National Institute for Health and Care Excellence

Final

Attention deficit hyperactivity disorder (update)

[E] Evidence review(s) for efficacy of non-pharmacological treatment and the impact of adverse events associated with non-pharmacological treatments of ADHD

NICE guideline NG87

Intervention evidence review

March 2018

Final

This evidence review was developed by the National Guideline Centre

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1 Non-pharmacological efficacy

Introduction

In the broadest sense, treatment of ADHD falls into two major categories, approaches that involve medication (i.e., 'pharmacological') and approaches that do not (i.e., 'non-pharmacological intervention'). At this simple level, non-pharmacological intervention is an umbrella term defined by exclusion (i.e., anything other than medication) however this dichotomy obscures that intervention packages may and are likely to contain both pharmacological and non-pharmacological approaches.

Within the broad category of non-pharmacological intervention lies a wide range of diverse strategies that vary considerably on key parameters, such as the theories underpinning treatment content, the targets for change, the methods of delivery, and the time involved. In the research literature, the term non-pharmacological approach can be used interchangeably with other descriptors, such as 'psychosocial treatments,' 'talking therapies' or 'cognitive training', even though these represent only a subset of interventions within the wider concept of non-pharmacological methods of behaviour change. Even within a single subset of a non-pharmacological approach, such as 'psychoeducation', there is no unifying definition of the intervention, its core features, or most active elements.

The diversity can appear attractive to individuals and families who feel hesitant to pursue medical management of ADHD and non- pharmacological treatments can be seen as risk free. This may not be the case and the diversity of treatments and approaches creates considerable challenges when examining the evidence base and drawing any meaningful conclusions.

The potential adverse events and harm associated with pharmacological treatment for ADHD are often discussed. However the adverse impacts of non-pharmacological treatment are much less frequently considered and very rarely recorded in trials. The intervention review on non-pharmacological treatments listed adverse events as an outcome. With the acknowledgment that this is a rarely reported outcome the committee also evaluated this topic with a qualitative review to explore what people with ADHD or people close to them reported as the adverse impacts of non-pharmacological treatment.

The aim of these reviews are to identify the most clinically and cost-effective non-pharmacological treatments for children and young people and adults with ADHD (review 1.1), as well as exploring the perceptions about these treatments (review 1.2). This review should be read alongsideevidence report F on combination treatment for evidence on when to decide which treatment approach to take.

1.1 Review question: What is the most clinically and cost-effective non-pharmacological treatment, and combination of treatments, for people with ADHD?

1.1.1 PICO table

For full details see the review protocol in appendix A.

Table 1: PICO characteristics of review question

Population	Children, young people and adults with ADHD
Interventions	• Cognitive behavioural therapy (CBT)/dialectical behaviour therapy (DBT) • Coaching, mentoring and other counselling approaches

	• Attention/memory/cognitive training • Neurofeedback • Parent/family/carer training • Psychoeducation • Relaxation techniques • Organisational skills/school or workplace targeted interventions • Interventions to improve sleep • Exercise • Play based therapies (for children) • Ecotherapies/outdoor activities • Non-specific supportive therapy • Combinations of the above
Comparisons	Any of the above compared to each other, usual care or sham
Outcomes	Critical: Quality of life ADHD symptoms Important: Discontinuation due to intervention Serious adverse events Behavioural/functional measures Emotional dysregulation Academic performance
Study design	RCTs

1.1.2 Methods and process

This evidence review was developed using the methods and process described in Developing NICE guidelines: the manual.[344] Methods specific to this review question are described in the review protocol in appendix A.

Declarations of interest were recorded according to NICE's 2014 conflicts of interest policy.

Studies in which either arm was randomised to use pharmacological interventions were excluded from this review and considered elsewhere in the combination review. Studies were included in this review regardless of whether or not concurrent medication was permitted during the trial period, as long as the permission was granted or denied to both arms. Studies in which >80% of the participants in either arm were using medication were considered to represent a combination of medication and non-pharmacological treatments and included in the combination review.

Evidence was separated into short term (under 3 months) and longer term (greater than 3 months. Evidence was also separated into whether the outcomes were assessed at the end of treatment (post-treatment/PT) or at the end of a follow-up period beyond the treatment (follow-up/FU).

A network meta-analysis was considered for this question but deemed inappropriate due to concerns over differences in trial populations, exact trial interventions and insufficient data available for the relevant outcomes (see the methodology chapter for further details).Clinical evidence

1.1.2.1 Included studies

(a) Sixty-three RCTs were included in the review;[1,4,5,10,24,48,55,90,99,114,116,136,145-147,151,153,156,159,164,180,184,195,205,222,226,231,235,246,250,261,278-280,301,308,311,324,335,337,351,359,360,362,364,367,370,395,412,413,423,427,437-440,451,457,463,466,470,474,484] these are summarised in Table 2 below. Evidence from these studies is summarised in the

clinical evidence summary tables below (Table 3, Table 4, Table 5, Table 6, Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
(b) Downgraded by 1 increment if the confidence interval crossed 1 MID.
(c) Control group mean unavailable.
(d) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(e) Downgraded by 2 increments if the confidence interval crossed both MIDs.

(a) Table 7, Table 8, Table 9, Table 10, Table 11, Table 12, Table 13, Table 14, Table 15, Table 16, Table 17, Table 18, Downgraded by 1 increment if the majority of the evidence was at high risk of bias.

(a) Table 19, Table 20, Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(b) Downgraded by 2 increments if the confidence interval crossed both MIDs.
(c) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.

Table 21,
Table 22,

Table 23, Table 24, Table 25, Table 26, Table 27, Table 28, Table 29).

See also the study selection flow chart in appendix C, study evidence tables in appendix D, forest plots in appendix E and GRADE tables in appendix F.

There were 10 RCTs in adults, 49 RCTs in the over 5 to 18 years and 4 RCTs in the under 5 years category.

The majority of studies (n=44) compared a non-pharmacological intervention to usual care, 6 studies compared an intervention to a non-specific supportive therapy, 2 study compared an intervention to a sham, 6 studies compared 2 interventions to each other and 7 studies compared a combination of interventions with usual care or a single intervention.

A number of the above studies included more than two arms and therefore contributed to more than one comparison.

1.1.2.2 Excluded studies

See the excluded studies list in appendix I.

1.1.2.3 Summary of clinical studies included in the evidence review

Table 2: Summary of studies included in the evidence review

Study	Intervention and comparison	Population	Outcomes	Comments
Abikoff, 2013 [4]	Organisation/school-based (n=125), 10-12 weeks, 1:1 versus Waitlist/Usual care (n=33), 10-12 weeks	Children (8-11 years old) (M=9.06, SD=0.84) USA Severity of ADHD not stated	Academic outcomes Reported at end of intervention and 40-64 weeks follow-up	35% of participants used medication throughout the trial
Abikoff, 2015 [5]	Parent/family training ADHD (n=130), 8 weeks, 1:1 Versus Waitlist/Usual care	Children (Range =3-4.11 years old) USA Severity of ADHD	ADHD symptoms – total, ADHD symptoms – inattention, ADHD symptoms – hyperactivity	Neither group were permitted to use ADHD medication during the trial

Study	Intervention and comparison	Population	Outcomes	Comments
	(n=34), 8 weeks	not stated	Reported at end of intervention and next year follow-up	
Ahmed, [10]	Exercise (n=42), 10 weeks, group intervention Versus Waitlist/Usual care (n=42), 10 weeks	Children (11-16 years old) (Range = 11-16 years old) Saudi Arabia Severity of ADHD not stated	ADHD symptoms – inattention, Function/behaviour and Academic outcome Reported at end of intervention	Medication status of each group was unclear
Anon, 1999 [1], Jensen 2007[250] (MTA study)	Parent/family training &organisation/school -based (n=144), 60 weeks, 1:1 and group contact Versus Waitlist/usual care (n=146), 60 weeks	Children (7 and 9.9 years old) (M=8.4, SD=0.8) USA Severity of ADHD not stated	ADHD symptoms – inattention, ADHD symptoms – hyperactivity, Function/behaviour , Academic – numeracy, Academic – literacy, Emotional dysregulation Reported at end of intervention and 3 year follow-up	At 14 months - 66% of usual care arm received medication during first year of the trial and 26% of intervention arm crossed over to medication. By 3 years 62% of the usual care arm and 45% of the intervention arm were using medication.
Au, 2014 [24]	Parent/family training (n=8), 9 weeks, Group intervention Versus Waitlist/usual care (n=9), 9 weeks	Children (5 – 10 years old) (M=7.4, SD=1.9) China Majority moderate symptoms of ADHD	Function/behaviour Reported at end of intervention (and 3 month follow-up for the intervention group only)	Neither group were using ADHD medication during the trial
Bink, 2016 [48]	Neurofeedback (n=59), 25 weeks, 1:1 Versus Waitlist/usual care (n=31), 25 weeks	Children (12 – 24 years old) (M=15.95, SD=3.33) Netherlands Severity of ADHD is mixed	Quality of life, ADHD symptoms – total, inattention, hyperactivity, CGI-I, Function/behaviour , Discontinuation due to adverse events, Serious adverse events, Academic outcomes and Emotional dysregulation	Both groups received medication treatment ‘as usual’

Study	Intervention and comparison	Population	Outcomes	Comments
			Reported at end of intervention and 1 year follow up.	
Bor, 2002 [55]	Parent/family training (n=55), 15-17 weeks, 1:1 Versus Usual care (n=32), 17 weeks	Children (0-6 years old), (M=3.43,SD=0.305) Austria Severity of ADHD not stated	ADHD symptoms – inattention, Function/behaviour Reported at end of intervention and 67-69 weeks follow-up	Neither group were permitted to use ADHD medication during the trial
Chacko, 2009 [90]	Parent/family training(n=80), 9 weeks, Group intervention Versus Waitlist/usual care (n=40), 9 weeks	Children (5-12 years old) (M=7.85, SD=2.16) USA Severity of ADHD not stated	ADHD symptoms – inattention, ADHD symptoms – hyperactivity, Function/behaviour Reported at end of intervention and 22 weeks follow-up	Both groups were permitted to use any previously prescribed ADHD medication during the trial and asked to maintain the type and dose of for the duration of the study. 38% were using medication
Christiansen, 2014 [99]	Neurofeedback delivered by slow cortical potential training, (n=14), 12 weeks, 1:1 Versus Psychoeducation based on self-instruction training (n=15), 12 weeks, group sessions	Children (6-13 years old) (M=8.42, SD=1.34) Germany Severity of ADHD not stated	ADHD symptoms – inattention Reported at end of intervention	Medication status of each group was unclear
Cowley, 2016 [114]	Neurofeedback (n=25), 8-20 weeks, 1:1 Versus Waitlist/usual care (n=21), 8-20 weeks	Adults (25-65 years old) (M=36.11, SD=10.33) Finland Severity of ADHD is mixed	ADHD symptoms – inattention, hyperactivity Reported at end of intervention	Medication status of each group was unclear
Daley, 2013 [116]	Parent/family training (n=24), 7 weeks, self-help Versus Waitlist/usual Care (n=19), 7 weeks, self-help	Children (4-11 years old) (M=7.3, SD=1.6) United Kingdom Severity of ADHD not stated	ADHD symptoms – total, ADHD symptoms – inattention, ADHD symptoms – hyperactivity Reported at end of intervention	Neither group were permitted to use ADHD medication during the trial
Egeland,	Attention/memory/co	Children (6-13	ADHD symptoms –	Both groups were

Study	Intervention and comparison	Population	Outcomes	Comments
2013 [136]	gnitive training delivered via computer programme (n=38), 5-7 weeks, mixed contact Versus Waitlist/usual care (n=37), 5-7 weeks	years old) (M=10.4, SD=0.7) Norway Severity of ADHD not stated	total, ADHD symptoms – inattention, ADHD symptoms – hyperactivity, Function/behaviour , Academic outcomes – numeracy, Academic outcomes – literacy Reported at end of intervention and 8 months follow-up	permitted to use any previously prescribed ADHD medication during the trial. 73% were using medication
Evans, 2011 [147]	Organisational/school-based delivered by counsellors via Challenging Horizons Programme (n=31), 39 weeks, mixed contact Versus Waitlist/usual care (n=14), 39 weeks	Children (10-13 years old), (Median=11, Range 10-13) USA Severity of ADHD not stated	ADHD symptoms – inattention, ADHD symptoms – hyperactivity Reported at end of intervention	Medication status of each group was unclear
Evans, 2014 [146]	Parent/family training & organisation/school-based training delivered via coaching sessions (n=24), 39 weeks, mixed contact Versus Waitlist/usual care (n=12), 39 weeks	Adolescents (13-17 years old), (M=15.4, SD=1) USA Severity of ADHD not stated	ADHD symptoms – inattention, ADHD symptoms – hyperactivity, Academic outcome Reported at end of intervention	Protocol for medication use unclear, control group were using medications at a lower rate than treatment group (41.7% compared to 54.2%).
Evans, 2016 [145]	Organisational/school-based delivered via after-school programme (n=222), 39 weeks, mixed contact Versus Waitlist/usual care (n=104), 39 weeks	Adolescents (13-18 years old) (Range=11-14) USA Severity of ADHD not stated	ADHD symptoms – inattention, ADHD symptoms – hyperactivity, Function/behaviour , Academic outcome Reported at end of intervention	49/112 (intervention via after school programme), 57/110 (intervention via mentoring), 47/104 (usual care) of population using medication at baseline.
Fabiano, 2010 [153]	Organisational/school-based delivered by consultants and teachers (n=33), 35 weeks, mixed contact Versus Waitlist/usual care	Children (6-12 years old), (M=8.17, SD=1.69) USA Severity of ADHD	ADHD symptoms – total, Function/behaviour , Academic outcomes – literacy, Academic outcomes –	46% of intervention arm and 60% of control arm using medication but unclear when this was prescribed.

Study	Intervention and comparison	Population	Outcomes	Comments
	(n=30), 35 weeks	not stated	numeracy Reported at end of intervention	
Fabiano, 2012 [151]	Parent/family training delivered by clinical psychologist (n=27), 8 weeks, mixed contact Versus Waitlist/usual care (n=28), 12 weeks	Children (6-12 years old) (M=8.52, SD=1.29) USA Severity of ADHD not stated	Function/behaviour Reported at end of intervention and 16 weeks follow-up	54% of trial population were using ADHD medication during trial.
Fehlings, 1991[156]	CBT/DBT delivered by trained therapist (n=13), 17 weeks, 1:1 Versus Non-specific supportive therapy (n=13), 17 weeks, 1:1	Children (7-13 years old) (M=9.35, SD=1.58) Canada Severity of ADHD not stated	ADHD symptoms – inattention, ADHD symptoms – hyperactivity Reported at end of intervention and 22 weeks follow-up	Neither group were using ADHD medication during the trial.
Ferrin, 2016 [159]	Psychoeducation (n=35), 6 weeks, group sessions Versus Waitlist/usual care (n=34), 6 weeks	Children (5-18 years old) (MD=10.71, SD=3.12) UK Severity of ADHD is mixed	ADHD symptoms – inattention, hyperactivity, Function/behaviour Reported at end of intervention and 6 months follow-up	Both groups received treatment as usual.
Fleming, 2015 [164]	CBT/DBT delivered through group sessions (n=19), 8 weeks, mixed contact Versus Waitlist/usual care with skills hand-outs from a manual (n=16), 8 weeks, self-help	Young adults (18-25 years old) (M=21.35, SD=1.43) USA Severity of ADHD not stated	Quality of life, ADHD symptoms inattention, Academic outcome, Emotional dysregulation Reported at end of intervention and 13 weeks follow-up	75% of trial population were using ADHD medication at baseline.
Gelade, 2016 [180]	Neurofeedback (n=39), 10-12 weeks, 1:1 Versus Exercise (n=37), 10-12 weeks	Children (7-13 years old) (M=9.63, SD=1.76) Netherlands Severity of ADHD is mixed	ADHD symptoms – inattention, hyperactivity, Function/behaviour Reported at end of intervention	Medication status of each group was unclear - none detailed.
Gevensleben, 2009	Neurofeedback system self-	Children (8-12 years old)	ADHD symptoms – total, ADHD	Neither group were permitted to use

Study	Intervention and comparison	Population	Outcomes	Comments
[184]	regulation and attention management training delivered via computer game (n=64), 3-4 weeks, mixed contact Versus Attention/memory/cognitive training delivered via computer software (n=38), 3-4 weeks, mixed contact	(M=9.6, SD=1.2) Germany Majority mild symptoms of ADHD	symptoms inattention, ADHD symptoms – hyperactivity, Function/behaviour Reported at end of intervention and 26 weeks follow-up	ADHD medication during the trial.
Gu, 2017 [195]	CBT/DBT supervised by psychologist (n=30), 6 weeks, 1:1 Versus Waitlist/usual care (n=26), 6 weeks	Adult (19 – 24 years old) (M=20.29, SD=7.34) China Severity of ADHD mixed	ADHD symptoms total, inattention, hyperactivity, Emotional dysregulation Reported at end of intervention and 3 month follow-up	Participants receiving pharmacological medication for ADHD must have remained at a stable dose for 1 month prior to enrolment.
Handen, 2015 [205]	Parent/family training (n=32), 10 weeks, 1:1 Versus Waitlist/usual care (n=32), 10 weeks,	Children (5 – 14 years old) (M=7.95, SD=1.95) USA Severity of ADHD mixed	ADHD symptoms total, ADHD symptoms inattention, ADHD symptoms – hyperactivity, CGI-I and behaviour outcomes Reported at end of intervention	Neither group were permitted to use ADHD medication during the trial.
Hepark, 2015 [222]	CBT/DBT conducted by experienced mindfulness teachers (n=55), 12 weeks, group intervention Versus Waitlist/usual care (n=48), 12 weeks	Adults (25-65 years old) (M=35.85) (SD=9.5) Netherlands Severity of ADHD not stated	ADHD symptoms – total, ADHD symptoms – inattention, ADHD symptoms – hyperactivity, function/behaviour, emotional dysregulation Reported at end of intervention	Both groups were permitted to use any previously prescribed ADHD medication during the trial provided it had been stabilised 2 weeks prior to participation. 56% of the population were using ADHD medication.
Hirvikoski, 2011 [226]	CBT/DBT delivered in group sessions by clinical psychologists (n=26), 14 weeks, group intervention Versus Non-specific supportive therapy with a loosely	Adults (25-65 years old) (M=38.96, SD=9.33) Sweden Severity of ADHD not stated	Serious adverse events Reported at end of intervention and 66 weeks follow-up	Both groups were permitted to use medication that has been stable for at least 3 months; those who could not stay on stable treatment would not be included in the statistical

Study	Intervention and comparison	Population	Outcomes	Comments
	structured discussion group supported by two clinical psychologists (n=25), 14 weeks, group intervention			analysis. 58% of the population were using medication.
Hoath, 2002 [231]	Parent/family training delivered by a trained practitioner (n=10), 12 weeks, group intervention Versus Waitlist/usual care (n=11), 12 weeks,	Children (5-9 years old) (M=7.70, SD=1.37) Australia Severity of ADHD not stated	ADHD symptoms – inattention, ADHD symptoms – hyperactivity, Function/behaviour Reported at end of intervention and 13 weeks follow-up	8/10 of intervention arm and 7/11 of control arm were using medication. No attempt was made to control medication throughout.
Horn, 1990 [235]	Parent/family training delivered by therapists (n=15), 12 weeks, (group intervention) Versus Relaxation delivered by therapists (n=13), 23 weeks, group intervention Versus Relaxation & Parent/family training programmes delivered by therapists (n=14), 12 weeks, group intervention	Children (Range=7-11 years old) USA Severity of ADHD not stated	ADHD symptoms – hyperactivity, Function/behaviour, Academic outcomes – numeracy, Academic outcomes – literacy Reported at end of intervention and 35 weeks follow-up	Neither group were permitted to use ADHD medication during the trial.
Iseman, 2011 [246]	Organisational/school-based (n=14), 10 days, group intervention Versus Waitlist/usual care with participants receiving typical mathematics instruction (n=15), 10 days, group intervention	Children (10-15 years old) (M=13, Range=10-15) USA Severity of ADHD not stated	Academic outcomes Reported at end of intervention	Medication status of each group was unclear - none detailed.
Kermani, 2016 [261]	Attention/memory/cognitive training delivered through structured games (n=30), 12 weeks, 1:1 Versus Waitlist/usual care (n=30), 12 weeks	Children (6-13 years old) (M=9.85, Range=8.5-11.2) Iran Severity of ADHD not stated	ADHD symptoms total Reported at end of intervention	Medication status of each group was unclear - none detailed.

Study	Intervention and comparison	Population	Outcomes	Comments
Langberg, 2008 [279]	Organisational/school-based (n=24), 8 weeks, mixed contact Versus Waitlist/usual care (n=13), 8 weeks	Children (9-14 years old (Range=9-14) USA Severity of ADHD not stated	Academic outcomes Reported at end of intervention	11/24 of intervention arm and 5/13 of control arm were using medication.
Langberg, 2012 [278]	Organisational/school-based (n=23), 11 weeks, 1:1 Versus Waitlist/usual care (n=24) 11 weeks,	Children (6-13 years old) (Range=11-14) USA Severity of ADHD not stated	ADHD symptoms – total Reported at end of intervention	69.9% of intervention arm and 62.5% of control arm were using medication.
Lansbergen, 2011 [280]	Neurofeedback via EEG (n=8), 17 weeks, directed self-help Versus Sham via simulated EEG signal (n=6), 17 weeks, directed self-help	Children (8-15 years old) (M=10.2, SD=2) Netherlands Majority moderate symptoms of ADHD	ADHD symptoms – inattention, ADHD symptoms – hyperactivity Reported at end of intervention	Both groups were permitted to use any previously prescribed ADHD medication during the trial. 64% were using ADHD medication.
Looyeh, 2012 [301]	Psychoeducation conducted by an experienced psychologist (n=7), 7 weeks, group intervention Versus Waitlist/usual care list (n=7), 7 weeks	Children (9-11 years old) (Range=9-11) Iran Severity of ADHD not stated	ADHD symptoms – total, ADHD symptoms – inattention, ADHD symptoms – hyperactivity Reported at end of intervention and 4 weeks follow-up	Neither group were permitted to use ADHD medication during the trial.
Matos, 2009 [308]	Parent/family training delivered by therapists (n=20), 15 weeks, 1:1 Versus Waitlist/usual care list (n=12), 15 weeks	Children (0-6 years old) (Range=4-6) Puerto Rico Severity of ADHD not stated	ADHD symptoms – inattention, ADHD symptoms-hyperactivity, Function/behaviour, Emotional dysregulation Reported at end of intervention	Neither group were permitted to use ADHD medication during the trial.
Mawjee, 2015 [311]	Attention/memory/cognitive training (n=65), 5 weeks, directed self-help Versus Versus Non-specific supportive therapy	Adults (18-25 years old) (M=23.87, SD=3.41) Canada Severity of ADHD	Function/behaviour, ADHD symptoms – total, Academic outcomes – numeracy, Academic outcomes – literacy	Both groups were permitted to use any previously prescribed ADHD medication during the trial. 57% were using ADHD medication.

Study	Intervention and comparison	Population	Outcomes	Comments
	with weekly calls from a certified coach (n=32), 5 weeks, facilitated remotely	not stated	Reported at end of intervention and 14 weeks follow-up	Both groups had weekly telephone calls from a certified CWMT coach.
Merrill, 2016 [324]	Parent/family training (n=39), 8 weeks, group intervention Versus Waitlist/usual care (n=36), 8 weeks	Children (5-12 years old) (MD=8, SD=1.70) Country unknown Severity of ADHD not stated	Academic outcomes Reported at end of intervention	All children were involved in a 3-week double blind placebo/medication crossover.
Molina, 2008 [335]	Organisational/school-based (n=12), 10 weeks, mixed contact Versus Non-specific supportive therapy (n=11), 10 weeks	Children (11-14 years old) (Range=11-14) USA Severity of ADHD not stated	Emotional dysregulation Reported at end of intervention	27% of intervention arm and 67% of control arm were using medication.
Moretti-altuna, 1987 [337]	Relaxation delivered via mediation training (n=9), 4 weeks, 1:1 Versus Waitlist/usual care with standard control therapy (n=8), 4 weeks	Children (6-13 years old) (Range=6-10) USA Severity of ADHD not stated	ADHD symptoms – total Reported at end of intervention	Neither group were permitted to use psychoactive medication during the trial.
Ostberg, 2012 [351]	Parent/family training(n=36), 10 weeks, group intervention Versus Waitlist/usual care (n=34), 10 weeks	Children (7-10 years old) (M=11, SD=2) Sweden Mixed population	Function/behaviour, ADHD symptoms – total Reported at end of intervention	25/36 of intervention arm and 24/34 of control arm were using medication.
Pettersson, 2017 [359]	CBT/DBT (n=27), 10 weeks, group and directed self help Versus Waitlist/usual care (n=18), 10 weeks	Adults (25-65 years old) (M=37.09, SD=10.81) Sweden Mixed population	ADHD symptoms – total, emotional dysregulation Reported at end of intervention	Patients who were taking prescribed ADHD medication had to be stable on the medication during the whole study time.
Pfiffner, 2007 [362]	Parent/family training delivered by therapist (n=36), 12 weeks, mixed contact Versus Waitlist/usual care (n=33), 12 weeks	Children (7-11 years old) (M=8.7, SD=1.2) USA Severity of ADHD not stated	ADHD symptoms – inattention Reported at end of intervention and 13-22 weeks follow-up	Both groups were permitted to use any previously prescribed ADHD medication during the trial provided it remained stable.

Study	Intervention and comparison	Population	Outcomes	Comments
Pfiffner, 2014 [360]	Parent/family training delivered by therapist (n=148), 12-13 weeks, mixed contact Versus Waitlist/usual care (n=51), 12-13 weeks	Children (7-11 years old) (M=8.6, Range=7-11) USA Severity of ADHD not stated	ADHD symptoms – inattention Reported at end of intervention and 22-30 weeks follow-up	9% (family & teacher training), 1.4% (parent training) and 2% (usual care) arms taking stimulant medication completed a 1 week wash-out to assess behaviour off medication.
Philipsen, 2015 [364]	CBT/DBT (n=106), 12 weeks Versus Non-specific supportive therapy (n=103), 12 weeks	Adults (18-58 years old) (M=35, SD=10.5) Germany Severity of ADHD not stated	ADHD symptoms – total, ADHD symptoms – inattention, ADHD symptoms – hyperactivity, emotional dysregulation Reported at end of intervention and 1 year follow up	Groups were on placebo medication.
Power, 2012 [367]	Parent/family training programmes delivered by clinician (n=100), 12 weeks, mixed contact Versus Psychoeducation (n=99), 12 weeks, mixed contact	Children (6-13 years old) (Mean grade level=3.5) USA Severity of ADHD not stated	Academic outcomes Reported at end of intervention and 14 weeks follow-up	Both groups were permitted to use any previously prescribed ADHD medication during the trial. 42% were using ADHD medication at baseline.
Rabiner, 2010 [370]	Attention/memory/cognitive training delivered via computer exercises (n=25), 14 weeks, mixed contact Versus Waitlist/usual care (n=25), 14 weeks	Children (6-13 years old) (Range=6-7) USA Severity of ADHD not stated	ADHD symptoms – inattention Reported at end of intervention and 38 weeks follow-up	Protocol for medication use unclear, 7% of population were receiving ADHD medication.
Schramm, 2016 [395]	Organisational/school based (n=40), 20 weeks, 1:1 Versus Waitlist/usual care (n=36), 20 weeks	Children (12-17 years old) (MD=13.99, SD=1.45) Germany Severity of ADHD not stated	ADHD symptoms – inattention, hyperactivity, Function/behaviour Reported at end of intervention	Medication status of each group was unclear - none detailed.
Sibley, 2013 [413]	Parent/family training programme delivered by clinicians (n=18), 8 weeks, group intervention	Children (Range 11-15 years old) USA	ADHD symptoms – inattention, ADHD symptoms – hyperactivity, Function/behaviour	Both groups were permitted to use any previously prescribed ADHD medication during the trial provided it

Study	Intervention and comparison	Population	Outcomes	Comments
	Versus Waitlist/usual care (n=18), 8 weeks	Severity of ADHD not stated	Reported at end of intervention	remained stable. 38.9% of population medicated for ADHD.
Sibley, 2016 [412]	Parent/family training (n=67), 10 weeks, group sessions Versus Waitlist/usual care (n=61), 10 weeks	Children (11-15 years old) (MD=12.75, SD=0.87) USA Severity of ADHD is mixed	ADHD symptoms total, Function/behaviour Reported at end of intervention and 6 month follow-up	Both groups were permitted to seek or continue additional medication/psycho social treatments during the study and all treatment was monitored.
Smith, 2016 [423]	Cognitive training & exercise (n=48), 15 weeks, mixed contact Versus Waitlist/usual care (n=44), 15 weeks	Children (5-9 years old) (M=7.41, SD=1.07) China, USA Severity of ADHD is mixed	ADHD symptoms total Reported at end of intervention	Both groups were permitted to use any previously prescribed ADHD medication during the trial provided it remained stable.
Solanto, 2010 [427]	CBT/DBT (n=45), 12 weeks, group intervention Versus Non-specific supportive therapy (n=43), 12 weeks	Adults(25-65 years old) (M=41.69, SD=11.86) USA Severity of ADHD not stated	ADHD symptoms – inattention, ADHD symptoms – total, Function/behaviour Reported at end of intervention	Both groups were permitted to use any previously prescribed ADHD medication during the trial. Approximately half of participants were using ADHD medication at baseline.
Steeger, 2016 [437]	Attention/memory/cognitive training & BPT (n=26), 5 weeks, mixed contact Versus Attention/memory/cognitive training (n=26), 5 weeks	Children (11 – 15 years old) (M=12.3, SD=1.15) USA Severity of ADHD is mixed	ADHD symptoms – inattention, hyperactivity, Function/behaviour Reported at end of intervention	Medication status of each group was unclear - none detailed.
Steiner, 2011 [440]	Neurofeedback via computer game (n=13), 17 weeks, directed self-help Versus Attention/memory/cognitive training (n=13), 17 weeks, directed self-help Versus Waitlist/usual care (n=15), 17 weeks	Children (6-13 years old) (M=12.4, SD=0.9) USA Severity of ADHD not stated	ADHD symptoms – inattention, ADHD symptoms – hyperactivity Reported at end of intervention	Medication status of each group was unclear. Children were eligible regardless of medication use.

Study	Intervention and comparison	Population	Outcomes	Comments
Steiner, 2014 [439], [438]	Neurofeedback using EEG sensors (n=34), 5 months, 1:1 Versus Attention/memory/cognitive training (n=34), 5 months, 1:1 Versus Waitlist/usual care (n=36), 5 months	Children (7-11 years old) (M=8.56, SD=1.1) USA Severity of ADHD not stated	ADHD symptoms – inattention, ADHD symptoms – hyperactivity Function/behaviour Reported at end of intervention and six month follow up	Both groups were permitted to use any previously prescribed ADHD medication during the trial. 17% were using ADHD medication at baseline.
Tamm, 2013 [451]	Attention/memory/cognitive training (n=54), 8 weeks, mixed contact Versus Waitlist/usual care and placed on waiting list (n=51), 8 weeks	Children (Range=7-5 years old) USA Severity of ADHD not stated	ADHD symptoms – inattention, ADHD symptoms – hyperactivity, Function/behaviour, Discontinuation due to adverse events Reported at end of intervention	Both groups were permitted to use any previously prescribed ADHD medication during the trial provided it was kept constant. 65% of the population were medicated for ADHD.
Thompson, 2009 [457]	Parent/family training programme consisting of parent training (n=21), 8 weeks, Versus Waitlist/usual care (n=20), 8 weeks	Children (2½ to 6½ years old) (M=51.20 months, SD=11.30 months) UK Severity of ADHD not stated	ADHD symptoms – total Reported at end of intervention and 7 weeks follow-up	Participants were not using ADHD medication.
Van den hoofdakker, 2007 [463]	Parent/family training programme consisting of behavioural parent training (n=47), 5 months, mixed contact Versus Waitlist/usual care (n=47), 5 months, mixed contact	Children (4-12 years old) (M=7.4, SD=1.9) Country Unknown Majority moderate symptoms of ADHD	ADHD symptoms – total Reported at end of intervention and 25 weeks follow-up	Both groups were permitted to use any previously prescribed ADHD medication during the trial. 55% of participants were using ADHD medication.
Van der oord, 2014 [466]	Attention/memory/cognitive training via computer game (n=21), 5 weeks, mixed contact Versus Waitlist/usual care and placed on waiting list (n=22), 5 weeks	Children (8-12 years old) (M=10, SD=0.97) Netherlands Severity of ADHD not stated	ADHD symptoms – inattention, ADHD symptoms – hyperactivity, Function/behaviour Reported at end of intervention and 9 weeks follow-up	During treatment and during the wait list period, the dose of methylphenidate was kept stable. 73% of participants were using ADHD medication.

Study	Intervention and comparison	Population	Outcomes	Comments
Van dongen-boomsma, 2013 [470]	Neurofeedback delivered by EEG (n=22) 15 weeks, Versus Sham consisting of simulated EEG signal (n=19), 15 weeks	Children (8-15 years old) (M=10.59, SD=2.25) Netherlands Severity of ADHD not stated	ADHD symptoms – total Serious adverse events Reported at end of intervention	Medication status of each group was unclear.
Virta, 2010 [474]	CBT/DBT led by an experienced psychologist (n=10), 10 weeks Versus Attention/memory/cognitive training led by a psychologist (n=9), 10 weeks Versus Waitlist/usual care (n=10), 10 weeks	Adults (21-49 years old) (CBT: M=38 range=25-49), (CT: M=32 range=21-44), (Control: M=34 range=22-49) Finland Severity of ADHD not stated	Quality of life, CGI-I, ADHD symptoms – total Reported at end of intervention	5/10 of CBT arm, 5/9 of cognitive training arm and 7/10 of usual care arm were using medication.
Webster-stratton, 2011 [483,484]	Parent/family training programmes conducted by therapists (n=49), 26 weeks, mixed contact Versus Usual care and placed on waitlist (n=50), 26 weeks	Children (4-6 years old) (M=5.35, SD=0.67) USA Severity of ADHD not stated	ADHD symptoms – inattention, ADHD symptoms – hyperactivity, Function/behaviour Reported at end of intervention and 1 year follow-up	Neither group were permitted to use ADHD medication during the trial.

See appendix D for full evidence tables.

1.1.2.4 Quality assessment of clinical studies included in the evidence review

Children under 5

Table 3: Clinical evidence summary: Parent/Family training versus waitlist/usual care

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/Usual Care	Risk difference with Parent/Family training (95% CI)
ADHD symptoms total, Parent (PT, 8-15 weeks, Conners, PACS, higher is poorer)	194 (2 studies) 8-15 weeks	⨁⨁⨁⨀ MODERATE[a] due to risk of bias		The mean ADHD symptoms total, parent (pt, 8-15 weeks, conners, pacs, higher is poorer) in the control groups was 60.96	The mean ADHD symptoms total, parent (pt, 8-15 weeks, conners (0-84), pacs, higher is poorer) in the intervention groups was 1.13 standard deviations lower (1.49 to 0.78 lower)
ADHD symptoms total, Parent (FU, 15 weeks, PACS, unclear range, higher is poorer)	30 (1 study) 15 weeks	⨁⨀⨀⨀ VERY LOW[b,c] due to risk of bias, imprecision		The mean ADHD symptoms total, parent (fu, 15 weeks, pacs, unclear range, higher is poorer) in the control groups was 17.3	The mean ADHD symptoms total, parent (fu, 15 weeks, pacs, higher is poorer) in the intervention groups was 6.43 lower (10.65 to 2.21 lower)
ADHD symptoms total, Teacher (PT, 8 weeks, Conners (0-84), higher is poorer)	164 (1 study) 8 weeks	⨁⨁⨀⨀ LOW[a,c] due to risk of bias, imprecision		The mean ADHD symptoms total, teacher (pt, 8 weeks, conners (0-84), higher is poorer) in the control groups was 70.65	The mean ADHD symptoms total, teacher (pt, 8 weeks, conners (0-84), higher is poorer) in the intervention groups was 2.36 lower (6.56 lower to 1.84 higher)

ADHD symptoms total, Clinician (PT, 8 weeks, ADHD-Rating Scale-IV, unclear range, higher is poorer)	164 (1 study) 8 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms total, clinician (pt, 8 weeks, ADHD-rating scale-iv, unclear range, higher is poorer) in the control groups was 12.85	The mean ADHD symptoms total, clinician (pt, 8 weeks, ADHD-rating scale-iv, higher is poorer) in the intervention groups was 5.23 lower (6.46 to 3.99 lower)
ADHD symptoms inattention, Parent (PT, 8-20 weeks, Conners, DBRS, higher is poorer)	259 (3 studies) 8-20 weeks	⊕⊕⊖⊖ LOW[a,c] due to risk of bias, imprecision		The mean ADHD symptoms inattention, parent (pt, 8-20 weeks, conners, dbrs, higher is poorer) in the control groups was 44.46	The mean ADHD symptoms inattention, parent (pt, 8-20 weeks, conners (0-84), dbrs (0-27), higher is poorer) in the intervention groups was 0.87 standard deviations lower (1.38 to 0.35 lower)
ADHD symptoms inattention, Clinician (PT, 8 weeks, ADHD-Rating Scale-IV, unclear range, higher is poorer)	164 (1 study) 8 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms inattention, clinician (pt, 8 weeks, ADHD-rating scale-iv, unclear range, higher is poorer) in the control groups was 6.12	The mean ADHD symptoms inattention, clinician (pt, 8 weeks, ADHD-rating scale-iv, higher is poorer) in the intervention groups was 2.91 lower (3.78 to 2.04 lower)
ADHD symptoms inattention, Teacher (PT, 8 weeks, Conners (0-84), higher is poorer)	164 (1 study) 8 weeks	⊕⊕⊖⊖ LOW[a,c] due to risk of bias, imprecision		The mean ADHD symptoms inattention, teacher (pt, 8 weeks, conners (0-84), higher is poorer) in the control groups was 68.22	The mean ADHD symptoms inattention, teacher (pt, 8 weeks, conners (0-84), higher is poorer) in the intervention groups was 3.10 lower (7.59 lower to 1.39 higher)

ADHD symptoms hyperactivity, Parent (PT, 8-20 weeks, Conners, DBRS, higher is poorer)	196 (2 studies) 8-20 weeks	⊕⊕⊖⊖ LOW[a,d] due to risk of bias, inconsistency		The mean ADHD symptoms hyperactivity, parent (pt, 8-20 weeks, conners, dbrs, higher is poorer) in the control groups was 60.49	The mean ADHD symptoms hyperactivity, parent (pt, 8-20 weeks, conners (0-84), dbrs (0-27), higher is poorer) in the intervention groups was 1.07 standard deviations lower (1.43 to 0.72 lower)
ADHD symptoms hyperactivity, Teacher (PT, 8 weeks, Conners (0-84), higher is poorer)	164 (1 study) 8 weeks	⊕⊕⊖⊖ LOW[a,c] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity, teacher (pt, 8 weeks, conners (0-84), higher is poorer) in the control groups was 70.26	The mean ADHD symptoms hyperactivity, teacher (pt, 8 weeks, conners (0-84), higher is poorer) in the intervention groups was 2.31 lower (6.74 lower to 2.12 higher)
ADHD symptoms hyperactivity, Clinician (PT, 8 weeks, ADHD-Rating Scale-IV, unclear range, higher is poorer)	164 (1 study) 8 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms hyperactivity, clinician (pt, 8 weeks, ADHD-rating scale-iv, unclear range, higher is poorer) in the control groups was 6.73	The mean ADHD symptoms hyperactivity, clinician (pt, 8 weeks, ADHD-rating scale-iv, higher is poorer) in the intervention groups was 2.32 lower (3.04 to 1.6 lower)
Function/behaviour, Parent (PT, 15-20 weeks, ECBI, DBRS, higher is poorer)	95 (2 studies) 15-20 weeks	⊕⊖⊖⊖ VERY LOW[b,c] due to risk of bias, imprecision		The mean function/behaviour, parent (pt, 15-20 weeks, ecbi, dbrs (0-27), higher is poorer) in the control groups was 37.05	The mean function/behaviour, parent (pt, 15-20 weeks, conners, ecbi, dbrs (0-27), higher is poorer) in the intervention groups was 1.23 standard deviations lower (2.33 to 0.13 lower)

(a) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.

(b) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(c) Downgraded by 1 increment if the confidence interval crossed 1 MID.
(d) Downgraded due to heterogeneity, unexplained by subgroup analysis.

Children aged 5 to 18

Table 4: Clinical evidence summary: Parent/family training versus waitlist/usual care

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/Usual Care	Risk difference with Parent/Family Training (95% CI)
ADHD symptoms total (7 - 10 weeks PT, parental account of childhood symptoms, SNAP, DBD, high is poor outcome)	235 (3 studies) 7-10 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms total (7 - 10 weeks pt, parental account of childhood symptoms, snap, dbd, high is poor outcome) in the control groups was 5.21	The mean ADHD symptoms total (7 - 10 weeks pt, parental account of childhood symptoms, snap, dbd, high is poor outcome) in the intervention groups was 0.68 standard deviations lower (0.94 to 0.42 lower)
ADHD symptoms total (10 weeks PT, teacher rated SNAP, DBD, high is poor outcome)	192 (2 studies) 10 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms total (10 weeks pt, teacher rated snap, dbd, high is poor outcome) in the control groups was 1.40	The mean ADHD symptoms total (10 weeks pt, teacher rated snap, dbd, high is poor outcome) in the intervention groups was 0.06 standard deviations lower (0.34 lower to 0.22 higher)
ADHD symptoms total (3-6 months FU, parent rated ADHD-C Rating Scale, DBD, high is poor outcome)	173 (2 studies) 3-6 months	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms total (3-6 months fu, parent rated adhd-c rating scale, dbd, high is poor outcome) in the control groups was 3.96	The mean ADHD symptoms total (3-6 months fu, parent rated adhd-c rating scale, dbd, high is poor outcome) in the intervention groups was 0.66 standard deviations lower (0.96 to 0.35 lower)
ADHD symptoms total (5 months PT, Conners parent rating scale, 0-84, high is poor outcome)	94 (1 study) 5 months	⊕⊕⊖⊖ LOW[c] due to risk of		The mean ADHD symptoms total (5 months pt, conners parent rating scale, 0-84, high is poor outcome)	The mean ADHD symptoms total (5 months pt, conners parent rating scale, 0-84, high is poor outcome) in

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/Usual Care	Risk difference with Parent/Family Training (95% CI)
		bias		in the control groups was 18.7	the intervention groups was 0.30 higher (2.53 lower to 3.13 higher)
ADHD symptoms total (6 months FU, teacher rated DBD, 0-3, high is poor outcome)	128 (1 study) 6 months	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms total (6 months fu, teacher rated dbd, 0-3, high is poor outcome) in the control groups was 1.24	The mean ADHD symptoms total (6 months fu, teacher rated dbd, 0-3, high is poor outcome) in the intervention groups was 0.02 higher (0.23 lower to 0.27 higher)
Inattention, Teacher (PT, 20 weeks, Conners (0-84), higher is poorer)	96 (1 study) 20 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention, teacher (pt, 20 weeks, conners (0-84), higher is poorer) in the control groups was 57.5	The mean ADHD symptoms inattention, teacher (pt, 20 weeks, conners (0-84), higher is poorer) in the intervention groups was 2.20 higher (3.2 lower to 7.6 higher)
ADHD symptoms inattention, Parent (PT, 20 weeks, Conners (0-84), higher is poorer)	96 (1 study) 20 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention, parent (pt, 20 weeks, conners (0-84), higher is poorer) in the control groups was 66.25	The mean ADHD symptoms inattention, parent (pt, 20 weeks, conners (0-84), higher is poorer) in the intervention groups was 1.60 lower (6.57 lower to 3.37 higher)
ADHD symptoms inattention, Parent (PT, 7-20 weeks, DBD, DuPaul, Conners, DBRS, higher is poorer)	477 (6 studies) 7-20 weeks	⊕⊖⊖⊖ VERY LOW[a,b,d] due to risk of bias, inconsistency, imprecision		The mean ADHD symptoms inattention, parent (pt, 7-20 weeks, dbd, dupaul, conners, dbrs, higher is poorer) in the control groups was 5.3	The mean ADHD symptoms inattention, parent (pt, 7-20 weeks, dbd, dupaul, conners, dbrs, higher is poorer) in the intervention groups was 0.50 standard deviations lower (0.82 to 0.19 lower)
ADHD symptoms inattention, Teacher (PT, 8-20 weeks, Conners, higher is poorer)	278 (3 studies) 8-20	⊕⊕⊖⊖ LOW[a,b] due to risk of		The mean ADHD symptoms inattention, teacher (pt, 8-20 weeks, conners, higher is poorer) in the	The mean ADHD symptoms inattention, teacher (pt, 8-20 weeks, conners, higher is poorer) in the

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/Usual Care	Risk difference with Parent/Family Training (95% CI)
	weeks	bias, imprecision		control groups was 4.06	intervention groups was 0.39 standard deviations lower (0.65 to 0.13 lower)
ADHD symptoms inattention (12 weeks PT, parent & teacher rated Children symptom inventory, 0-27, high is poor outcome)	66 (1 study) 12 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (12 weeks pt, parent & teacher rated children symptom inventory, 0-27, high is poor outcome) in the control groups was 5.1	The mean ADHD symptoms inattention (12 weeks pt, parent & teacher rated children symptom inventory, 0-27, high is poor outcome) in the intervention groups was 2.10 lower (3.23 to 0.97 lower)
ADHD symptoms inattention (3-5 month FU, parent & teacher rated Children symptom inventory, 0-27, high is poor outcome)	54 (1 study) 3-5 months	⊕⊖⊖⊖ VERY LOW[b,c] due to risk of bias, imprecision		The mean ADHD symptoms inattention (3-5 month fu, parent & teacher rated children symptom inventory, 0-27, high is poor outcome) in the control groups was 4.4	The mean ADHD symptoms inattention (3-5 month fu, parent & teacher rated children symptom inventory, 0-27, high is poor outcome) in the intervention groups was 1.20 lower (2.37 to 0.03 lower)
ADHD symptoms inattention (5-7 months FU, teacher rated Children symptom inventory, DBD, high is poor outcome)	232 (2 studies) 5-7 months	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms inattention (5-7 months fu, teacher rated children symptom inventory, dbd, high is poor outcome) in the control groups was 3.48	The mean ADHD symptoms inattention (5-7 months fu, teacher rated children symptom inventory, dbd, high is poor outcome) in the intervention groups was 0.02 standard deviations lower (0.31 lower to 0.27 higher)
ADHD symptoms inattention (3-7 months FU, parent rated DBD rating scale, ADHD-IA, child symptom inventory, high is poor outcome)	395 (4 studies) 3-7 months	⊕⊖⊖⊖ VERY LOW[a,b,d] due to risk of bias, inconsistency, imprecision		The mean ADHD symptoms inattention (3-7 months fu, parent rated dbd rating scale, adhd-ia, child symptom inventory, high is poor outcome) in the control groups was	The mean ADHD symptoms inattention (3-7 months fu, parent rated dbd rating scale, adhd-ia, child symptom inventory, high is poor outcome) in the intervention groups was

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/Usual Care	Risk difference with Parent/Family Training (95% CI)
				3.36	0.44 standard deviations lower (0.84 to 0.04 lower)
ADHD symptoms hyperactivity, Teacher (PT, 20 weeks, Conners (0-84), higher is poorer)	96 (1 study) 20 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity, teacher (pt, 20 weeks, conners (0-84), higher is poorer) in the control groups was 65.2	The mean ADHD symptoms hyperactivity, teacher (pt, 20 weeks, conners (0-84), higher is poorer) in the intervention groups was 4.00 lower (8.18 lower to 0.18 higher)
ADHD symptoms hyperactivity, Parent (PT, 20 weeks, Conners (0-84), higher is poorer)	96 (1 study) 20 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity, parent (pt, 20 weeks, conners (0-84), higher is poorer) in the control groups was 70.15	The mean ADHD symptoms hyperactivity, parent (pt, 20 weeks, conners (0-84), higher is poorer) in the intervention groups was 5.70 lower (9.58 to 1.82 lower)
ADHD symptoms hyperactivity, Parent (PT, 7-20 weeks, DBD, Du Paul, Conners, DBRS, higher is poorer)	283 (5 studies) 7-20 weeks	⊕⊖⊖⊖ VERY LOW[a,b,d] due to risk of bias, imprecision, inconsistency		The mean ADHD symptoms hyperactivity, parent (pt, 7-20 weeks, dbd, du paul, conners, dbrs, higher is poorer) in the control groups was 5.55	The mean ADHD symptoms hyperactivity, parent (pt, 7-20 weeks, dbd, du paul, conners, dbrs, higher is poorer) in the intervention groups was 0.40 standard deviations lower (0.76 to 0.04 lower)
ADHD symptoms hyperactivity, Teacher (PT, 8-20 weeks, Conners, higher is poorer)	84 (2 studies) 8-20 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity, teacher (pt, 8-20 weeks, conners, higher is poorer) in the control groups was 2.81	The mean ADHD symptoms hyperactivity, teacher (pt, 8-20 weeks, conners, higher is poorer) in the intervention groups was 0.32 standard deviations lower (0.77 lower to 0.14 higher)
ADHD symptoms hyperactivity (3-6 months FU, parent rated DBD rating scale, ADHD-HI, high is poor outcome)	201 (3 studies) 3-6 months	⊕⊖⊖⊖ VERY LOW[b,c] due to risk of bias,		The mean ADHD symptoms hyperactivity (3-6 months fu, parent rated dbd rating scale, adhd-hi, high is poor outcome) in the control	The mean ADHD symptoms hyperactivity (3-6 months fu, parent rated dbd rating scale, adhd-hi, high is poor outcome) in the intervention

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/Usual Care	Risk difference with Parent/Family Training (95% CI)
		imprecision		groups was 2.45	groups was 0.34 standard deviations lower (0.63 to 0.05 lower)
ADHD symptoms hyperactivity (6 months FU, teacher rated disruptive behaviour disorder rating scale, 0-3, high is poor outcome)	36 (1 study) 6 months	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (6 months fu, teacher rated disruptive behaviour disorder rating scale, 0-3, high is poor outcome) in the control groups was 0.6	The mean ADHD symptoms hyperactivity (6 months fu, teacher rated disruptive behaviour disorder rating scale, 0-3, high is poor outcome) in the intervention groups was 0.72 higher (0.17 to 1.27 higher)
CGI-I ~ much improved or very much improved (10 weeks PT, investigator rated, 1-7)	64 (1 study) 10 weeks	⊕⊖⊖⊖ VERY LOW[a,f] due to risk of bias, imprecision	RR 1.5 (0.6 to 3.72)	Moderate	
				188 per 1000	94 more per 1000 (from 75 fewer to 511 more)
Function/behaviour, Parent (PT, 20 weeks, Conners (0-84), higher is poorer)	96 (1 study) 20 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour, parent (pt, 20 weeks, conners (0-84), higher is poorer) in the control groups was 61.25	The mean function/behaviour, parent (pt, 20 weeks, conners (0-84), higher is poorer) in the intervention groups was 2.80 lower (7.27 lower to 1.67 higher)
Function/behaviour, Teacher (PT, 8-20 weeks, Conners, SNAP, CBQ, AAPC, higher is poorer)	288 (3 studies) 8-20 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean function/behaviour, teacher (pt, 8-20 weeks, conners, snap, cbq, aapc, higher is poorer) in the control groups was 22.34	The mean function/behaviour, teacher (pt, 8-20 weeks, conners, snap, cbq, aapc, higher is poorer) in the intervention groups was 0.21 standard deviations lower (0.44 lower to 0.02 higher)
Function/Behaviour (8 weeks PT, self-reported CBQ-20, 0-7, high is poor outcome)	36 (1 study) 8 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of		The mean function/behaviour (8 weeks pt, self-reported cbq-20, 0-7, high is poor outcome) in the control	The mean function/behaviour (8 weeks pt, self-reported cbq-20, 0-7, high is poor outcome) in the

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/Usual Care	Risk difference with Parent/Family Training (95% CI)
		bias, imprecision		groups was 2	intervention groups was 0.34 higher (0.09 lower to 0.77 higher)
Function/behaviour, Parent (PT, 8-20 weeks, ECBI, Conners, DBD, SNAP, CBQ, AAPC, higher is poorer)	438 (7 studies) 8-20 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour, parent (pt, 8-20 weeks, ecbi, conners, dbd, snap, cbq, aapc, higher is poorer) in the control groups was 11.08	The mean function/behaviour, parent (pt, 8-20 weeks, ecbi, conners, dbd, snap, cbq, aapc, higher is poorer) in the intervention groups was 0.39 standard deviations lower (0.58 to 0.19 lower)
Function/Behaviour (1-6 months FU, parent reported DBD, ECBI, SDQ, CBQ-20, AAPC, high is poor outcome)	375 (5 studies) 1-6 months	⨁⨀⨀⨀ VERY LOW[c,d] due to risk of bias, inconsistency		The mean function/behaviour (1-6 months fu, parent reported dbd, ecbi, sdq, cbq-20, aapc, high is poor outcome) in the control groups was 10.29	The mean function/behaviour (1-6 months fu, parent reported dbd, ecbi, sdq, cbq-20, aapc, high is poor outcome) in the intervention groups was 0.30 standard deviations lower (0.68 to 0.08 lower)
Function/Behaviour (6 months FU, teacher rated AAPC, 0-3, high is poor outcome)	128 (1 study) 6 months	⨁⨁⨁⨀ MODERATE[a] due to risk of bias		The mean function/behaviour (6 months fu, teacher rated aapc, 0-3, high is poor outcome) in the control groups was 0.76	The mean function/behaviour (6 months fu, teacher rated aapc, 0-3, high is poor outcome) in the intervention groups was 0.10 higher (0.14 lower to 0.34 higher)
Function/Behaviour (6 months FU, self-reported CBQ-20, 0-7, high is poor outcome)	36 (1 study) 6 months	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (6 months fu, self-reported cbq-20, 0-7, high is poor outcome) in the control groups was 2.9	The mean function/behaviour (6 months fu, self-reported cbq-20, 0-7, high is poor outcome) in the intervention groups was 0.66 lower (1.22 to 0.1 lower)
Academic - Literacy (8 weeks PT, reading/language arts (RLA)	75 (1 study)	⨁⨀⨀⨀ VERY LOW[b,c]		The mean academic - literacy (8 weeks pt, reading/language arts	The mean academic - literacy (8 weeks pt, reading/language arts (rla)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/Usual Care	Risk difference with Parent/Family Training (95% CI)
accuracy %, high is good outcome)	8 weeks	due to risk of bias, imprecision		(rla) accuracy %, high is good outcome) in the control groups was 82.76	accuracy %, high is good outcome) in the intervention groups was 8.83 higher (4.53 to 13.13 higher)
Academic - Numeracy (8 weeks PT, math accuracy %, high is good outcome)	75 (1 study) 8 weeks	⨁⨁⨀⨀ LOW[c] due to risk of bias		The mean academic - numeracy (8 weeks pt, math accuracy %, high is good outcome) in the control groups was 83.85	The mean academic - numeracy (8 weeks pt, math accuracy %, high is good outcome) in the intervention groups was 8.04 higher (4.7 to 11.38 higher)

(a) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
(b) Downgraded by 1 increment if the confidence interval crossed 1 MID.
(c) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(d) Downgraded by 1 or 2 increments because the point estimate and or the confidence intervals varied widely across studies, unexplained by subgroup analysis
(e) Downgrade by 2 increments if the confidence interval crossed both MIDs.

Table 5: Clinical evidence summary: Attention/memory/cognitive training versus waitlist/usual care

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Attention/memory/cognitive training (95% CI)
ADHD symptoms total (12 weeks PT parent rated, CBCL, unclear range high is poor outcome)	60 (1 study) 12 weeks	⨁⨁⨀⨀ LOW[d] due to risk of bias		The mean ADHD symptoms total (12 weeks pt parent rated, cbcl, unclear range, high is poor outcome) in the control groups was 72.6	The mean ADHD symptoms total (12 weeks pt parent rated, cbcl, unclear range, high is poor outcome) in the intervention groups was 27.60 lower (30.67 to 24.53 lower)
ADHD symptoms total (5-7weeks	67	⨁⨁⨀⨀		The mean ADHD symptoms total	The mean ADHD symptoms total (5-

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Attention/memory/cognitive training (95% CI)
PT, parent rated ARS-IV, 25-49, high is poor outcome)	(1 study) 5-7 weeks	LOW[a,b] due to risk of bias, imprecision		(5-7weeks pt, parent rated ars-iv, 25-49, high is poor outcome) in the control groups was 27.6	7weeks pt, parent rated ars-iv, 25-49, high is poor outcome) in the intervention groups was 2.40 lower (8.1 lower to 3.3 higher)
ADHD symptoms total (5-7weeks PT, teacher rated ARS-IV, unclear range, high is poor outcome)	67 (1 study) 5-7 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms total (5-7weeks pt, teacher rated ars-iv, unclear range, high is poor outcome) in the control groups was 21.9	The mean ADHD symptoms total (5-7weeks pt, teacher rated ars-iv, unclear range, high is poor outcome) in the intervention groups was 2.00 lower (7.68 lower to 3.68 higher)
ADHD symptoms total (8 months FU, parent rated ARS-IV, 25-49, high is poor outcome)	67 (1 study) 8 months	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms total (8 months fu, parent rated ars-iv, 25-49, high is poor outcome) in the control groups was 28.1	The mean ADHD symptoms total (8 months fu, parent rated ars-iv, 25-49, high is poor outcome) in the intervention groups was 1.10 lower (6.49 lower to 4.29 higher))
ADHD symptoms total (8 months FU, teacher rated ARS-IV, unclear range, high is poor outcome)	67 (1 study) 8 months	⨁⨁⨀⨀ LOW[1,2] due to risk of bias, imprecisio		The mean ADHD symptoms total (8 months fu, teacher rated ars-iv, unclear range, high is poor outcome) in the control groups was 22.6	The mean ADHD symptoms total (8 months fu, teacher rated ars-iv, unclear range, high is poor outcome) in the intervention groups was 2.50 lower

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Attention/memory/cognitive training (95% CI)
		n			(7.82 lower to 2.82 higher)
ADHD symptoms inattention (5-7 weeks PT, parent rated ARS-IV, high is poor outcome)	107 (2 studies) 5-7 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (5-7 weeks pt, parent rated ars-iv, high is poor outcome) in the control groups was 16.48	The mean ADHD symptoms inattention (5-7 weeks pt, parent rated ars-iv, high is poor outcome) in the intervention groups was 2.31 lower (4.54 to 0.09 lower)
ADHD symptoms inattention (12-20 weeks PT, parent rated Conners Rating Scales–Revised, SNAP, high is poor outcome)	197 (3 studies) 12-20 weeks	⊕⊕⊕⊖ LOW[a,e] due to risk of bias, inconsistency		The mean ADHD symptoms inattention (12-20 weeks pt, parent rated conners rating scales–revised, snap, high is poor outcome) in the control groups was 36.89	The mean ADHD symptoms inattention (12-20 weeks pt, parent rated conners rating scales–revised, snap, high is poor outcome) in the intervention groups was 1.14 standard deviations lower (1.91 to 0.38 lower)
ADHD symptoms inattention (6-8 months FU, parent rated ARS-IV, Conners-3P, high is poor outcome)	137 (2 studies) 6-8 months	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (6-8 months fu, parent rated ars-iv, conners-3p, high is poor outcome) in the control groups was 46.37	The mean ADHD symptoms inattention (6-8 months fu, parent rated ars-iv, conners-3p, high is poor outcome) in the intervention groups was 0.47 standard deviations lower (0.81 to 0.13 lower)
ADHD symptoms inattention (5-7	107	⊕⊕⊖⊖		The mean ADHD symptoms	The mean ADHD symptoms

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Attention/memory/cognitive training (95% CI)
weeks PT, teacher rated ARS-IV, high is poor outcome)	(2 studies) 5-7 weeks	LOW[a,b] due to risk of bias, imprecision		inattention (5-7 weeks pt, teacher rated ars-iv, high is poor outcome) in the control groups was 12.87	inattention (5-7 weeks pt, teacher rated ars-iv, high is poor outcome) in the intervention groups was 1.11 lower (3.54 lower to 1.33 higher)
ADHD symptoms inattention (12-20 weeks PT, teacher rated Conners Rating Scales–Revised, SNAP, high is poor outcome)	201 (3 studies) 12-20 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms inattention (12-20 weeks pt, teacher rated conners rating scales–revised, snap, high is poor outcome) in the control groups was 33.7	The mean ADHD symptoms inattention (12-20 weeks pt, teacher rated conners rating scales–revised, snap, high is poor outcome) in the intervention groups was 0.06 standard deviations higher (0.22 lower to 0.34 higher)
ADHD symptoms inattention (8 months FU, teacher rated ARS-IV, 12-24, high is poor outcome)	67 (1 study) 8 months	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (8 months fu, teacher rated ars-iv, 12-24, high is poor outcome) in the control groups was 14.5	The mean ADHD symptoms inattention (8 months fu, teacher rated ars-iv, 12-24, high is poor outcome) in the intervention groups was 1.30 lower (4.34 lower to 1.74 higher)
ADHD symptoms inattention (12 weeks PT, investigator rated SNAP, 0-3, high is poor outcome)	105 (1 study) 12 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms inattention (12 weeks pt, investigator rated snap, 0-3, high is poor outcome) in the control groups was 2.39	The mean ADHD symptoms inattention (12 weeks pt, investigator rated snap, 0-3, high is poor outcome) in the intervention groups was 0.55 lower

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Attention/memory/cognitive training (95% CI)
					(0.74 to 0.36 lower)
ADHD symptoms inattention (14 weeks PT, teacher rated CTRS-R:L, more events is better)	50 (1 study) 14 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision	RR 2.75 (1.01 to 7.48)	Moderate	
				160 per 1000	280 more per 1000 (from 2 more to 1000 more)
ADHD symptoms inattention (52 weeks FU, teacher rated CTRS-R:L, more events is better)	50 (1 study) 52 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision	RR 0.79 (0.54 to 1.16)	Moderate	
				760 per 1000	160 fewer per 1000 (from 350 fewer to 122 more)
ADHD symptoms hyperactivity (5-7 weeks PT, parent rated ARS-IV, high is poor outcome)	107 (2 studies) 5-7 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (5-7 weeks pt, parent rated ars-iv, high is poor outcome) in the control groups was 12.8	The mean ADHD symptoms hyperactivity (5-7 weeks pt, parent rated ars-iv, high is poor outcome) in the intervention groups was 2.08 lower (4.38 lower to 0.21 higher)
ADHD symptoms hyperactivity (12 - 20 weeks PT, parent rated Conners 3-P, SNAP, high is poor outcome)	197 (3 studies) 12-20 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecisio		The mean ADHD symptoms hyperactivity (12 - 20 weeks pt, parent rated conners 3-p, snap, high is poor outcome) in the control groups was 35.95	The mean ADHD symptoms hyperactivity (12 - 20 weeks pt, parent rated conners 3-p, snap, high is poor outcome) in the intervention groups was 0.41 standard deviations lower

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Attention/memory/cognitive training (95% CI)
		n			(0.7 to 0.13 lower)
ADHD symptoms hyperactivity (6-8 months FU, parent rated ARS-IV, Conners 3-P, high is poor outcome)	137 (2 studies) 6-8 months	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (6-8 months fu, parent rated ars-iv, conners 3-p, high is poor outcome) in the control groups was 45.41	The mean ADHD symptoms hyperactivity (6-8 months fu, parent rated ars-iv, conners 3-p, high is poor outcome) in the intervention groups was 0.2 standard deviations lower (0.54 lower to 0.13 higher)
ADHD symptoms hyperactivity (5-7 weeks PT, teacher rated ARS-IV, high is poor outcome)	107 (2 studies) 5-7 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (5-7 weeks pt, teacher rated ars-iv, high is poor outcome) in the control groups was 8.58	The mean ADHD symptoms hyperactivity (5-7 weeks pt, teacher rated ars-iv, high is poor outcome) in the intervention groups was 0.82 lower (3.00 lower to 1.36 higher)
ADHD symptoms hyperactivity (17 weeks PT, teacher rated Conners Rating Scales–Revised, 0-84, high is poor outcome)	26 (1 study) 17 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (17 weeks pt, teacher rated conners rating scales–revised, 0-84, high is poor outcome) in the control groups was 52.8	The mean ADHD symptoms hyperactivity (17 weeks pt, teacher rated conners rating scales–revised, 0-84, high is poor outcome) in the intervention groups was 11.80 higher (0.33 to 23.27 higher)
ADHD symptoms hyperactivity (8months FU, teacher rated ARS-	67 (1 study)	⊕⊕⊖⊖ LOW[a,b]		The mean ADHD symptoms hyperactivity (8months fu, teacher	The mean ADHD symptoms hyperactivity (8months fu, teacher

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Attention/memory/cognitive training (95% CI)
IV, unclear range, high is poor outcome)	8 months	due to risk of bias, imprecision		rated ars-iv, unclear range, high is poor outcome) in the control groups was 8.2	rated ars-iv, unclear range, high is poor outcome) in the intervention groups was 1.30 lower (4.08 lower to 1.48 higher)
ADHD symptoms hyperactivity (12 weeks PT, investigator rated SNAP, 0-3, high is poor outcome)	105 (1 study) 12 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (12 weeks pt, investigator rated snap, 0-3, high is poor outcome) in the control groups was 1.51	The mean ADHD symptoms hyperactivity (12 weeks pt, investigator rated snap, 0-3, high is poor outcome) in the intervention groups was 0.24 lower (0.49 lower to 0.01 higher)
Discontinuation related to study intervention (12 weeks)	105 (1 study) 12 weeks	⨁⨀⨀⨀ VERY LOW[a,c] due to risk of bias, imprecision	RR 1.7 (0.61 to 4.73)	Moderate	
				98 per 1000	69 more per 1000 (from 38 fewer to 366 more)
Function/Behaviour (5-7weeks PT, parent rated Global Executive Composite, high is poor outcome)	107 (2 studies) 5-7 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (5-7weeks pt, parent rated global executive composite, high is poor outcome) in the control groups was 103.8	The mean function/behaviour (5-7weeks pt, parent rated global executive composite, high is poor outcome) in the intervention groups was 0.2 standard deviations lower (0.59 lower to 0.18 higher)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Attention/memory/cognitive training (95% CI)
Function/Behaviour (12-20 weeks PT, parent rated BRIEF, global executive subscale, BASC, high is poor outcome)	245 (2 studies) 12-20 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (12-20 weeks pt, parent rated brief, behaviour regulation & global executive subscale, basc, high is poor outcome) in the control groups was 60.7	The mean function/behaviour (12-20 weeks pt, parent rated brief, behaviour regulation & global executive subscale, basc, high is poor outcome) in the intervention groups was 0.40 standard deviations lower (0.70 to 0.10 lower)
Function/Behaviour (6-8 months FU, parent rated BRIEF, global executive subscale, high is poor outcome)	137 (2 studies) 6-8 months	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (6-8 months fu, parent rated brief, global executive subscale, high is poor outcome) in the control groups was 65.25	The mean function/behaviour (6-8 months fu, parent rated brief, global executive subscale, high is poor outcome) in the intervention groups was 0.24 standard deviations lower (0.58 lower to 0.10 higher)
Function/Behaviour (5-12 weeks PT, teacher rated BASC, Global Executive Composite, high is poor outcome)	172 (2 studies) 5-12 weeks	⨁⨁⨁⨀ MODERATE[a] due to risk of bias		The mean function/behaviour (5-12 weeks pt, teacher rated basc, global executive composite, high is poor outcome) in the control groups was 62.83	The mean function/behaviour (5-12 weeks pt, teacher rated basc, global executive composite, high is poor outcome) in the intervention groups was 0.11 standard deviations higher (0.19 lower to 0.41 higher)
Function/Behaviour (8 months FU,	67	⨁⨁⨀⨀		The mean function/behaviour (8	The mean function/behaviour (8

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Attention/memory/cognitive training (95% CI)
teacher rated Global Executive Composite, 0-100, high is poor outcome)	(1 study) 8 months	LOW[a,b] due to risk of bias, imprecision		months fu, teacher rated global executive composite, 0-100, high is poor outcome) in the control groups was 69	months fu, teacher rated global executive composite, 0-100, high is poor outcome) in the intervention groups was 2.00 lower (7.54 lower to 3.54 higher)
Function/Behaviour (5 months PT, investigator rated BOSS scale, 0-100, high is good outcome)	70 (1 study) 5 months	⨁⊖⊖⊖ VERY LOW[b,d] due to risk of bias, imprecision		The mean function/behaviour (5 months pt, investigator rated boss scale, 0-100, high is good outcome) in the control groups was 79.3	The mean function/behaviour (5 months pt, investigator rated boss scale, 0-100, high is good outcome) in the intervention groups was 2.20 lower (8.57 lower to 4.17 higher)
Function/Behaviour (6 months FU, investigator rated BOSS scale, 0-100, high is good outcome)	70 (1 study) 6 months	⨁⊖⊖⊖ VERY LOW[b,d] due to risk of bias, imprecision		The mean function/behaviour (6 months fu, investigator rated boss scale, 0-100, high is good outcome) in the control groups was 81.23	The mean function/behaviour (6 months fu, investigator rated boss scale, 0-100, high is good outcome) in the intervention groups was 5.07 lower (11.42 lower to 1.28 higher)
Academic - Literacy (5-7 weeks PT, LOGOS reading fluency % correct, 0-100, high is good outcome)	67 (1 study) 5-7 weeks	⨁⨁⊖⊖ LOW[a,b] due to risk of bias, imprecisio		The mean academic - literacy (5-7 weeks pt, logos reading fluency % correct, 0-100, high is good outcome) in the control groups was 95	The mean academic - literacy (5-7 weeks pt, logos reading fluency % correct, 0-100, high is good outcome) in the intervention groups was 1.00 higher

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Attention/memory/cognitive training (95% CI)
		n			(1.39 lower to 3.39 higher)
Academic - Literacy (8 months FU, LOGOS reading fluency % correct, 0-100, high is good outcome)	67 (1 study) 8 months	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean academic - literacy (8 months pt, logos reading fluency % correct, 0-100, high is good outcome) in the control groups was 96	The mean academic - literacy (8 months pt, logos reading fluency % correct, 0-100, high is good outcome) in the intervention groups was 2.00 higher (0.31 to 3.69 higher)
Academic - Numeracy (5-7 weeks PT, Key Math composite score, 0-18, high is good outcome	67 (1 study) 5-7 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean academic - numeracy (5-7 weeks pt, key math composite score, 0-18, high is good outcome in the control groups was 7.8	The mean academic - numeracy (5-7 weeks pt, key math composite score, 0-18, high is good outcome in the intervention groups was 0.60 higher (0.49 lower to 1.69 higher)
Academic - Numeracy (8 months FU, Key Math composite score, 0-18, high is good outcome	67 (1 study) 8 months	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean academic - numeracy (8 months fu, key math composite score, 0-18, high is good outcome in the control groups was 7.7	The mean academic - numeracy (8 months fu, key math composite score, 0-18, high is good outcome in the intervention groups was 0.50 higher (0.63 lower to 1.63 higher)

(a) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
(b) Downgraded by 1 increment if the confidence interval crossed one MID.

(c) Downgraded by 2 increments if the confidence interval crossed both MIDs.
(d) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(e) Downgraded due to heterogeneity, unexplained by subgroup analysis.

Table 6: Clinical evidence summary: Neurofeedback versus waitlist/usual care

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Neurofeedback (95% CI)
ADHD symptoms inattention (17-20 weeks PT, parent rated Conners Rating Scales–Revised, high is poor outcome)	90 (2 studies) 17-20 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (17-20 weeks pt, parent rated conners rating scales–revised, high is poor outcome) in the control groups was 74.59	The mean ADHD symptoms inattention (17-20 weeks pt, parent rated conners rating scales–revised, high is poor outcome) in the intervention groups was 4.97 lower (9.17 to 0.77 lower)
ADHD symptoms inattention (6 months FU, parent rated Conners 3-P, 0-84, high is poor outcome)	70 (1 study) 6 months	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (6 months fu, parent rated conners 3-p, 0-84, high is poor outcome) in the control groups was 74.58	The mean ADHD symptoms inattention (6 months fu, parent rated conners 3-p, 0-84, high is poor outcome) in the intervention groups was 4.52 lower (10.03 lower to 0.99 higher)
ADHD symptoms inattention (17-20 weeks PT, teacher rated Conners Rating Scales–Revised, high is poor outcome)	94 (2 studies) 17-20 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (17-20 weeks pt, teacher rated conners rating scales–revised, high is poor outcome) in the control groups was 65.73	The mean ADHD symptoms inattention (17-20 weeks pt, teacher rated conners rating scales–revised, high is poor outcome) in the intervention groups was 3.12 lower (7.65 lower to 1.41 higher)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Neurofeedback (95% CI)
ADHD symptoms inattention (1 year FU, self-rated DSM-IV, 0-9, CS, high is poor outcome)	90 (1 study) 1 years	⊕⊖⊖⊖ VERY LOW[d,e] due to risk of bias, imprecision		See comment3	The mean ADHD symptoms inattention (1 year fu, self-rated dsm-iv, 0-9, cs, high is poor outcome) in the intervention groups was 0.06 standard deviations lower (0.72 lower to 0.61 higher)
ADHD symptoms hyperactivity (17-20 weeks PT, parent rated Conners Rating Scales–Revised, high is poor outcome)	90 (2 studies) 17-20 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (17-20 weeks pt, parent rated conners rating scales–revised, high is poor outcome) in the control groups was 73.54	The mean ADHD symptoms hyperactivity (17-20 weeks pt, parent rated conners rating scales–revised, high is poor outcome) in the intervention groups was 2.18 lower (8.34 lower to 3.97 higher)
ADHD symptoms hyperactivity (6 months FU, parent rated Conners 3-P, 0-84, high is poor outcome)	70 (1 study) 6 months	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (6 months fu, parent rated conners 3-p, 0-84, high is poor outcome) in the control groups was 77.16	The mean ADHD symptoms hyperactivity (6 months fu, parent rated conners 3-p, 0-84, high is poor outcome) in the intervention groups was 4.80 lower (11.86 lower to 2.26 higher)
ADHD symptoms hyperactivity (17 weeks PT, teacher rated Conners Rating Scales–Revised, 0-84, high is poor	24 (1 study) 17 weeks	⊕⊖⊖⊖ VERY LOW[a,c] due to risk		The mean ADHD symptoms hyperactivity (17 weeks pt, teacher rated conners rating scales–revised, 0-84, high is poor outcome)	The mean ADHD symptoms hyperactivity (17 weeks pt, teacher rated conners rating scales–revised, 0-84, high is poor outcome) in the

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Neurofeedback (95% CI)
outcome)		of bias, imprecision		in the control groups was 52.8	intervention groups was 3.30 higher (6.73 lower to 13.33 higher)
ADHD symptoms hyperactivity (1 year FU, self-rated DSM-IV, 0-9, CS, high is poor outcome)	90 (1 study) 1 patient-years	⨁⊖⊖⊖ VERY LOW[b,d] due to risk of bias, imprecision		See comment3	The mean ADHD symptoms hyperactivity (1 year fu, self-rated dsm-iv, 0-9, cs, high is poor outcome) in the intervention groups was 0.22 standard deviations lower (0.89 lower to 0.45 higher)
Function/Behaviour (5 months PT, parent rated BRIEF, global executive subscale 0-100, high is poor outcome)	70 (1 study) 5 months	⨁⨁⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (5 months pt, parent rated brief, global executive subscale 0-100, high is poor outcome) in the control groups was 64.8	The mean function/behaviour (5 months pt, parent rated brief, global executive subscale 0-100, high is poor outcome) in the intervention groups was 2.70 lower (6.89 lower to 1.49 higher)
Function/Behaviour (6 months FU, parent rated BRIEF, global executive subscale, 0-100, high is poor outcome)	70 (1 study) 6 months	⨁⨁⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (6 months fu, parent rated brief, global executive subscale, 0-100, high is poor outcome) in the control groups was 65.48	The mean function/behaviour (6 months fu, parent rated brief, global executive subscale, 0-100, high is poor outcome) in the intervention groups was 4.46 lower (9.21 lower to 0.29 higher)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Neurofeedback (95% CI)
Function/Behaviour (5 months PT, investigator rated BOSS scale, 0-100, high is good outcome)	70 (1 study) 5 months	⨁⊖⊖⊖ VERY LOW[b,d] due to risk of bias, imprecision		The mean function/behaviour (5 months pt, investigator rated boss scale, 0-100, high is good outcome) in the control groups was 79.3	The mean function/behaviour (5 months pt, investigator rated boss scale, 0-100, high is good outcome) in the intervention groups was 1.30 lower (7.92 lower to 5.32 higher)
Function/Behaviour (6 months FU, investigator rated BOSS scale, 0-100, high is good outcome)	70 (1 study) 6 months	⨁⨁⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (6 months fu, investigator rated boss scale, 0-100, high is good outcome) in the control groups was 81.23	The mean function/behaviour (6 months fu, investigator rated boss scale, 0-100, high is good outcome) in the intervention groups was 3.47 lower (9.11 lower to 2.17 higher)

(f) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
(g) Downgraded by 1 increment if the confidence interval crossed 1 MID.
(h) Control group mean unavailable.
(i) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(j) Downgraded by 2 increments if the confidence interval crossed both MIDs.

Table 7: Clinical evidence summary: Psychoeducation versus waitlist/usual care

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual Care	Risk difference with Psychoeducation (95% CI)
ADHD symptoms total (11 weeks FU, teacher rated Children symptom inventory, 0-27, high is poor outcome)	14 (1 study) 11 weeks	⨁⊖⊖⊖ VERY LOW[a,b] due to risk		The mean ADHD symptoms total (11 weeks fu, teacher rated children symptom inventory, 0-27, high is poor outcome) in the control groups	The mean ADHD symptoms total (11 weeks fu, teacher rated children symptom inventory, 0-27, high is poor outcome) in the intervention

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual Care	Risk difference with Psychoeducation (95% CI)
		of bias, imprecision		was 12	groups was 5.14 lower (11.17 lower to 0.89 higher)
ADHD symptoms total (7 weeks PT, teacher rated Children symptom inventory, 0-27, high is poor outcome)	14 (1 study) 7 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms total (7 weeks pt, teacher rated children symptom inventory, 0-27, high is poor outcome) in the control groups was 11.86	The mean ADHD symptoms total (7 weeks pt, teacher rated children symptom inventory, 0-27, high is poor outcome) in the intervention groups was 4.86 lower (10.49 lower to 0.77 higher)
ADHD symptoms inattention (7 weeks PT, teacher rated Children symptom inventory, 0-27, high is poor outcome)	14 (1 study) 7 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (7 weeks pt, teacher rated children symptom inventory, 0-27, high is poor outcome) in the control groups was 6.57	The mean ADHD symptoms inattention (7 weeks pt, teacher rated children symptom inventory, 0-27, high is poor outcome) in the intervention groups was 2.43 standard deviations lower (5.4 lower to 0.54 higher)
ADHD symptoms inattention (11 weeks FU, teacher rated Children symptom inventory, 0-27, high is poor outcome)	14 (1 study) 11 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (11 weeks fu, teacher rated children symptom inventory, 0-27, high is poor outcome) in the control groups was 6.29	The mean ADHD symptoms inattention (11 weeks fu, teacher rated children symptom inventory, 0-27, high is poor outcome) in the intervention groups was 2.00 standard deviations lower (5.43 lower to 1.43 higher)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual Care	Risk difference with Psychoeducation (95% CI)
ADHD symptoms inattention (6 weeks PT, parent rated CPRS, 0-27, high is poor outcome)	69 (1 study) 6 weeks	⊕⊕⊖⊖ LOW[b,c] due to risk of bias, imprecision		The mean ADHD symptoms inattention (6 weeks pt, parent rated cprs, 0-27, high is poor outcome) in the control groups was 12.38	The mean ADHD symptoms inattention (6 weeks pt, parent rated cprs, 0-27, high is poor outcome) in the intervention groups was 1.45 higher (0.61 lower to 3.51 higher)
ADHD symptoms hyperactivity (6 weeks PT, parent rated CPRS, 0-27, high is poor outcome)	69 (1 study) 6 weeks	⊕⊕⊖⊖ LOW[b,c] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (6 weeks pt, parent rated cprs, 0-27, high is poor outcome) in the control groups was 11.21	The mean ADHD symptoms hyperactivity (6 weeks pt, parent rated cprs, 0-27, high is poor outcome) in the intervention groups was 1.65 higher (0.46 lower to 3.76 higher)
ADHD symptoms hyperactivity (7 weeks PT, teacher rated Children symptom inventory, 0-27, high is poor outcome)	14 (1 study) 7 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (7 weeks pt, teacher rated children symptom inventory, 0-27, high is poor outcome) in the control groups was 5.29	The mean ADHD symptoms hyperactivity (7 weeks pt, teacher rated children symptom inventory, 0-27, high is poor outcome) in the intervention groups was 2.43 lower (5.66 lower to 0.8 higher)
ADHD symptoms hyperactivity (11 weeks FU, teacher rated Children symptom inventory, 0-27, high is poor outcome)	14 (1 study) 11 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias,		The mean ADHD symptoms hyperactivity (11 weeks fu, teacher rated children symptom inventory, 0-27, high is poor outcome) in the control groups was	The mean ADHD symptoms hyperactivity (11 weeks fu, teacher rated children symptom inventory, 0-27, high is poor outcome) in the intervention groups was

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual Care	Risk difference with Psychoeducation (95% CI)
		imprecision		5.71	3.14 lower (6.46 lower to 0.18 higher)
Function/Behaviour (6 weeks PT, parent reported SDQ, 0-40, high is poor outcome)	69 (1 study) 6 weeks	⊕⊕⊖⊖ LOW[b,c] due to risk of bias, imprecision		The mean function/behaviour (6 weeks pt, parent reported sdq, 0-40, high is poor outcome) in the control groups was 21.46	The mean function/behaviour (6 weeks pt, parent reported sdq, 0-40, high is poor outcome) in the intervention groups was 1.04 higher (2.09 lower to 4.17 higher)
Function/Behaviour (6 weeks PT, teacher reported SDQ, 0-40, high is poor outcome)	69 (1 study) 6 weeks	⊕⊕⊖⊖ LOW[b,c] due to risk of bias, imprecision		The mean function/behaviour (6 weeks pt, teacher reported sdq, 0-40, high is poor outcome) in the control groups was 14.44	The mean function/behaviour (6 weeks pt, teacher reported sdq, 0-40, high is poor outcome) in the intervention groups was 3.30 higher (1.1 to 5.5 higher)
Function/Behaviour (6 months FU, parent reported SDQ, 0-40, high is poor outcome)	69 (1 study) 6 months	⊕⊕⊖⊖ LOW[b,c] due to risk of bias, imprecision		The mean function/behaviour (6 months fu, parent reported sdq, 0-40, high is poor outcome) in the control groups was 22.43	The mean function/behaviour (6 months fu, parent reported sdq, 0-40, high is poor outcome) in the intervention groups was 1.22 lower (4.39 lower to 1.95 higher)
Function/Behaviour (6 months FU, teacher reported SDQ, 0-40, high is poor outcome)	69 (1 study) 6 months	⊕⊕⊖⊖ LOW[b,c] due to risk of bias, imprecision		The mean function/behaviour (6 months fu, teacher reported sdq, 0-40, high is poor outcome) in the control groups was 18.15	The mean function/behaviour (6 months fu, teacher reported sdq, 0-40, high is poor outcome) in the intervention groups was 0.32 lower (3.71 lower to 3.07 higher)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual Care	Risk difference with Psychoeducation (95% CI)

(a) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(b) Downgraded by 1 increment if the confidence interval crossed 1 MID.
(c) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.

Table 8: Clinical evidence summary: Relaxation versus waitlist/usual care

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Usual Care	Risk difference with Exercise (95% CI)
ADHD symptoms total (4 weeks PT, parent rated Conners scale, 0-84, high is poor outcome)	17 (1 study) 4 weeks	⨁⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms total (4 weeks pt, parent rated conners scale, 0-84, high is poor outcome) in the control groups was 19	The mean ADHD symptoms total (4 weeks pt, parent rated conners scale, 0-84, high is poor outcome) in the intervention groups was 3.22 lower (10.84 lower to 4.4 higher)
ADHD symptoms total (4 weeks PT, teacher rated Conners scale, 0-84, high is poor outcome)	17 (1 study) 4 weeks	⨁⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms total (4 weeks pt, teacher rated conners scale, 0-84, high is poor outcome) in the control groups was 12.63	The mean ADHD symptoms total (4 weeks pt, teacher rated conners scale, 0-84, high is poor outcome) in the intervention groups was 0.52 lower (5.88 lower to 4.84 higher)

(a) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(b) Downgraded by 2 increments if the confidence interval crossed both MIDs.

Table 9: Clinical evidence summary: Exercise versus waitlist/usual care

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Usual Care	Risk difference with Exercise (95% CI)
ADHD symptoms inattention (10 weeks PT, teacher rated Behaviour Rating scale, 0-54, High is good outcome)	84 (1 study) 10 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (10 weeks pt, teacher rated behaviour rating scale, 0-54, high is good outcome) in the control groups was 5.62	The mean ADHD symptoms inattention (10 weeks pt, teacher rated behavior rating scale, 0-54, high is good outcome) in the intervention groups was 2.84 higher (0.42 to 5.26 higher)
Function/behaviour (10 weeks PT, teacher rated Behaviour Rating scale, 0-54, High is good outcome)	84 (1 study) 10 weeks	⊕⊖⊖⊖ VERY LOW[a,c] due to risk of bias, imprecision		The mean function/behaviour (10 weeks pt, teacher rated behaviour rating scale, 0-54, high is good outcome) in the control groups was 3.45	The mean function/behaviour (10 weeks pt, teacher rated behavior rating scale, 0-54, high is good outcome) in the intervention groups was 0.74 lower (1.99 lower to 0.51 higher)
Academic performance (10 weeks PT, teacher rated Behaviour Rating scale, 0-54, High is good outcome)	84 (1 study) 10 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean academic performance (10 weeks pt, teacher rated behaviour rating scale, 0-54, high is good outcome) in the control groups was 23	The mean academic performance (10 weeks pt, teacher rated behavior rating scale, 0-54, high is good outcome) in the intervention groups was 7.24 higher (4.42 to 10.06 higher)

(a) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
(b) Downgraded by 1 increment if the confidence interval crossed 1 MID.
(c) Downgraded by 2 increments if the confidence interval crossed both MIDs.

Table 10: Clinical evidence summary: Organisation/School-based versus waitlist/usual care

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Organisational/school based (95% CI)
ADHD symptoms total (teacher rated 35 weeks PT, Disruptive Behaviour Disorders rating scale, 0-3, high is poor outcome)	60 (1 study) 35 weeks	⨁⊖⊖⊖ VERY LOW[b,c] due to risk of bias, imprecision		The mean ADHD symptoms total (35 weeks pt, disruptive behaviour disorders rating scale, 0-3, high is poor outcome) in the control groups was 1.23	The mean ADHD symptoms total (35 weeks pt, disruptive behaviour disorders rating scale, 0-3, high is poor outcome) in the intervention groups was 0.18 lower (0.51 lower to 0.15 higher)
ADHD symptoms inattention (11-20 weeks PT, parent rated VADPRS, FBB-HKS, high is poor outcome)	123 (2 studies) 11-20 weeks	⨁⨁⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (11-20 weeks pt, parent rated vadprs, fbb-hks, high is poor outcome) in the control groups was 1.92	The mean ADHD symptoms inattention (11-20 weeks pt, parent rated vadprs, fbb-hks, high is poor outcome) in the intervention groups was 0.50 standard deviations lower (0.86 to 0.14 lower)
ADHD symptoms inattention (39 weeks PT, parent rated disruptive behaviour disorder questionnaire, high is poor outcome)	371 (2 studies) 39 weeks	⨁⨁⨁⊖ MODERATE[b] due to imprecision		The mean ADHD symptoms inattention (39 weeks pt, parent rated disruptive behaviour disorder questionnaire, high is poor outcome) in the control groups was 15.37	The mean ADHD symptoms inattention (39 weeks pt, parent rated disruptive behaviour disorder questionnaire, high is poor outcome) in the intervention groups was 1.88 lower (3.23 to 0.52 lower)
ADHD symptoms inattention (65 weeks FU, parent rated disruptive	326 (1 study)	⨁⨁⨁⨁ HIGH		The mean ADHD symptoms inattention (65 weeks fu, parent	The mean ADHD symptoms inattention (65 weeks fu, parent

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Organisational/school based (95% CI)
behaviour disorder questionnaire, 0-27, high is poor outcome)	65 weeks			rated disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) in the control groups was 13.98	rated disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) in the intervention groups was 0.46 lower (2.01 lower to 1.09 higher)
ADHD symptoms inattention (20-39 weeks PT, teacher rated disruptive behaviour disorder questionnaire, FBB-HKS, high is poor outcome)	447 (3 studies) 20-39 weeks	⊕⊕⊕⊕ HIGH		The mean ADHD symptoms inattention (20-39 weeks pt, teacher rated disruptive behaviour disorder questionnaire, fbb-hks, high is poor outcome) in the control groups was 9.03	The mean ADHD symptoms inattention (20-39 weeks pt, teacher rated disruptive behaviour disorder questionnaire, fbb-hks, high is poor outcome) in the intervention groups was 0.10 standard deviations lower (0.3 lower to 0.1 higher)
ADHD symptoms inattention (65 weeks FU, teacher rated disruptive behaviour disorder questionnaire, 0-27, high is poor outcome)	326 (1 study) 65 weeks	⊕⊕⊕⊕ HIGH		The mean inattention (65 weeks fu, teacher rated disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) in the control groups was 10.36	The mean ADHD symptoms inattention (65 weeks fu, teacher rated disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) in the intervention groups was 0.21 lower (1.96 lower to 1.54 higher)
ADHD symptoms hyperactivity (20-39 weeks PT, parent disruptive behaviour disorder questionnaire, FBB-HKS, high is poor outcome)	447 (3 studies) 20-39 weeks	⊕⊕⊕⊕ HIGH		The mean ADHD symptoms hyperactivity (20-39 weeks pt, parent disruptive behaviour disorder questionnaire, fbb-hks, high is poor outcome) in the control	The mean ADHD symptoms hyperactivity (20-39 weeks pt, parent disruptive behaviour disorder questionnaire, fbb-hks, high is poor outcome) in the intervention groups

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Organisational/school based (95% CI)
				groups was 7.69	was 0.05 standard deviations lower (0.25 lower to 0.14 higher)
ADHD symptoms hyperactivity (20-39 weeks PT, teacher disruptive behaviour disorder questionnaire, FBB-HKS, high is poor outcome)	447 (3 studies) 20-39 weeks	⊕⊕⊕⊕ HIGH		The mean ADHD symptoms hyperactivity (20-39 weeks pt, teacher disruptive behaviour disorder questionnaire, fbb-hks, high is poor outcome) in the control groups was 4.99	The mean ADHD symptoms hyperactivity (20-39 weeks pt, teacher disruptive behaviour disorder questionnaire, fbb-hks, high is poor outcome) in the intervention groups was 0.14 standard deviations lower (0.33 lower to 0.06 higher)
ADHD symptoms hyperactivity (65 weeks FU, parent disruptive behaviour disorder questionnaire, 0-27, high is poor outcome)	332 (1 study) 65 weeks	⊕⊕⊕⊕ HIGH		The mean ADHD symptoms hyperactivity (65 weeks fu, parent disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) in the control groups was 8.2	The mean ADHD symptoms hyperactivity (65 weeks fu, parent disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) in the intervention groups was 0.91 lower (2.27 lower to 0.45 higher)
ADHD symptoms hyperactivity (65 weeks FU, teacher disruptive behaviour disorder questionnaire, 0-27, high is poor outcome)	326 (1 study) 65 weeks	⊕⊕⊕⊕ HIGH		The mean ADHD symptoms hyperactivity (65 weeks fu, teacher disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) in the control groups was 5.74	The mean ADHD symptoms hyperactivity (65 weeks fu, teacher disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) in the intervention groups was 0.73 lower (2.26 lower to 0.8 higher)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Organisational/school based (95% CI)
ADHD symptoms hyperactivity (11 weeks PT, parent rated VADPRS, hyperactive/impulsive, 0-3, high is poor outcome)	47 (1 study) 11 weeks	⨁⊖⊖⊖ VERY LOW[a,c] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (11 weeks pt, parent rated vadprs, hyperactive/impulsive, 0-3, high is poor outcome) in the control groups was 1.18	The mean ADHD symptoms hyperactivity (11 weeks pt, parent rated vadprs, hyperactive/impulsive, 0-3, high is poor outcome) in the intervention groups was 0.04 higher (0.36 lower to 0.44 higher)
Function/Behaviour (20-39 weeks PT, parent disruptive behaviour disorder questionnaire, SDQ, high is poor outcome)	402 (2 studies) 20-39 weeks	⨁⨁⨁⨁ HIGH		The mean function/behaviour (20-39 weeks pt, parent disruptive behaviour disorder questionnaire, sdq, high is poor outcome) in the control groups was 8.01	The mean function/behaviour (20-39 weeks pt, parent disruptive behaviour disorder questionnaire, sdq, high is poor outcome) in the intervention groups was 0.47 lower (1.22 lower to 0.28 higher)
Function/Behaviour (65 weeks FU, parent disruptive behaviour disorder questionnaire, 0-27, high is poor outcome)	326 (1 study) 65 weeks	⨁⨁⨁⨁ HIGH		The mean function/behaviour (65 weeks fu, parent disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) in the control groups was 8.07	The mean function/behaviour (65 weeks fu, parent disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) in the intervention groups was 1.11 lower (2.35 lower to 0.13 higher)
Function/Behaviour (20-39 weeks PT, teacher disruptive behaviour	462 (3 studies)	⨁⨁⨁⨁ HIGH		The mean function/behaviour (20-39 weeks pt, teacher disruptive	The mean function/behaviour (20-39 weeks pt, teacher disruptive

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Organisational/school based (95% CI)
disorder questionnaire, SDQ, high is poor outcome)	20-39 weeks			behaviour disorder questionnaire, sdq, high is poor outcome) in the control groups was 4.06	behaviour disorder questionnaire, sdq, high is poor outcome) in the intervention groups was 0.16 standard deviations lower (0.35 lower to 0.04 higher)
Function/Behaviour (65 weeks FU, teacher disruptive behaviour disorder questionnaire, 0-27, high is poor outcome)	326 (1 study) 65 weeks	⨁⨁⨁⨁ HIGH		The mean function/behaviour (65 weeks fu, teacher disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) in the control groups was 3.75	The mean function/behaviour (65 weeks fu, teacher disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) in the intervention groups was 0.22 higher (1.07 lower to 1.51 higher)
Academic - Literacy (35 weeks PT, Woodcock-Johnson reading subscale, 0-132, high is good outcome)	60 (1 study) 35 weeks	⨁⊖⊖⊖ VERY LOW[b,c] due to risk of bias, imprecision		The mean academic - literacy (35 weeks pt, woodcock-johnson reading subscale, 0-132, high is good outcome) in the control groups was 94.37	The mean academic - literacy (35 weeks pt, woodcock-johnson reading subscale, 0-132, high is good outcome) in the intervention groups was 1.54 higher (6.87 lower to 9.95 higher)
Academic (65 weeks FU, Teacher rated Classroom performance survey scale, unclear range, high is poor outcome)	326 (1 study) 65 weeks	⨁⨁⨁⨁ HIGH		The mean academic (65 weeks fu, teacher rated classroom performance survey scale, high is poor outcome) in the control groups was 24.66	The mean academic (65 weeks fu, teacher rated classroom performance survey scale, high is poor outcome) in the intervention groups was 0.05 higher (2.1 lower to 2.2 higher)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Organisational/school based (95% CI)
Academic (39 weeks PT, Teacher rated Classroom performance survey scale, unclear range, high is poor outcome)	326 (1 study) 39 weeks	⊕⊕⊕⊕ HIGH		The mean academic (39 weeks pt, teacher rated classroom performance survey scale, high is poor outcome) in the control groups was 24.48	The mean academic (39 weeks pt, teacher rated classroom performance survey scale, high is poor outcome) in the intervention groups was 0.98 lower (2.99 lower to 1.03 higher)
Academic - Numeracy (35 weeks PT, Woodcock-Johnson math subscale, 0-132, high is good outcome)	60 (1 study) 35 weeks	⊕⊖⊖⊖ VERY LOW[b,c] due to risk of bias, imprecision		The mean academic - numeracy (35 weeks pt, woodcock-johnson math subscale, 0-132, high is good outcome) in the control groups was 95.63	The mean academic - numeracy (35 weeks pt, woodcock-johnson math subscale, 0-132, high is good outcome) in the intervention groups was 1.68 higher (6.42 lower to 9.78 higher)
Academic performance (10-12 weeks PT, APRS, 19-95, High is good outcome)	158 (1 study) 10-12 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean academic performance (10-12 weeks pt, aprs, 19-95, high is good outcome) in the control groups was 54.53	The mean academic performance (10-12 weeks pt, aprs, 19-95, high is good outcome) in the intervention groups was 8.51 higher (4.65 to 12.37 higher)
Academic - Numeracy (1 year PT, WJ-III math fluency, 0-98, high is good outcome)	28 (1 study) 1 years	⊕⊖⊖⊖ VERY LOW[b,c]		The mean academic - numeracy (1 year pt, wj-iii math fluency, 0-98, high is good outcome) in the	The mean academic - numeracy (1 year pt, wj-iii math fluency, 0-98, high is good outcome) in the

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Organisational/school based (95% CI)
		due to risk of bias, imprecision		control groups was 14	intervention groups was 2.08 higher (2.87 lower to 7.03 higher)
Academic - Numeracy (during 10 week intervention, Maths worksheets, 0-100, high is good outcome)	28 (1 study) 10 weeks	⨁⊖⊖⊖ VERY LOW[c,d] due to risk of bias, imprecision		The mean academic - numeracy (during 10 week intervention, maths worksheets, 0-100, high is good outcome) in the control groups was 37.8	The mean academic - numeracy (during 10 week intervention, maths worksheets, 0-100, high is good outcome) in the intervention groups was 4.90 higher (10.66 lower to 20.46 higher)
Academic - Numeracy (10 days PT, WJ-III ACH math fluency, 0-98, high is good outcome	27 (1 study) 10 days	⨁⊖⊖⊖ VERY LOW[b,c] due to risk of bias, imprecision		The mean academic - numeracy (10 days pt, wj-iii ach math fluency, 0-98, high is good outcome in the control groups was 79.4	The mean academic - numeracy (10 days pt, wj-iii ach math fluency, 0-98, high is good outcome in the intervention groups was 6.70 higher (20.03 lower to 33.43 higher)
Academic performance (8 weeks PT, parent rated APRS, total, 19-95, High is good outcome)	37 (1 study) 8 weeks	⨁⊖⊖⊖ VERY LOW[b,c] due to risk of bias, imprecision		The mean academic performance (8 weeks pt, parent rated aprs, total, 19-95, high is good outcome) in the control groups was 60.92	The mean academic performance (8 weeks pt, parent rated aprs, total, 19-95, high is good outcome) in the intervention groups was 2.91 higher (4.29 lower to 10.11 higher)

(a) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.

(b) Downgraded by 1 increment if the confidence interval crossed 1 MID.
(c) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(d) Downgraded by 2 increments if the confidence interval crossed both MIDs.

Table 11: Clinical evidence summary: Parent/family training & Organisation/school based versus Waitlist/usual care

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/Usual Care	Risk difference with Parent/Family Training & Organisation/School-based (95% CI)
ADHD symptoms total (3 years FU, parent rated SNAP, 0-3, high is poor outcome)	243 (1 study) 3 years	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms total (3 years fu, snap, 0-3, high is poor outcome) in the control groups was 1.26	The mean ADHD symptoms total (3 years fu, snap, 0-3, high is poor outcome) in the intervention groups was 0.01 higher (0.14 lower to 0.16 higher)
ADHD symptoms inattention (39-60 weeks PT, parent rated disruptive behaviour disorder, SNAP, high is poor outcome)	305 (2 studies) 39-60 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms inattention (39-60 weeks pt, parent rated disruptive behaviour disorder, snap, high is poor outcome) in the control groups was 2.87	The mean ADHD symptoms inattention (39-60 weeks pt, parent rated disruptive behaviour disorder, snap, high is poor outcome) in the intervention groups was 0.13 standard deviations lower (0.35 lower to 0.1 higher)
ADHD symptoms inattention (60 weeks PT, teacher rated SNAP, 0-3, high is poor outcome)	247 (1 study) 60 weeks	⊕⊕⊖⊖ LOW[b] due to risk of bias		The mean ADHD symptoms inattention (60 weeks pt, teacher rated snap, 0-3, high is poor outcome) in the control groups was 1.48	The mean ADHD symptoms inattention (60 weeks pt, teacher rated snap, 0-3, high is poor outcome) in the intervention groups was 0.01 lower (0.18 lower to 0.16 higher)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/Usual Care	Risk difference with Parent/Family Training & Organisation/School-based (95% CI)
ADHD symptoms hyperactivity (39-60 weeks PT, parents rated disruptive behaviour disorder, SNAP, 0-27, high is poor outcome)	295 (2 studies) 39-60 weeks	⊕⊕⊕⊕ HIGH		The mean ADHD symptoms hyperactivity (39-60 weeks pt, parents rated disruptive behaviour disorder, snap, 0-27, high is poor outcome) in the control groups was 2.20	The mean ADHD symptoms hyperactivity (39-60 weeks pt, parents rated disruptive behaviour disorder, snap, 0-27, high is poor outcome) in the intervention groups was 0.15 standard deviations lower (0.38 lower to 0.08 higher)
ADHD symptoms hyperactivity (60 weeks PT, teacher rated SNAP, 0-3, high is poor outcome)	247 (1 study) 60 weeks	⊕⊕⊖⊖ LOW[b] due to risk of bias		The mean ADHD symptoms hyperactivity (60 weeks pt, teacher rated snap, 0-3, high is poor outcome) in the control groups was 1.25	The mean ADHD symptoms hyperactivity (60 weeks pt, teacher rated snap, 0-3, high is poor outcome) in the intervention groups was 0.15 lower (0.35 lower to 0.05 higher)
ADHD symptoms hyperactivity (60 weeks PT, classroom observer, unclear range, high is poor outcome)	216 (1 study) 60 weeks	⊕⊖⊖⊖ VERY LOW[b,c] due to risk of bias, imprecision		The mean ADHD symptoms ADHD symptoms hyperactivity (60 weeks pt, classroom observer, unclear range, high is poor outcome) in the control groups was 0.18	The mean ADHD symptoms hyperactivity (60 weeks pt, classroom observer, unclear range, high is poor outcome) in the intervention groups was 0.11 higher (0.05 to 0.17 higher)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/Usual Care	Risk difference with Parent/Family Training & Organisation/School-based (95% CI)
Function/behaviour - ODD (60 weeks PT, parent rated SNAP, 0-3, high is poor outcome)	259 (1 study) 60 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean function/behaviour - odd (60 weeks pt, parent rated snap, 0-3, high is poor outcome) in the control groups was 1.11	The mean function/behaviour - odd (60 weeks pt, parent rated snap, 0-3, high is poor outcome) in the intervention groups was 0.06 lower (0.23 lower to 0.11 higher)
Function/behaviour ODD (60 weeks PT, teacher rated SNAP, 0-3, high is poor outcome)	247 (1 study) 60 weeks	⊕⊕⊖⊖ LOW[b] due to risk of bias		The mean function/behaviour odd (60 weeks pt, teacher rated snap, 0-3, high is poor outcome) in the control groups was 1	The mean function/behaviour odd (60 weeks pt, teacher rated snap, 0-3, high is poor outcome) in the intervention groups was 0.03 lower (0.23 lower to 0.17 higher)
Function/behaviour - ODD aggression (60 weeks PT, classroom observer, unclear range, high is poor outcome)	216 (1 study) 60 weeks	⊕⊖⊖⊖ VERY LOW[b,c] due to risk of bias, imprecision		The mean function/behaviour - odd aggression (60 weeks pt, classroom observer, unclear range, high is poor outcome) in the control groups was 0.006	The mean function/behaviour - odd aggression (60 weeks pt, classroom observer, unclear range, high is poor outcome) in the intervention groups was 0.00 higher (0 to 0.01 higher)
Social skills (60 weeks PT, parent rated Social skills rating system internalising subscale, unclear range, high is poor	256 (1 study) 60 weeks	⊕⊕⊖⊖ LOW[b] due to risk of		The mean social skills (60 weeks pt, parent rated social skills rating system internalising subscale, unclear range, high is poor	The mean social skills (60 weeks pt, parent rated social skills rating system internalising subscale, unclear range, high is poor

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/Usual Care	Risk difference with Parent/Family Training & Organisation/School-based (95% CI)
outcome)		bias		outcome) in the control groups was 0.82	outcome) in the intervention groups was 0.05 lower (0.15 lower to 0.05 higher)
Social skills (60 weeks PT, teacher rated Social skills rating system internalising subscale, unclear range, high is poor outcome)	207 (1 study) 60 weeks	⨁⊖⊖⊖ VERY LOW[b,c] due to risk of bias, imprecision		The mean social skills (60 weeks pt, teacher rated social skills rating system internalising subscale, unclear range, high is poor outcome) in the control groups was 0.69	The mean social skills (60 weeks pt, teacher rated social skills rating system internalising subscale, unclear range, high is poor outcome) in the intervention groups was 0.11 lower (0.22 lower to 0 higher)
Academic - Literacy (3 years FU, WIAT, 0-132, high is good outcome)	243 (1 study) 3 years	⨁⨁⨁⊖ MODERATE[a] due to risk of bias		The mean academic - literacy (3 years fu, wiat, 0-132, high is good outcome) in the control groups was 96	The mean academic - literacy (3 years fu, wiat, 0-132, high is good outcome) in the intervention groups was 2.30 higher (1.32 lower to 5.92 higher)
Academic (39 weeks PT, Teacher rated Classroom performance survey scale, unclear range, high is poor outcome)	36 (1 study) 39 weeks	⨁⨁⊖⊖ LOW[a,c] due to risk of bias, imprecisio		The mean academic (39 weeks pt, teacher rated classroom performance survey scale, unclear range, high is poor outcome) in the control groups was	The mean academic (39 weeks pt, teacher rated classroom performance survey scale, unclear range, high is poor outcome) in the intervention groups was

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/Usual Care	Risk difference with Parent/Family Training & Organisation/School-based (95% CI)
		n		25.5	5.00 lower (9.99 to 0.01 lower)
Academic - Literacy (60 weeks PT, Wechsler Individual Achievement Test, 69-130, high is good outcome)	265 (1 study) 60 weeks	⨁⨁⨁⊖ MODERATE[a] due to risk of bias		The mean academic - literacy (60 weeks pt, wechsler individual achievement test, 69-130, high is good outcome) in the control groups was 95.4	The mean academic - literacy (60 weeks pt, wechsler individual achievement test, 69-130, high is good outcome) in the intervention groups was 0.80 higher (2.7 lower to 4.3 higher)
Academic - Numeracy (60 weeks PT, Wechsler Individual Achievement Test, 69-130, high is good outcome	265 (1 study) 60 weeks	⨁⨁⨁⊖ MODERATE[a] due to risk of bias		The mean academic - numeracy (60 weeks pt, wechsler individual achievement test, 69-130, high is good outcome in the control groups was 100.4	The mean academic - numeracy (60 weeks pt, wechsler individual achievement test, 69-130, high is good outcome in the intervention groups was 0.10 lower (3.59 lower to 3.39 higher)

(a) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
(b) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(c) Downgraded by 1 increment if the confidence interval crossed 1MID.

Table 12: Clinical evidence summary: Cognitive training & exercise versus waitlist/usual care

Outcomes	No of	Quality	Relative	Anticipated absolute effects

	Participants (studies) Follow up	of the evidence (GRADE)	effect (95% CI)	Risk with Waitlist/usual care	Risk difference with Cognitive training & exercise (95% CI)
ADHD symptoms total (15 weeks PT, clinician rated SNAP, unclear range, high is poor outcome)	80 (1 study) 15 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms total (15 weeks pt, clinician rated snap, unclear range, high is poor outcome) in the control groups was 25.6	The mean ADHD symptoms total (15 weeks pt, clinician rated snap, unclear range, high is poor outcome) in the intervention groups was 1.20 higher (2.24 lower to 4.64 higher)
ADHD symptoms total (15 weeks PT, parent rated SNAP, unclear range, high is poor outcome)	79 (1 study) 15 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms total (15 weeks pt, parent rated snap, unclear range, high is poor outcome) in the control groups was 24.4	The mean ADHD symptoms total (15 weeks pt, parent rated snap, unclear range, high is poor outcome) in the intervention groups was 1.00 lower (4.89 lower to 2.89 higher)
ADHD symptoms total (15 weeks PT, teacher rated SNAP, unclear range, high is poor outcome)	65 (1 study) 15 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms total (15 weeks pt, teacher rated snap, unclear range, high is poor outcome) in the control groups was 25.2	The mean ADHD symptoms total (15 weeks pt, teacher rated snap, unclear range, high is poor outcome) in the intervention groups was 0.10 lower (5.6 lower to 5.4 higher)

(a) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
(b) Downgraded by 1 increment if the confidence interval crossed 1MID.

Table 13: Clinical evidence summary: CBT/DBT versus Non-specific supportive therapy

Outcomes	No of	Quality	Relative	Anticipated absolute effects

	Participants (studies) Follow up	of the evidence (GRADE)	effect (95% CI)	Risk with Non-specific supportive therapy	Risk difference with CBT/DBT (95% CI)
ADHD symptoms inattention (17 weeks PT, parent rated Revised behaviour problem checklist, 0-27, high is poor outcome)	25 (1 study) 17 weeks	⨁⨁⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (17 weeks pt, parent rated revised behaviour problem checklist, 0-27, high is poor outcome) in the control groups was 17.7	The mean ADHD symptoms inattention (17 weeks pt, parent rated revised behaviour problem checklist, 0-27, high is poor outcome) in the intervention groups was 3.80 lower (9.74 lower to 2.14 higher)
ADHD symptoms inattention (39 weeks FU, parent rated Revised behaviour problem checklist, 0-27, high is poor outcome)	25 (1 study) 39 weeks	⨁⊖⊖⊖ VERY LOW[a,c] due to risk of bias, imprecision		The mean ADHD symptoms inattention (39 weeks fu, parent rated revised behaviour problem checklist, 0-27, high is poor outcome) in the control groups was 14.5	The mean ADHD symptoms inattention (39 weeks fu, parent rated revised behaviour problem checklist, 0-27, high is poor outcome) in the intervention groups was 2.00 lower (7.71 lower to 3.71 higher)
ADHD symptoms inattention (17 weeks PT, teacher rated Revised behaviour problem checklist, 0-27, high is poor outcome)	25 (1 study) 17 weeks	⨁⨁⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (17 weeks pt, teacher rated revised behaviour problem checklist, 0-27, high is poor outcome) in the control groups was 17.7	The mean ADHD symptoms inattention (17 weeks pt, teacher rated revised behaviour problem checklist, 0-27, high is poor outcome) in the intervention groups was 4.20 lower (7.97 to 0.43 lower)
ADHD symptoms inattention (39 weeks FU, teacher rated Revised behaviour problem	25 (1 study) 39 weeks	⨁⊖⊖⊖ VERY LOW[a,c]		The mean ADHD symptoms inattention (39 weeks fu, teacher rated revised behaviour problem	The mean ADHD symptoms inattention (39 weeks fu, teacher rated revised behaviour problem

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Non-specific supportive therapy	Risk difference with CBT/DBT (95% CI)
checklist, 0-27, high is poor outcome)		due to risk of bias, imprecision		checklist, 0-27, high is poor outcome) in the control groups was 14.1	checklist, 0-27, high is poor outcome) in the intervention groups was 1.20 lower (8.58 lower to 6.18 higher)
ADHD symptoms hyperactivity (17 weeks PT, parent rated modified Werry Weiss Activity scale, 0-100, high is poor outcome)	25 (1 study) 17 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (17 weeks pt, parent rated modified werry weiss activity scale, 0-100, high is poor outcome) in the control groups was 37.2	The mean ADHD symptoms hyperactivity (39 weeks fu, teacher rated revised behaviour problem checklist, 0-27, high is poor outcome) in the intervention groups was 11.00 lower (22.90 lower to 0.90 higher)
ADHD symptoms hyperactivity (39 weeks FU, parent rated modified Werry Weiss Activity scale, 0-100, high is poor outcome)	25 (1 study) 39 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (39 weeks fu, parent rated modified werry weiss activity scale, 0-100, high is poor outcome) in the control groups was 32.6	The mean ADHD symptoms hyperactivity (39 weeks fu, parent rated modified werry weiss activity scale, 0-100, high is poor outcome) in the intervention groups was 7.70 lower (20.12 lower to 4.72 higher)

(a) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
(b) Downgraded by 1 increment if the confidence interval crossed 1MID.
(c) Downgraded by 2 increments if the confidence interval crossed both MIDs.

Table 14: Clinical evidence summary: Organisation/School-based versus Non-specific supportive therapy

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Non-specific supportive therapy	Risk difference with Organisational/school based (95% CI)
Function/behaviour (10 weeks PT, adolescent reported Aggression and Conduct Problems Scale, 0-27, high is poor outcome)	20 (1 study) 10 weeks	⨁⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (10 weeks pt, aggression and conduct problems scale, 0-27, high is poor outcome) in the control groups was 10.33	The mean function/behaviour (10 weeks pt, aggression and conduct problems scale, 0-27, high is poor outcome) in the intervention groups was 7.15 lower (12.99 to 1.31 lower)
Emotional dysregulation (10 weeks PT, adolescent reported BASC-I, 0-100, high is poor outcome)	20 (1 study) 10 weeks	⨁⊖⊖⊖ VERY LOW[1a,b] due to risk of bias, imprecision		The mean emotional dysregulation (10 weeks pt, basc-i, 0-100, high is poor outcome) in the control groups was 45.11	The mean emotional dysregulation (10 weeks pt, basc-i, 0-100, high is poor outcome) in the intervention groups was 3.11 lower (7.58 lower to 1.36 higher)

(a) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(b) Downgraded by 1 increment if the confidence interval crossed 1 MID.

Table 15: Clinical evidence summary: Neurofeedback versus sham

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Sham	Risk difference with Neurofeedback (95% CI)
ADHD symptoms total (15 weeks PT, teacher rated ADHD-RS-IV , 0-54, high is poor outcome)	41 (1 study) 15 weeks	⨁⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms total (15 weeks pt, teacher rated adhd-rs-iv , 0-54, high is poor outcome) in the control groups was 18.9	The mean ADHD symptoms total (15 weeks pt, teacher rated adhd-rs-iv , 0-54, high is poor outcome) in the intervention groups was 0.40 higher (6.21 lower to 7.01 higher)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Sham	Risk difference with Neurofeedback (95% CI)
ADHD symptoms total (15 weeks PT, investigator rated ADHD-RS-IV , 0-54, high is poor outcome)	41 (1 study) 15 weeks	⨁⨁⨁⨀ MODERATE[c] due to imprecision		The mean ADHD symptoms total (15 weeks pt, investigator rated adhd-rs-iv , 0-54, high is poor outcome) in the control groups was 26.3	The mean ADHD symptoms total (15 weeks pt, investigator rated adhd-rs-iv , 0-54, high is poor outcome) in the intervention groups was 2.90 lower (8.02 lower to 2.22 higher)
ADHD symptoms inattention (15 weeks PT, teacher rated ADHD-RS-IV ADHD symptoms inattention, 0-27, high is poor outcome)	41 (1 study) 15 weeks	⨁⨀⨀⨀ VERY LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (15 weeks pt, teacher rated adhd-rs-iv inattention, 0-27, high is poor outcome) in the control groups was 11	The mean ADHD symptoms inattention (15 weeks pt, teacher rated adhd-rs-iv inattention, 0-27, high is poor outcome) in the intervention groups was 0.30 higher (2.91 lower to 3.51 higher)
ADHD symptoms inattention (15-17 weeks PT, investigator rated ADHD-RS-IV inattention, ADHD DSM-IV, high is poor outcome)	55 (2 studies) 15-17 weeks	⨁⨁⨁⨀ MODERATE[c] due to imprecision		The mean ADHD symptoms inattention (15-17 weeks pt, investigator rated adhd-rs-iv inattention, adhd dsm-iv, high is poor outcome) in the control groups was 13.49	The mean ADHD symptoms inattention (15-17 weeks pt, investigator rated adhd-rs-iv inattention, adhd dsm-iv, high is poor outcome) in the intervention groups was 0.06 standard deviations lower (0.59 lower to 0.48 higher)
ADHD symptoms hyperactivity (15 weeks PT, teacher rated	41 (1 study)	⨁⨀⨀⨀ VERY		The mean ADHD symptoms hyperactivity (15 weeks pt, teacher	The mean ADHD symptoms hyperactivity (15 weeks pt, teacher

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Sham	Risk difference with Neurofeedback (95% CI)
ADHD-RS-IV hyperactivity, 0-27, high is poor outcome)	15 weeks	LOW[a,b] due to risk of bias, imprecision		rated adhd-rs-iv hyperactivity, 0-27, high is poor outcome) in the control groups was 8	rated adhd-rs-iv hyperactivity, 0-27, high is poor outcome) in the intervention groups was 0.00 higher (4.17 lower to 4.17 higher)
ADHD symptoms hyperactivity (15-17 weeks PT, investigator rated ADHD-RS-IV hyperactivity, ADHD DSM-IV, high is poor outcome)	55 (2 studies) 15-17 weeks	⨁⨁⨁⊖ MODERATE[c] due to imprecision		The mean ADHD symptoms hyperactivity (15-17 weeks pt, investigator rated adhd-rs-iv hyperactivity, adhd dsm-iv, high is poor outcome) in the control groups was 13.03	The mean ADHD symptoms hyperactivity (15-17 weeks pt, investigator rated adhd-rs-iv hyperactivity, adhd dsm-iv, high is poor outcome) in the intervention groups was 0.46 standard deviations lower (1 lower to 0.08 higher)
CGI-I ~ much improved or very much improved (43 weeks FU, investigator rated)	14 (1 study) 43 weeks	⨁⨁⊖⊖ LOW[b] due to imprecision	Peto OR 5.75 (0.11 to 302.04)	Moderate	
				130 more per 1000 (from 180 fewer to 430 more)	
Serious adverse events (15 weeks PT, Pittsburgh Side Effects Rating Scale, 0-27, high is poor outcome)	41 (1 study) 15 weeks	⨁⨁⊖⊖ LOW[b] due to imprecision		The mean serious adverse events (15 weeks pt, pittsburgh side effects rating scale, 0-27, high is poor outcome) in the control groups was 3.9	The mean serious adverse events (15 weeks pt, pittsburgh side effects rating scale, 0-27, high is poor outcome) in the intervention groups was 0.20 higher (2.41 lower to 2.81 higher)

(a) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.

(b) Downgraded by 2 increments if the confidence interval crossed both MIDs.
(c) Downgraded by 1 increment if the confidence interval crossed 1 MID.

Table 16: Clinical evidence summary: Neurofeedback versus Exercise

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Exercise	Risk difference with Neurofeedback (95% CI)
ADHD symptoms hyperactivity, (10-12 weeks PT, parent rated, SWAN, 0-3, higher is poorer)	76 (1 study) 10-12 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity, (10-12 weeks pt, parent rated, swan, 0-3,higher is poorer) in the control groups was 1.07	The mean ADHD symptoms hyperactivity, (10-12 weeks pt, parent rated, swan,0-3, higher is poorer) in the intervention groups was 0.05 lower (0.41 lower to 0.31 higher)
ADHD symptoms hyperactivity, (10-12 weeks PT, teacher rated, SWAN, 0-3, higher is poorer)	74 (1 study) 10-12 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity, (10-12 weeks pt, teacher rated, swan, 0-3,higher is poorer) in the control groups was 1.1	The mean ADHD symptoms hyperactivity, (10-12 weeks pt, teacher rated, swan, 0-3,higher is poorer) in the intervention groups was 0.06 higher (0.41 lower to 0.53 higher)
ADHD symptoms inattention (10-12 weeks PT, parent rated SWAN, 0-3, high is poor outcome)	76 (1 study) 10-12 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms inattention (10-12 weeks pt, parent rated swan, 0-3, high is poor outcome) in the control groups was 1.11	The mean ADHD symptoms inattention (10-12 weeks pt, parent rated swan, 0-3, high is poor outcome) in the intervention groups was 0.00 higher (0.31 lower to 0.31 higher)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Exercise	Risk difference with Neurofeedback (95% CI)
ADHD symptoms inattention (10-12 weeks PT, teacher rated SWAN, 0-3, high is poor outcome)	74 (1 study) 10-12 weeks	⨁⨁⨁⨀ MODERATE[a] due to risk of bias		The mean ADHD symptoms inattention (10-12 weeks pt, teacher rated swan, 0-3, high is poor outcome) in the control groups was 1.33	The mean ADHD symptoms inattention (10-12 weeks pt, teacher rated swan, 0-3, high is poor outcome) in the intervention groups was 0.03 lower (0.37 lower to 0.31 higher)
Function/Behaviour (10-12 weeks PT, parent reported SDQ, 0-40, high is poor outcome)	76 (1 study) 10-12 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (10-12 weeks pt, parent reported sdq, 0-40, high is poor outcome) in the control groups was 15.81	The mean function/behaviour (10-12 weeks pt, parent reported sdq, 0-40, high is poor outcome) in the intervention groups was 0.89 lower (3.29 lower to 1.51 higher)
Function/Behaviour (10-12 weeks PT, teacher reported SDQ, 0-40, high is poor outcome)	74 (1 study) 10-12 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (10-12 weeks pt, teacher reported sdq, 0-40, high is poor outcome) in the control groups was 15.97	The mean function/behaviour (10-12 weeks pt, teacher reported sdq, 0-40, high is poor outcome) in the intervention groups was 0.59 lower (2.88 lower to 1.7 higher)

(a) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
(b) Downgraded by 1 increment if the confidence interval crossed 1 MID.

Table 17: Clinical evidence summary: Parent/family training versus relaxation

Outcomes	No of	Quality	Relative	Anticipated absolute effects

	Participants (studies) Follow up	of the evidence (GRADE)	effect (95% CI)	Risk with Relaxation	Risk difference with Parent Training (95% CI)
ADHD symptoms hyperactivity (12 weeks PT, parent rated CBCL, 0-106, high is poor outcome)	24 (1 study) 12 weeks	⊕⊖⊖⊖ VERY LOW[a,d] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (12 weeks pt, parent rated cbcl, 0-106, high is poor outcome) in the control groups was 70.5	The mean ADHD symptoms hyperactivity (12 weeks pt, parent rated cbcl, 0-106, high is poor outcome) in the intervention groups was 0.00 higher (8.41 lower to 8.41 higher)
ADHD symptoms hyperactivity (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome)	24 (1 study) 47 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (47 weeks pt, parent rated cbcl, 0-106, high is poor outcome) in the control groups was 70.3	The mean ADHD symptoms hyperactivity (47 weeks fu, parent rated cbcl, 0-106, high is poor outcome) in the intervention groups was 1.10 standard deviations lower (9.25 lower to 7.05 higher)
ADHD symptoms hyperactivity (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome)	24 (1 study) 12 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (12 weeks pt, teacher rated ctrs, 0-15, high is poor outcome) in the control groups was 13.6	The mean ADHD symptoms hyperactivity (12 weeks pt, teacher rated ctrs, 0-15, high is poor outcome) in the intervention groups was 1.50 lower (6.41 lower to 3.41 higher)
ADHD symptoms hyperactivity (47 weeks FU, teacher rated CTRS, 0-15, high is poor outcome)	24 (1 study) 47 weeks	⊕⊖⊖⊖ VERY LOW[a,c] due to risk of		The mean ADHD symptoms hyperactivity (47 weeks pt, teacher rated ctrs, 0-15, high is poor outcome) in the control groups was 19.6	The mean ADHD symptoms hyperactivity (47 weeks fu, teacher rated ctrs, 0-15, high is poor outcome) in the intervention groups was

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Relaxation	Risk difference with Parent Training (95% CI)
		bias, imprecision			6.40 lower (11.52 to 1.28 lower)
Function/behaviour (12 weeks PT, parent rated CBCL, 0-106, high is poor outcome)	24 (1 study) 12 weeks	⊕⊖⊖⊖ VERY LOW2 due to risk of bias, imprecision		The mean function/behaviour (12 weeks pt, parent rated cbcl, 0-106, high is poor outcome) in the control groups was 71.7	The mean function/behaviour (12 weeks pt, parent rated cbcl, 0-106, high is poor outcome) in the intervention groups was 1.30 higher (4.7 lower to 7.3 higher)
Function/behaviour (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome)	24 (1 study) 47 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (47 weeks pt, parent rated cbcl, 0-106, high is poor outcome) in the control groups was 69.8	The mean function/behaviour (47 weeks fu, parent rated cbcl, 0-106, high is poor outcome) in the intervention groups was 1.60 higher (3.72 lower to 6.92 higher)
Function/behaviour (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome)	24 (1 study) 12 weeks	⊕⊖⊖⊖ VERY LOW[a,d] due to risk of bias, imprecision		The mean function/behaviour (12 weeks pt, teacher rated ctrs, 0-15, high is poor outcome) in the control groups was 6.1	The mean function/behaviour (12 weeks pt, teacher rated ctrs, 0-15, high is poor outcome) in the intervention groups was 1.40 lower (4.56 lower to 1.76 higher)
Function/behaviour (47 weeks FU, teacher rated CTRS, 0-15,	24 (1 study)	⊕⊖⊖⊖ VERY		The mean function/behaviour (47 weeks pt, teacher rated ctrs, 0-15,	The mean function/behaviour (47 weeks fu, teacher rated ctrs, 0-15,

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Relaxation	Risk difference with Parent Training (95% CI)
high is poor outcome)	47 weeks	LOW[a,b] due to risk of bias, imprecision		high is poor outcome) in the control groups was 5.2	high is poor outcome) in the intervention groups was 0.70 higher (3.54 lower to 4.94 higher)
Academic - Literacy (12 weeks PT, WRAT-R, 55-145, high is good outcome)	24 (1 study) 12 weeks	⨁⊖⊖⊖ VERY LOW[a,c] due to risk of bias, imprecision		The mean academic - literacy (12 weeks pt, wrat-r, 55-145, high is good outcome) in the control groups was 106.4	The mean academic - literacy (12 weeks pt, wrat-r, 55-145, high is good outcome) in the intervention groups was 13.00 higher (2.2 lower to 28.2 higher)
Academic - Literacy (47 weeks FU, WRAT-R, 55-145, high is good outcome)	24 (1 study) 47 weeks	⨁⊖⊖⊖ VERY LOW[a,c] due to risk of bias, imprecision		The mean academic - literacy (47 weeks pt, wrat-r, 55-145, high is good outcome) in the control groups was 104.3	The mean academic - literacy (47 weeks fu, wrat-r, 55-145, high is good outcome) in the intervention groups was 10.10 higher (4.08 lower to 24.28 higher)
Academic - Numeracy (12 weeks PT, WRAT-R, 0-145, high is good outcome)	24 (1 study) 12 weeks	⨁⊖⊖⊖ VERY LOW[a,c] due to risk of bias, imprecision		The mean academic - numeracy (12 weeks pt, wrat-r, 0-145, high is good outcome) in the control groups was 95.2	The mean academic - numeracy (12 weeks pt, wrat-r, 0-145, high is good outcome) in the intervention groups was 8.10 higher (2.57 to 13.63 higher)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Relaxation	Risk difference with Parent Training (95% CI)
Academic - Numeracy (47 weeks FU, WRAT-R, 0-145, high is good outcome)	24 (1 study) 47 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean academic - numeracy (47 weeks pt, wrat-r, 0-145, high is good outcome) in the control groups was 88.6	The mean academic - numeracy (47 weeks fu, wrat-r, 0-145, high is good outcome) in the intervention groups was 10.70 higher (5.33 to 16.07 higher)

(a) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(b) Downgraded by 2 increments if the confidence interval crossed both MIDs.
(c) Downgraded by 1 increment if the confidence interval crossed 1 MID.
(d) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.

Table 18: Clinical evidence summary: Parent/family training versus psychoeducation

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Psychoeducation	Risk difference with Family Training (95% CI)
Academic (26 weeks FU, teacher rated APRS questionnaire, 0-5, high is good outcome)	188 (1 study) 26 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean academic (26 weeks pt, teacher rated aprs questionnaire, 0-5, high is good outcome) in the control groups was 3.36	The mean academic (26 weeks fu, teacher rated aprs questionnaire, 0-5, high is good outcome) in the intervention groups was 0.15 higher (0.05 lower to 0.35 higher)
Academic (12 weeks PT, teacher rated APRS questionnaire, 0-5, high is good outcome)	188 (1 study) 12 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean academic (12 weeks pt, teacher rated aprs questionnaire, 0-5, high is good outcome) in the control groups was 3.2	The mean academic (12 weeks pt, teacher rated aprs questionnaire, 0-5, high is good outcome) in the intervention groups was 0.12 higher

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Psychoeducation	Risk difference with Family Training (95% CI)
					(0.07 lower to 0.31 higher)

(b) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.

Table 19: Clinical evidence summary: Neurofeedback versus Attention/memory/cognitive training

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Attention/memory/cognitive training	Risk difference with Neurofeedback (95% CI)
ADHD symptoms total (3-4 weeks PT, parent rated German ADHD rating scale, 0-3, high is poor outcome)	94 (1 study) 3-4 weeks	⨁⨁⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms total (3-4 weeks pt, parent rated German adhd rating scale, 0-3, high is poor outcome) in the control groups was -0.14	The mean ADHD symptoms total (3-4 weeks pt, parent rated German adhd rating scale, 0-3, high is poor outcome) in the intervention groups was 0.25 lower (0.42 to 0.08 lower)
ADHD symptoms total (26 weeks FU, parent rated German ADHD rating scale, 0-3, high is poor outcome)	61 (1 study) 26 weeks	⨁⊖⊖⊖ VERY LOW[b,c] due to risk of bias, imprecision		The mean ADHD symptoms total (26 weeks fu, parent rated German adhd rating scale, 0-3, high is poor outcome) in the control groups was 1.24	The mean ADHD symptoms total (26 weeks fu, parent rated German adhd rating scale, 0-3, high is poor outcome) in the intervention groups was 0.16 lower (0.47 lower to 0.15 higher)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Attention/memory/cognitive training	Risk difference with Neurofeedback (95% CI)
ADHD symptoms total (3-4 weeks PT, teacher rated German ADHD rating scale, 0-3, high is poor outcome)	94 (1 study) 3-4 weeks	⨁⨁⨁⨀ MODERATE[a] due to risk of bias		The mean ADHD symptoms total (3-4 weeks pt, teacher rated German adhd rating scale, 0-3, high is poor outcome) in the control groups was -0.3	The mean ADHD symptoms total (3-4 weeks pt, teacher rated German adhd rating scale, 0-3, high is poor outcome) in the intervention groups was 0.01 higher (0.17 lower to 0.19 higher)
ADHD symptoms inattention (3-4 weeks PT, parent rated German ADHD rating scale, 0-3, high is poor outcome)	97 (1 study) 3-4 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (3-4 weeks pt, parent rated German adhd rating scale, 0-3, high is poor outcome) in the control groups was -0.19	The mean ADHD symptoms inattention (3-4 weeks pt, parent rated German adhd rating scale, 0-3, high is poor outcome) in the intervention groups was 0.29 lower (0.5 to 0.08 lower)
ADHD symptoms inattention (17-20 weeks PT, parent rated Conners Rating Scales–Revised, high is poor outcome)	88 (2 studies) 17-20 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (17-20 weeks pt, parent rated conners rating scales–revised, high is poor outcome) in the control groups was 67.51	The mean ADHD symptoms inattention (17-20 weeks pt, parent rated conners rating scales–revised, high is poor outcome) in the intervention groups was 3.25 higher (0.42 lower to 6.92 higher)
ADHD symptoms inattention (24 weeks FU, parent rated Conners 3-P, 0-84, high is poor outcome)	68 (1 study) 24 weeks	⨁⨀⨀⨀ VERY LOW[b,c] due to risk of bias,		The mean ADHD symptoms inattention (24 weeks fu, parent rated conners 3-p, 0-84, high is poor outcome) in the control groups was 67.56	The mean ADHD symptoms inattention (24 weeks fu, parent rated conners 3-p, 0-84, high is poor outcome) in the intervention groups was 2.50 higher

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Attention/memory/cognitive training	Risk difference with Neurofeedback (95% CI)
		imprecision			(2.87 lower to 7.87 higher)
ADHD symptoms inattention (26 weeks FU, parent rated German ADHD rating scale, 0-3, high is poor outcome)	61 (1 study) 26 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms inattention (26 weeks fu, parent rated German adhd rating scale, 0-3, high is poor outcome) in the control groups was 1.56	The mean ADHD symptoms inattention (26 weeks fu, parent rated German adhd rating scale, 0-3, high is poor outcome) in the intervention groups was 0.07 lower (0.37 lower to 0.23 higher)
ADHD symptoms inattention (3-4 weeks PT, teacher rated German ADHD rating scale, Conners 3-T, 0-3, high is poor outcome)	94 (1 study) 3-4 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (3-4 weeks pt, teacher rated German adhd rating scale, conners 3-t, 0-3, high is poor outcome) in the control groups was -0.06	The mean ADHD symptoms inattention (3-4 weeks pt, teacher rated German adhd rating scale, conners 3-t, 0-3, high is poor outcome) in the intervention groups was 0.29 lower (0.54 to 0.04 lower)
ADHD symptoms inattention (17-20 weeks PT, teacher rated, Conners 3-T, high is poor outcome)	88 (2 studies) 17-20 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (17-20 weeks pt, teacher rated, conners 3-t, high is poor outcome) in the control groups was 64.69	The mean ADHD symptoms inattention (17-20 weeks pt, teacher rated, conners 3-t, high is poor outcome) in the intervention groups was 1.73 lower (6.13 lower to 2.67 higher)
ADHD symptoms hyperactivity (3-4 weeks PT, parent rated German ADHD scale, 0-3, high is poor outcome)	94 (1 study) 3-4 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias,		The mean ADHD symptoms hyperactivity (3-4 weeks pt, parent rated German adhd scale, 0-3, high is poor outcome) in the control groups was	The mean ADHD symptoms hyperactivity (3-4 weeks pt, parent rated German adhd scale, 0-3, high is poor outcome) in the intervention groups was

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Attention/memory/cognitive training	Risk difference with Neurofeedback (95% CI)
		imprecision		-0.12	0.19 lower (0.37 to 0.01 lower)
ADHD symptoms hyperactivity (17-20 weeks PT, parent rated Conners Rating Scales–Revised, high is poor outcome)	88 (2 studies) 17-20 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (17-20 weeks pt, parent rated conners rating scales–revised, high is poor outcome) in the control groups was 69.8	The mean ADHD symptoms hyperactivity (17-20 weeks pt, parent rated conners rating scales–revised, high is poor outcome) in the intervention groups was 1.22 higher (5.24 lower to 7.68 higher)
ADHD symptoms hyperactivity (24 weeks FU, parent rated Conners 3-P, 0-84, high is poor outcome)	68 (1 study) 24 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms hyperactivity (24 weeks fu, parent rated conners 3-p, 0-84, high is poor outcome) in the control groups was 72.19	The mean ADHD symptoms hyperactivity (24 weeks fu, parent rated conners 3-p, 0-84, high is poor outcome) in the intervention groups was 0.17 higher (6.83 lower to 7.17 higher)
ADHD symptoms hyperactivity (26 weeks FU, parent rated German ADHD rating scale, 0-3, high is poor outcome)	61 (1 study) 26 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (26 weeks fu, parent rated German adhd rating scale, 0-3, high is poor outcome) in the control groups was 1	The mean ADHD symptoms hyperactivity (26 weeks fu, parent rated German adhd rating scale, 0-3, high is poor outcome) in the intervention groups was 0.24 lower (0.63 lower to 0.15 higher)
ADHD symptoms hyperactivity (3-4 weeks PT, teacher rated German ADHD rating scale, 0-3, high is poor outcome)	94 (1 study) 3-4 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of		The mean ADHD symptoms hyperactivity (3-4 weeks pt, teacher rated German adhd rating scale, 0-3, high is poor outcome) in the control groups was	The mean ADHD symptoms hyperactivity (3-4 weeks pt, teacher rated German adhd rating scale, 0-3, high is poor outcome) in the intervention groups was

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Attention/memory/cognitive training	Risk difference with Neurofeedback (95% CI)
		bias, imprecision		-0.01	0.20 lower (0.42 lower to 0.02 higher)
ADHD symptoms hyperactivity (17 weeks PT, teacher rated Conners 3-T rating scale, 0-84, high is poor outcome)	20 (1 study) 17 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (17 weeks pt, teacher rated conners 3-t rating scale, 0-84, high is poor outcome) in the control groups was 64.6	The mean ADHD symptoms hyperactivity (17 weeks pt, teacher rated conners 3-t rating scale, 0-84, high is poor outcome) in the intervention groups was 8.50 lower (22.84 lower to 5.84 higher)
Function/Behaviour (3-4 weeks PT, parent rated Oppositional defiant/conduct disorders scale, 0-3, high is poor outcome)	94 (1 study) 3-4 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (3-4 weeks pt, parent rated oppositional defiant/conduct disorders scale, 0-3, high is poor outcome) in the control groups was -0.07	The mean function/behaviour (3-4 weeks pt, parent rated oppositional defiant/conduct disorders scale, 0-3, high is poor outcome) in the intervention groups was 0.18 lower (0.39 lower to 0.03 higher)
Function/Behaviour (5 months PT, parent rated BRIEF, global executive subscale 0-100, high is poor outcome)	68 (1 study) 5 months	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (5 months pt, parent rated brief, global executive subscale 0-100, high is poor outcome) in the control groups was 61.5	The mean function/behaviour (5 months pt, parent rated brief, global executive subscale 0-100, high is poor outcome) in the intervention groups was 0.60 higher (3.49 lower to 4.69 higher)
Function/Behaviour (24 weeks FU, parent rated BRIEF, global executive subscale 0-100, high is	68 (1 study) 24 weeks	⊕⊖⊖⊖ VERY LOW[b,c]		The mean function/behaviour (24 weeks fu, parent rated brief, global executive subscale 0-100, high is	The mean function/behaviour (24 weeks fu, parent rated brief, global executive subscale 0-100, high is

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Attention/memory/cognitive training	Risk difference with Neurofeedback (95% CI)
poor outcome)		due to risk of bias, imprecision		poor outcome) in the control groups was 60.29	poor outcome) in the intervention groups was 0.73 higher (3.87 lower to 5.33 higher)
Function/Behaviour (26 weeks FU, parent rated German ADHD scale, 0-3, high is poor outcome)	61 (1 study) 26 weeks	⨁⊖⊖⊖ VERY LOW[b,c] due to risk of bias, imprecision		The mean function/behaviour (26 weeks fu, parent rated German adhd scale, 0-3, high is poor outcome) in the control groups was 0.97	The mean function/behaviour (26 weeks fu, parent rated German adhd scale, 0-3, high is poor outcome) in the intervention groups was 0.11 lower (0.48 lower to 0.26 higher)
Function/Behaviour (3-4 weeks PT, teacher rated German rating scale for oppositional defiant disorders, 0-3, high is poor outcome)	94 (1 study) 3-4 weeks	⨁⨁⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (3-4 weeks pt, teacher rated German rating scale for oppositional defiant disorders, 0-3, high is poor outcome) in the control groups was 0.1	The mean function/behaviour (3-4 weeks pt, teacher rated German rating scale for oppositional defiant disorders, 0-3, high is poor outcome) in the intervention groups was 0.23 lower (0.41 to 0.05 lower)
Function/Behaviour (5 months PT, investigator rated BOSS scale, 0-100, high is good outcome)	68 (1 study) 5 months	⨁⨁⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (5 months pt, investigator rated boss scale, 0-100, high is good outcome) in the control groups was 77.1	The mean function/behaviour (5 months pt, investigator rated boss scale, 0-100, high is good outcome) in the intervention groups was 0.90 higher (5.81 lower to 7.61 higher)
Function/Behaviour (6 months FU,	68	⨁⨁⊖⊖		The mean function/behaviour (6	The mean function/behaviour (6

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Attention/memory/cognitive training	Risk difference with Neurofeedback (95% CI)
investigator rated BOSS scale, 0-100, high is good outcome)	(1 study) 6 months	LOW[a,b] due to risk of bias, imprecision		months fu, investigator rated boss scale, 0-100, high is good outcome) in the control groups was 76.16	months fu, investigator rated boss scale, 0-100, high is good outcome) in the intervention groups was 1.60 higher (5.41 lower to 8.61 higher)
Emotional dysregulation (3-4 weeks PT, parents rated SDQ questionnaire, 0-10, high is poor outcome)	94 (1 study) 3-4 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean emotional dysregulation (3-4 weeks pt, parents rated sdq questionnaire, 0-10, high is poor outcome) in the control groups was 0.03	The mean emotional dysregulation (3-4 weeks pt, parents rated sdq questionnaire, 0-10, high is poor outcome) in the intervention groups was 0.40 lower (1.78 lower to 0.98 higher)
Emotional dysregulation (3-4 weeks PT, teacher rated SDQ questionnaire, 0-10, high is poor outcome)	94 (1 study) 3-4 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean emotional dysregulation (3-4 weeks pt, teacher rated sdq questionnaire, 0-10, high is poor outcome) in the control groups was -0.82	The mean emotional dysregulation (3-4 weeks pt, teacher rated sdq questionnaire, 0-10, high is poor outcome) in the intervention groups was 0.43 higher (0.46 lower to 1.32 higher)

(a) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
(b) Downgraded by 1 increment if the confidence interval crossed 1MID.
(c) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.

Table 20: Clinical evidence summary: Neurofeedback versus psychoeducation

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Psychoeducation	Risk difference with Neurofeedback (95% CI)
ADHD symptoms inattention (17 weeks PT, parent rated Conners-3P, 0-15, high is poor outcome)	29 (1 study) 17 weeks	⨁⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention (17 weeks pt, parent rated conners-3p, 0-15, high is poor outcome) in the control groups was 7	The mean ADHD symptoms inattention (17 weeks pt, parent rated conners-3p, 0-15, high is poor outcome) in the intervention groups was 0.71 higher (3.28 lower to 4.7 higher)
ADHD symptoms inattention (17 weeks PT, teacher rated Conners-3P, 0-15, high is poor outcome)	29 (1 study) 17 weeks	⨁⊖⊖⊖ VERY LOW[b,c] due to risk of bias, imprecision		The mean ADHD symptoms inattention (17 weeks pt, teacher rated conners-3p, 0-15, high is poor outcome) in the control groups was 6.69	The mean ADHD symptoms inattention (17 weeks pt, teacher rated conners-3p, 0-15, high is poor outcome) in the intervention groups was 0.74 higher (3.05 lower to 4.53 higher)

(d) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(e) Downgraded by 2 increments if the confidence interval crossed both MIDs.
(f) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.

Table 21: Clinical evidence summary: Parent/family training & relaxation versus parent/family training

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with PT/FT	Risk difference with Parent Training & Relaxation (95% CI)
ADHD symptoms hyperactivity (12 weeks PT, parent rated	23 (1 study)	⨁⊖⊖⊖ VERY		The mean ADHD symptoms hyperactivity (12 weeks pt, parent	The mean ADHD symptoms hyperactivity (12 weeks pt, parent

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with PT/FT	Risk difference with Parent Training & Relaxation (95% CI)
CBCL, 0-106, high is poor outcome)	12 weeks	LOW[a,b] due to risk of bias, imprecision		rated cbcl, 0-106, high is poor outcome) in the control groups was 70.5	rated cbcl, 0-106, high is poor outcome) in the intervention groups was 6.00 lower (13.09 lower to 1.09 higher)
ADHD symptoms hyperactivity (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome)	23 (1 study) 47 weeks	⨁⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (47 weeks pt, parent rated cbcl, 0-106, high is poor outcome) in the control groups was 69.2	The mean ADHD symptoms hyperactivity (47 weeks fu, parent rated cbcl, 0-106, high is poor outcome) in the intervention groups was 5.50 lower (11.07 lower to 0.07 higher)
ADHD symptoms hyperactivity (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome)	23 (1 study) 12 weeks	⨁⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (12 weeks pt, teacher rated ctrs, 0-15, high is poor outcome) in the control groups was 12.1	The mean ADHD symptoms hyperactivity (12 weeks pt, teacher rated ctrs, 0-15, high is poor outcome) in the intervention groups was 2.60 higher (2.32 lower to 7.52 higher)
ADHD symptoms hyperactivity (47 weeks FU, teacher rated CTRS, unclear range, high is poor outcome)	23 (1 study) 47 weeks	⨁⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (47 weeks pt, teacher rated ctrs, unclear range, high is poor outcome) in the control groups was 13.2	The mean ADHD symptoms hyperactivity (47 weeks fu, teacher rated ctrs, unclear range, high is poor outcome) in the intervention groups was 3.00 higher

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with PT/FT	Risk difference with Parent Training & Relaxation (95% CI)
					(2.7 lower to 8.7 higher)
Function/behaviour (12 weeks PT, parent rated CBCL, 0-106, high is poor outcome)	23 (1 study) 12 weeks	⨁⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (12 weeks pt, parent rated cbcl, 0-106, high is poor outcome) in the control groups was 73	The mean function/behaviour (12 weeks pt, parent rated cbcl, 0-106, high is poor outcome) in the intervention groups was 4.50 lower (10.39 lower to 1.39 higher)
Function/behaviour (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome)	23 (1 study) 47 weeks	⨁⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (47 weeks pt, parent rated cbcl, 0-106, high is poor outcome) in the control groups was 71.4	The mean function/behaviour (47 weeks fu, parent rated cbcl, 0-106, high is poor outcome) in the intervention groups was 5.80 lower (10.33 to 1.27 lower)
Function/behaviour (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome)	23 (1 study) 12 weeks	⨁⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (12 weeks pt, teacher rated ctrs, 0-15, high is poor outcome) in the control groups was 4.7	The mean function/behaviour (12 weeks pt, teacher rated ctrs, 0-15, high is poor outcome) in the intervention groups was 1.40 higher (1.62 lower to 4.42 higher)
Function/behaviour (47 weeks FU, teacher rated CTRS, 0-15, high is poor outcome)	23 (1 study) 47 weeks	⨁⊖⊖⊖ VERY LOW[a,c]		The mean function/behaviour (47 weeks pt, teacher rated ctrs, 0-15, high is poor outcome) in the control	The mean function/behaviour (47 weeks fu, teacher rated ctrs, 0-15, high is poor outcome) in the

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with PT/FT	Risk difference with Parent Training & Relaxation (95% CI)
		due to risk of bias, imprecision		groups was 5.9	intervention groups was 0.40 higher (3.86 lower to 4.66 higher)
Academic - Literacy (12 weeks PT, WRAT-R, 55-145, high is good outcome)	23 (1 study) 12 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean academic - literacy (12 weeks pt, wrat-r, 55-145, high is good outcome) in the control groups was 119.4	The mean academic - literacy (12 weeks pt, wrat-r, 55-145, high is good outcome) in the intervention groups was 9.90 lower (25.48 lower to 5.68 higher)
Academic - Literacy (47 weeks FU, WRAT-R, 55-145, high is good outcome)	23 (1 study) 47 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean academic - literacy (47 weeks pt, wrat-r, 55-145, high is good outcome) in the control groups was 114.4	The mean academic - literacy (47 weeks fu, wrat-r, 55-145, high is good outcome) in the intervention groups was 7.10 lower (21.95 lower to 7.75 higher)
Academic - Numeracy (12 weeks PT, WRAT-R, 0-145, high is good outcome)	23 (1 study) 12 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean academic - numeracy (12 weeks pt, wrat-r, 0-145, high is good outcome) in the control groups was 103.3	The mean academic - numeracy (12 weeks pt, wrat-r, 0-145, high is good outcome) in the intervention groups was 5.70 lower (10.47 to 0.93 lower)
Academic - Numeracy (47	23	⊕⊖⊖⊖		The mean academic - numeracy (47	The mean academic - numeracy (47

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with PT/FT	Risk difference with Parent Training & Relaxation (95% CI)
weeks FU, WRAT-R, 0-145, high is good outcome)	(1 study) 47 weeks	VERY LOW[a,b] due to risk of bias, imprecision		weeks pt, wrat-r, 0-145, high is good outcome) in the control groups was 99.3	weeks fu, wrat-r, 0-145, high is good outcome) in the intervention groups was 4.40 lower (12 lower to 3.2 higher)

(a) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(b) Downgraded by 1 increment if the confidence interval crossed 1MID.
(c) Downgraded by 2 increments if the confidence interval crossed both MIDs.

Table 22: Clinical evidence summary: Parent/family training & relaxation versus relaxation

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Relaxation	Risk difference with Parent Training & Relaxation (95% CI)
ADHD symptoms hyperactivity (12 weeks PT, parent rated CBCL, 0-106, high is poor outcome)	23 (1 study) 12 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (12 weeks pt, parent rated cbcl, 0-106, high is poor outcome) in the control groups was 70.5	The mean ADHD symptoms hyperactivity (12 weeks pt, parent rated cbcl, 0-106, high is poor outcome) in the intervention groups was 6.00 lower (13.46 lower to 1.46 higher)
ADHD symptoms hyperactivity (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome)	23 (1 study) 47 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias,		The mean ADHD symptoms hyperactivity (47 weeks pt, parent rated cbcl, 0-106, high is poor outcome) in the control groups was 70.3	The mean ADHD symptoms hyperactivity (47 weeks fu, parent rated cbcl, 0-106, high is poor outcome) in the intervention groups was

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Relaxation	Risk difference with Parent Training & Relaxation (95% CI)
		imprecision			6.60 lower (13.83 lower to 0.63 higher)
ADHD symptoms hyperactivity (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome)	23 (1 study) 12 weeks	⊕⊖⊖⊖ VERY LOW[a,c] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (12 weeks pt, teacher rated ctrs, 0-15, high is poor outcome) in the control groups was 13.6	The mean ADHD symptoms hyperactivity (12 weeks pt, teacher rated ctrs, 0-15, high is poor outcome) in the intervention groups was 1.10 higher (2.91 lower to 5.11 higher)
ADHD symptoms hyperactivity (47 weeks FU, teacher rated CTRS, unclear range, high is poor outcome)	23 (1 study) 47 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (47 weeks pt, teacher rated ctrs, unclear range, high is poor outcome) in the control groups was 19.6	The mean ADHD symptoms hyperactivity (47 weeks fu, teacher rated ctrs, unclear range, high is poor outcome) in the intervention groups was 3.40 lower (9.24 lower to 2.44 higher)
Function/behaviour (12 weeks PT, parent rated CBCL, 0-106, high is poor outcome)	23 (1 study) 12 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (12 weeks pt, parent rated cbcl, 0-106, high is poor outcome) in the control groups was 71.7	The mean function/behaviour (12 weeks pt, parent rated cbcl, 0-106, high is poor outcome) in the intervention groups was 3.20 lower (10.31 lower to 3.91 higher)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Relaxation	Risk difference with Parent Training & Relaxation (95% CI)
Function/behaviour (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome)	23 (1 study) 47 weeks	⨁⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (47 weeks pt, parent rated cbcl, 0-106, high is poor outcome) in the control groups was 69.8	The mean function/behaviour (47 weeks fu, parent rated cbcl, 0-106, high is poor outcome) in the intervention groups was 4.20 lower (9.87 lower to 1.47 higher)
Function/behaviour (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome)	23 (1 study) 12 weeks	⨁⊖⊖⊖ VERY LOW[a,c] due to risk of bias, imprecision		The mean function/behaviour (12 weeks pt, teacher rated ctrs, 0-15, high is poor outcome) in the control groups was 5.2	The mean function/behaviour (12 weeks pt, teacher rated ctrs, 0-15, high is poor outcome) in the intervention groups was 0.90 higher (2.87 lower to 4.67 higher)
Function/behaviour (47 weeks FU, teacher rated CTRS, 0-15, high is poor outcome)	23 (1 study) 47 weeks	⨁⊖⊖⊖ VERY LOW[a,c] due to risk of bias, imprecision		The mean function/behaviour (47 weeks pt, teacher rated ctrs, 0-15, high is poor outcome) in the control groups was 5.2	The mean function/behaviour (47 weeks fu, teacher rated ctrs, 0-15, high is poor outcome) in the intervention groups was 1.10 higher (3.32 lower to 5.52 higher)
Academic - Literacy (47 weeks FU, WRAT-R, 55-145, high is good outcome)	23 (1 study) 47 weeks	⨁⊖⊖⊖ VERY LOW[a,c] due to risk of bias, imprecisio		The mean academic - literacy (47 weeks pt, wrat-r, 55-145, high is good outcome) in the control groups was 104.3	The mean academic - literacy (47 weeks fu, wrat-r, 55-145, high is good outcome) in the intervention groups was 3.00 higher (7.57 lower to 13.57 higher)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Relaxation	Risk difference with Parent Training & Relaxation (95% CI)
		n			
Academic - Literacy (12 weeks PT, WRAT-R, 55-145, high is good outcome)	23 (1 study) 12 weeks	⨁⊖⊖⊖ VERY LOW[a,c] due to risk of bias, imprecision		The mean academic - literacy (12 weeks pt, wrat-r, 55-145, high is good outcome) in the control groups was 106.4	The mean academic - literacy (12 weeks pt, wrat-r, 55-145, high is good outcome) in the intervention groups was 3.10 higher (9.92 lower to 16.12 higher)
Academic - Numeracy (47 weeks FU, WRAT-R, 0-145, high is good outcome)	23 (1 study) 47 weeks	⨁⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean academic - numeracy (47 weeks pt, wrat-r, 0-145, high is good outcome) in the control groups was 88.6	The mean academic - numeracy (47 weeks fu, wrat-r, 0-145, high is good outcome) in the intervention groups was 6.30 higher (2.06 lower to 14.66 higher)
Academic - Numeracy (12 weeks PT, WRAT-R, 0-145, high is good outcome)	23 (1 study) 12 weeks	⨁⊖⊖⊖ VERY LOW[a,c] due to risk of bias, imprecision		The mean academic - numeracy (12 weeks pt, wrat-r, 0-145, high is good outcome) in the control groups was 95.2	The mean academic - numeracy (12 weeks pt, wrat-r, 0-145, high is good outcome) in the intervention groups was 2.40 higher (4.24 lower to 9.04 higher)

(a) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(b) Downgraded by 1 increment if the confidence interval crossed 1 MID.
(c) Downgraded by 2 increments if the confidence interval crossed both MIDs.

Table 23: Clinical evidence summary: Attention/memory/cognitive training & BPT versus Attention/memory/cognitive training

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Attention/memory/cognitive training	Risk difference with Attention/memory/cognitive training & BPT (95% CI)
ADHD symptoms inattention (5 weeks PT, mother rated ADHD-RS, 0-27, high is poor outcome)	45 (1 study) 5 weeks	⊕⊕⊕⊖ MODERATE[a] due to imprecision		The mean ADHD symptoms inattention (5 weeks pt, mother rated adhd-rs, 0-27, high is poor outcome) in the control groups was 13.91	The mean ADHD symptoms inattention (5 weeks pt, mother rated adhd-rs, 0-27, high is poor outcome) in the intervention groups was 0.59 higher (2.61 lower to 3.79 higher)
ADHD symptoms inattention (5 weeks PT, teacher rated ADHD-RS, 0-27, high is poor outcome)	45 (1 study) 5 weeks	⊕⊕⊕⊖ MODERATE[a] due to imprecision		The mean ADHD symptoms inattention (5 weeks pt, teacher rated adhd-rs, 0-27, high is poor outcome) in the control groups was 7.77	The mean ADHD symptoms inattention (5 weeks pt, teacher rated adhd-rs, 0-27, high is poor outcome) in the intervention groups was 2.00 higher (1.9 lower to 5.9 higher)
ADHD symptoms hyperactivity (5 weeks PT, mother rated ADHD-RS, 0-27, high is poor)	45 (1 study) 5 weeks	⊕⊖⊖⊖ VERY LOW[b,c] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity (5 weeks pt, mother rated adhd-rs, 0-27, high is poor) in the control groups was 9.81	The mean ADHD symptoms hyperactivity (5 weeks pt, mother rated adhd-rs, 0-27, high is poor) in the intervention groups was 0.26 lower (3.77 lower to 3.25 higher)
ADHD symptoms hyperactivity (5 weeks PT, teacher rated ADHD-RS, 0-27, high is poor)	45 (1 study) 5 weeks	⊕⊕⊖⊖ LOW[c] due to imprecision		The mean ADHD symptoms hyperactivity (5 weeks pt, teacher rated adhd-rs, 0-27, high is poor) in the control groups was 4.95	The mean ADHD symptoms hyperactivity (5 weeks pt, teacher rated adhd-rs, 0-27, high is poor) in the intervention groups was 0.40 lower

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Attention/memory/cognitive training	Risk difference with Attention/memory/cognitive training & BPT (95% CI)
					(3.36 lower to 2.56 higher)
Function/Behaviour (5 weeks PT, mother rated, BRIEF, Global Executive Composite, unclear range, high is poor outcome)	45 (1 study) 5 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour (5 weeks pt, mother rated, brief, global executive composite, unclear range, high is poor outcome) in the control groups was 142.18	The mean function/behaviour (5 weeks pt, mother rated, brief, global executive composite, unclear range, high is poor outcome) in the intervention groups was 4.37 higher (9.83 lower to 18.57 higher)
Function/Behaviour (5 weeks PT, teacher rated, BRIEF, Global Executive Composite, unclear range, high is poor outcome)	45 (1 study) 5 weeks	⨁⨀⨀⨀ VERY LOW[b,c] due to risk of bias, imprecision		The mean function/behaviour (5 weeks pt, teacher rated, brief, global executive composite, unclear range, high is poor outcome) in the control groups was 116	The mean function/behaviour (5 weeks pt, teacher rated, brief, global executive composite, unclear range, high is poor outcome) in the intervention groups was 1.55 lower (19.03 lower to 15.93 higher)

1 Downgraded by 1 increment if the confidence interval crossed one MID.
2 Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
3 Downgraded by 2 increments if the confidence interval crossed both MIDs.

(a) Downgraded by 1 increment if the confidence interval crossed 1 MID.
(b) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
(c) Downgraded by 2 increments if the confidence interval crossed both MIDs.

Adults over the age of 18

Table 24: Clinical evidence summary: Neurofeedback versus waitlist/usual care

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Neurofeedback (95% CI)
ADHD symptoms inattention [8-20 weeks PT, self-rated ADHD RS, 0-3, CS, high is poor outcome]	44 (1 study) 8-20 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention [8-20 weeks pt, self-rated ADHD rs, 0-3, cs, high is poor outcome] in the control groups was -0.14	The mean ADHD symptoms inattention [8-20 weeks pt, self-rated ADHD rs, 0-3, cs, high is poor outcome] in the intervention groups was 1.06 lower (2.06 to 0.06 lower)
ADHD symptoms hyperactivity [8-20 weeks PT, self-rated ADHD RS, 0-3, CS, high is poor outcome]	44 (1 study) 8-20 weeks	⨁⨁⨀⨀ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms hyperactivity [8-20 weeks pt, self-rated ADHD rs, 0-3, cs, high is poor outcome] in the control groups was 0.38	The mean ADHD symptoms hyperactivity [8-20 weeks pt, self-rated ADHD rs, 0-3, cs, high is poor outcome] in the intervention groups was 1.46 lower (2.64 to 0.28 lower)

(a) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
(b) Downgraded by 1 increment if the confidence interval crossed 1 MID.

Table 25: Clinical evidence summary: CBT/DBT versus waitlist/usual care

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with CBT/DBT (95% CI)
Quality of life [FU, self-rated, 21 weeks, AAQoL, 0-100, higher is better]	33 (1 study) 21 weeks	⨁⨁⨀⨀ LOW[a,b] due to		The mean quality of life [fu, self-rated, 21 weeks, aaqol, 0-100, higher is better] in the	The mean quality of life [fu, 21 weeks, self-rated, aaqol, 0-100,higher is better] in the intervention groups was

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with CBT/DBT (95% CI)
		risk of bias, imprecision		control groups was 55.5	6.21 higher (4.18 lower to 16.6 higher)
Quality of life [PT, 8-10 weeks, AAQoL, Q-LES-Q general, higher is better]	46 (2 studies) 8-10 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean quality of life [pt, 8-10 weeks, aaqol, q-les-q general, higher is better] in the control groups was 52.8	The mean quality of life [pt, 8-10 weeks, aaqol, q-les-q general, higher is better] in the intervention groups was 0.71 standard deviations higher (0.34 lower to 1.75 higher)
ADHD symptoms total [6-10 weeks PT, self-rated CAARS, CSS, high is poor outcome]	101 (2 studies) 6-10 weeks	⊕⊖⊖⊖ VERY LOW[b,d] due to risk of bias, imprecision		The mean ADHD symptoms total [6-10 weeks pt, self-rated caars, css, high is poor outcome] in the control groups was 54.57	The mean ADHD symptoms total [6-10 weeks pt, self-rated caars, css, high is poor outcome] in the intervention groups was 0.75 standard deviations lower (1.17 to 0.34 lower)
ADHD symptoms total [3 months FU, self-rated CAARS, unclear range, high is poor outcome]	56 (1 study) 3 months	⊕⊕⊖⊖ LOW[d] due to risk of bias		The mean ADHD symptoms total [3 months fu, self-rated caars, unclear range, high is poor outcome] in the control groups was 72.15	The mean ADHD symptoms total [3 months fu, self-rated caars, unclear range, high is poor outcome] in the intervention groups was 10.65 lower (15.43 to 5.87 lower)
ADHD symptoms total [12 weeks PT, investigator rated CAARS, high is poor outcome]	83 (1 study) 12 weeks	⊕⊖⊖⊖ VERY LOW[b,d] due to risk of		3	The mean ADHD symptoms total [12 weeks pt, investigator rated caars, high is poor outcome] in the intervention groups was 0.83 standard deviations lower

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with CBT/DBT (95% CI)
		bias, imprecision			(1.24 to 0.43 lower)
ADHD symptoms total [12 weeks PT, self-rated CAARS, high is poor outcome]	83 (1 study) 12 weeks	⊕⊖⊖⊖ VERY LOW[b,d] due to risk of bias, imprecision		3	The mean ADHD symptoms total [12 weeks pt, self-rated caars, high is poor outcome] in the intervention groups was 0.62 standard deviations lower (1.01 to 0.22 lower)
ADHD symptoms inattention [PT self-rated, 6-8 weeks, BAARS-IV, CAARS, high is poor]	89 (2 studies) 6-8 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention [pt self-rated, 6-8 weeks, baars-iv, caars, high is poor] in the control groups was 47.74	The mean ADHD symptoms inattention [pt self-rated, 6-8 weeks, baars-iv, caars, high is poor] in the intervention groups was 0.89 standard deviations lower (1.83 lower to 0.05 higher)
ADHD symptoms inattention [FU self-rated, 12 - 21 weeks, BAARS-IV, CAARS, high is poor]	89 (2 studies) 12-21 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention [fu self-rated, 12 - 21 weeks, baars-iv, caars, high is poor] in the control groups was 47.65	The mean ADHD symptoms inattention [fu self-rated, 12 - 21 weeks, baars-iv, caars, high is poor] in the intervention groups was 1.00 standard deviations lower (1.63 to 0.37 lower)
ADHD symptoms inattention [12 weeks PT, self-rated CAARS, 0 - 36, high is poor outcome]	83 (1 study) 12 weeks	⊕⊖⊖⊖ VERY LOW[b,d] due to risk of bias, imprecisio		3	The mean ADHD symptoms inattention [12 weeks pt, self-rated caars, 0 - 36, high is poor outcome] in the intervention groups was 0.65 standard deviations lower (1.05 to 0.25 lower)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with CBT/DBT (95% CI)
		n			
ADHD symptoms inattention [12 weeks PT, investigator rated CAARS, 0 - 36, high is poor outcome]	83 (1 study) 12 weeks	⊕⊖⊖⊖ VERY LOW[b,d] due to risk of bias, imprecisio n		3	The mean ADHD symptoms inattention [12 weeks pt, investigator rated caars, 0 - 36, high is poor outcome] in the intervention groups was 0.73 standard deviations lower (1.13 to 0.33 lower)
ADHD symptoms hyperactivity [6 weeks PT, self-rated CAARS, unclear range, high is poor outcome]	56 (1 study) 6 weeks	⊕⊕⊖⊖ LOW[d] due to risk of bias		The mean ADHD symptoms hyperactivity [6 weeks pt, self-rated caars, unclear range, high is poor outcome] in the control groups was 71.15	The mean ADHD symptoms hyperactivity [6 weeks pt, self-rated caars, unclear range, high is poor outcome] in the intervention groups was 10.29 lower (14.86 to 5.72 lower)
ADHD symptoms hyperactivity [3 months FU, self-rated CAARS, unclear range, high is poor outcome]	56 (1 study) 3 months	⊕⊕⊖⊖ LOW[d] due to risk of bias		The mean ADHD symptoms hyperactivity [3 months fu, self-rated caars, unclear range, high is poor outcome] in the control groups was 71.38	The mean ADHD symptoms hyperactivity [3 months fu, self-rated caars, unclear range, high is poor outcome] in the intervention groups was 12.17 lower (16.71 to 7.63 lower)
ADHD symptoms hyperactivity [12 weeks PT, investigator rated CAARS, 0 - 36, high is poor outcome]	83 (1 study) 12 weeks	⊕⊖⊖⊖ VERY LOW[b,d] due to risk of		3	The mean ADHD symptoms hyperactivity [12 weeks pt, investigator rated caars, 0 - 36, high is poor outcome] in the intervention groups was

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with CBT/DBT (95% CI)
		bias, imprecision			0.68 standard deviations lower (1.08 to 0.28 lower)
ADHD symptoms hyperactivity [12 weeks PT, self-rated CAARS, 0 - 36, high is poor outcome]	83 (1 study) 12 weeks	⊕⊖⊖⊖ VERY LOW[b,d] due to risk of bias, imprecision		3	The mean ADHD symptoms hyperactivity [12 weeks pt, self-rated caars, 0 - 36, high is poor outcome] in the intervention groups was 0.43 standard deviations lower (0.82 to 0.04 lower)
Improvement of ADHD symptoms [FU, 21 weeks, BAARS-IV Inattention]	33 (1 study) 21 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision	RR 2.59 (1.03 to 6.48)	Moderate	
				250 per 1000	397 more per 1000 (from 7 more to 1000 more)
Improvement of ADHD symptoms [PT, 8 weeks, BAARS-IV Inattention, Current ADHD Symptom Scale Self-Report Form]	33 (1 study) 8 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision	RR 2.59 (1.03 to 6.48)	Moderate	
				250 per 1000	397 more per 1000 (from 7 more to 1000 more)
Improvement of ADHD symptoms [PT, 10 weeks, BADDS, SCL-16, ASR]	20 (1 study) 10 weeks	⊕⊖⊖⊖ VERY LOW[b,d] due to risk of bias,	RR 3 (0.79 to 11.44)	Moderate	
				200 per 1000	400 more per 1000 (from 42 fewer to 1000 more)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with CBT/DBT (95% CI)
		imprecision			
Improvement of ADHD symptoms [PT, 10 weeks, CG-I]	20 (1 study) 10 weeks	⊕⊖⊖⊖ VERY LOW[b,d] due to risk of bias, imprecision	RR 2.33 (0.83 to 6.54)	Moderate 300 per 1000	399 more per 1000 (from 51 fewer to 1000 more)
Function/behaviour [12 weeks PT, self-rated BRIEF-ASR, 0 - 54, high is poor outcome]	83 (1 study) 12 weeks	⊕⊖⊖⊖ VERY LOW[b,d] due to risk of bias, imprecision		3	The mean function/behaviour [12 weeks pt, self-rated brief-asr, 0 - 54, high is poor outcome] in the intervention groups was 0.86 standard deviations lower (1.27 to 0.46 lower)
Emotional dysregulation [PT self-rated, 6-10 weeks, BDI, BDI-2, higher is poorer]	134 (3 studies) 6-10 weeks	⊕⊖⊖⊖ VERY LOW[b,d] due to risk of bias, imprecision		The mean emotional dysregulation [pt self-rated, 6-10 weeks, bdi, bdi-2, higher is poorer] in the control groups was 11.60	The mean emotional dysregulation [pt self-rated, 6-10 weeks, bdi, bdi-2, higher is poorer] in the intervention groups was 0.47 standard deviations lower (0.83 to 0.11 lower)
Emotional dysregulation [FU self-rated, 12- 21weeks, BDI, BDI-2, higher is poorer]	89 (2 studies) 12-21 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecisio		The mean emotional dysregulation [fu self-rated, 12- 21weeks, bdi, bdi-2, higher is poorer] in the control groups was 9.43	The mean emotional dysregulation [fu self-rated, 12- 21weeks, bdi,bdi-2, higher is poorer] in the intervention groups was 0.31 standard deviations lower (0.81 lower to 0.2 higher)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with CBT/DBT (95% CI)
		n			
Emotional dysregulation [12 weeks PT, self-rated BDI, 0-63, higher is poorer]	83 (1 study) 12 weeks	⊕⊖⊖⊖ VERY LOW[b,d] due to risk of bias, imprecision		3	The mean emotional dysregulation [12 weeks pt, self-rated bdi, 0-63, higher is poorer] in the intervention groups was 0.25 standard deviations lower (0.64 lower to 0.14 higher)
Academic outcome [PT, 8 weeks, GPA, 0-4, higher is better	33 (1 study) 8 weeks	⊕⊖⊖⊖ VERY LOW[a,e] due to risk of bias, imprecision		The mean academic outcome [pt, 8 weeks, gpa, 0-4, higher is better in the control groups was 3.1	The mean academic outcome [pt, 8 weeks, gpa, 0-4, higher is better in the intervention groups was 0.08 lower (0.44 lower to 0.28 higher)
Academic outcome [FU, 21 weeks, GPA, 0-4, higher is better]	33 (1 study) 21 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean academic outcome [fu, 21 weeks, gpa, 0-4, higher is better] in the control groups was 3.19	The mean academic outcome [fu, 21 weeks, gpa, 0-4, higher is better] in the intervention groups was 0.22 lower (0.59 lower to 0.15 higher)

(a) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
(b) Downgraded by 1 increment if the confidence interval crossed 1MID.
(c) No mean for control group available.
(d) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(e) Downgraded by 2 increments if the confidence interval crossed both MIDs.

Table 26: Clinical evidence summary: Attention/memory/cognitive training versus waitlist/usual care

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Waitlist/usual care	Risk difference with Attention/memory/cognitive training (95% CI)
Quality of life [PT, 10 weeks, Q-LES-Q general, 0-100]	14 (1 study) 10 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean quality of life [pt, 10 weeks, q-les-q general, 0-100] in the control groups was 59.2	The mean quality of life [pt, 10 weeks, q-les-q general, 0-100] in the intervention groups was 6.00 higher (13.54 lower to 25.54 higher)
Improvement of ADHD symptoms [PT, 10 weeks, BADDS, SCL-16, ASR]	18 (1 study) 10 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision	RR 1 (0.18 to 5.63)	Moderate	
				222 per 1000	0 fewer per 1000 (from 182 fewer to 1000 more)
Improvement of ADHD symptoms [PT, 10 weeks, CG-I]	19 (1 study) 10 weeks	⊕⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision	RR 0.74 (0.16 to 3.48)	Moderate	
				300 per 1000	78 fewer per 1000 (from 252 fewer to 744 more)

(a) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(b) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.

Table 27: Clinical evidence summary: CBT/DBT versus Non-specific supportive therapy

Outcomes	No of	Quality of	Relati	Anticipated absolute effects

	Participants (studies) Follow up	the evidence (GRADE)	ve effect (95% CI)	Risk with Non-specific supportive therapy	Risk difference with CBT/DBT (95% CI)
ADHD symptoms total [PT, 13 weeks, self-reported, CAARS, higher is poorer]	209 (1 study) 13 weeks	⨁⨁⊖⊖ LOW[1a,b] due to risk of bias, imprecision		The mean ADHD symptoms total [pt, 13 weeks, self-reported, caars, higher is poorer] in the control groups was 17.3	The mean ADHD symptoms total [pt, 13 weeks, self-reported, caars, higher is poorer] in the intervention groups was 1.20 higher (0.41 lower to 2.81 higher)
ADHD symptoms total [12 weeks PT, self-rated, Brown attention deficit disorder scale, CS, high is poor outcome]	81 (1 study) 12 weeks	⨁⨁⨁⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms total [12 weeks pt, self-rated, brown attention deficit disorder scale, cs, high is poor outcome] in the control groups was 76.80	The mean ADHD symptoms total [12 weeks pt, self-rated, brown attention deficit disorder scale, cs, high is poor outcome] in the intervention groups was 0.03 standard deviations higher (0.41 lower to 0.46 higher)
ADHD symptoms total [52 weeks FU, self-rated CAARS, 0 - 36, high is poor outcome]	209 (1 study) 52 weeks	⨁⨁⨁⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms total [52 weeks fu, self-rated caars, 0 - 36, high is poor outcome] in the control groups was 18	The mean ADHD symptoms total [52 weeks fu, self-rated caars, 0 - 36, high is poor outcome] in the intervention groups was 1.10 lower (2.92 lower to 0.72 higher)
ADHD symptoms total [13 weeks PT, observer rated CAARS, 0 - 36, high is poor outcome]	209 (1 study) 13 weeks	⨁⨁⨁⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms total [13 weeks pt, observer rated caars, 0 - 36, high is poor outcome] in the control groups was 17.3	The mean ADHD symptoms total [13 weeks pt, observer rated caars, 0 - 36, high is poor outcome] in the intervention groups was 1.10 higher (0.51 lower to 2.71 higher)
ADHD symptoms total [52 weeks FU, observer rated CAARS, 0 - 36, high is poor outcome]	209 (1 study) 52 weeks	⨁⨁⨁⊖ MODERATE[1] due to risk of bias		The mean ADHD symptoms total [52 weeks fu, observer rated caars, 0 - 36, high is poor outcome] in the control groups was 17.5	The mean ADHD symptoms total [52 weeks fu, observer rated caars, 0 - 36, high is poor outcome] in the intervention groups was 1.10 lower (2.92 lower to 0.72 higher)

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Non-specific supportive therapy	Risk difference with CBT/DBT (95% CI)
ADHD symptoms inattention [PT, 12 weeks, self-rated CAARS, higher is poorer]	81 (1 study) 12 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean ADHD symptoms inattention [pt, 12 weeks, self-rated caars, higher is poorer] in the control groups was 73.19	The mean ADHD symptoms inattention [pt, 12 weeks, self-rated caars, higher is poorer] in the intervention groups was 0.52 standard deviations higher (0.07 to 0.96 higher)
ADHD symptoms inattention [PT, 13 weeks, investigator rated CAARS, 0-36, higher is poorer]	209 (1 study) 13 weeks	⊕⊖⊖⊖ VERY LOW[a,c] due to risk of bias, imprecision		The mean ADHD symptoms inattention [pt, 13 weeks, investigator rated caars, 0-36, higher is poorer] in the control groups was 17.8	The mean ADHD symptoms inattention [pt, 13 weeks, investigator rated caars, 0-36, higher is poorer] in the intervention groups was 0.20 higher (1.55 lower to 1.95 higher)
ADHD symptoms inattention [52 weeks FU, observer rated CAARS, 0 - 36, high is poor outcome]	209 (1 study) 52 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms inattention [52 weeks fu, observer rated caars, 0 - 36, high is poor outcome] in the control groups was 17.5	The mean ADHD symptoms inattention [52 weeks fu, observer rated caars, 0 - 36, high is poor outcome] in the intervention groups was 1.50 lower (3.39 lower to 0.39 higher)
ADHD symptoms hyperactivity [13 weeks PT, observer rated CAARS, 0 - 36, high is poor outcome]	209 (1 study) 13 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms hyperactivity [13 weeks pt, observer rated caars, 0 - 36, high is poor outcome] in the control groups was 15.2	The mean ADHD symptoms hyperactivity [13 weeks pt, observer rated caars, 0 - 36, high is poor outcome] in the intervention groups was 0.60 higher (1.51 lower to 2.71 higher)
ADHD symptoms hyperactivity [52 weeks FU, observer rated CAARS, 0 - 36, high is	209 (1 study) 52	⊕⊕⊕⊖ MODERATE[a]		The mean ADHD symptoms hyperactivity [52 weeks fu, observer rated caars, 0 - 36, high	The mean ADHD symptoms hyperactivity [52 weeks fu, observer rated caars, 0 - 36, high is poor

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Non-specific supportive therapy	Risk difference with CBT/DBT (95% CI)
poor outcome]	weeks	due to risk of bias		is poor outcome] in the control groups was 15.2	outcome] in the intervention groups was 0.30 lower (2.26 lower to 1.66 higher)
Improvement of ADHD symptoms [PT, 17 weeks, BAARS-IV Inattention, Current ADHD Symptom Scale Self Report Form]	38 (1 study) 17 weeks	⊕⊖⊖⊖ VERY LOW[b,d] due to risk of bias, imprecision	Peto OR 11.22 (2.39 to 52.57)	420 more per 1000 (from 190 fewer to 650 more)	-
Serious adverse events PT [17 weeks]	38 (1 study) 17 weeks	⊕⊕⊖⊖ LOW[d] due to risk of bias	RD 0.0 (-0.10 to 0.10)	Zero serious adverse events reported in both arms.	
Function/behaviour [PT, 12 weeks, self-rated BRIEF, higher is poorer]	81 (1 study) 12 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean function/behaviour [pt, 12 weeks, self-rated brief, higher is poorer] in the control groups was 78.64	The mean function/behaviour [pt, 12 weeks, self-rated brief, higher is poorer] in the intervention groups was 0.38 standard deviations higher (0.06 to 0.82 lower)
Emotional dysregulation [12 weeks PT, self-rated BDI, 0-63, higher is poorer]	81 (1 study) 12 weeks	⊕⊕⊕⊖ MODERATE[a] due to risk of bias		The mean emotional dysregulation [12 weeks pt, self-rated bdi, 0-63, higher is poorer] in the control groups was 9.08	The mean emotional dysregulation [12 weeks pt, self-rated bdi, 0-63, higher is poorer] in the intervention groups was 0.08 standard deviations lower (0.52 lower to 0.36 higher)
Emotional dysregulation [13 weeks PT,	209	⊕⊖⊖⊖		The mean emotional dysregulation	The mean emotional dysregulation

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Non-specific supportive therapy	Risk difference with CBT/DBT (95% CI)
self-rated BDI, 0-63, higher is poorer]	(1 study) 13 weeks	VERY LOW[a,c] due to risk of bias, imprecision		[13 weeks pt, self-rated bdi, 0-63, higher is poorer] in the control groups was 10.8	[13 weeks pt, self-rated bdi, 0-63, higher is poorer] in the intervention groups was 0.10 lower (1.92 lower to 1.72 higher)
Emotional dysregulation [52 weeks FU, self-rated BDI, 0-63, higher is poorer]	209 (1 study) 52 weeks	⨁⨁⨁⊖ MODERATE[a] due to risk of bias		The mean emotional dysregulation [52 weeks fu, self-rated bdi, 0-63, higher is poorer] in the control groups was 10.1	The mean emotional dysregulation [52 weeks fu, self-rated bdi, 0-63, higher is poorer] in the intervention groups was 0.70 lower (2.8 lower to 1.4 higher)

(a) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
(b) Downgraded by 1 increment if the confidence interval crossed 1MID.
(c) Downgraded by 2 increments if the confidence interval crosses 2 MIDs.
(d) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.

Table 28: Clinical evidence summary: Attention/memory/cognitive training versus Non-specific supportive therapy

Outcomes	No of Participants (studies) Follow up	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with Non-specific supportive therapy	Risk difference with Attention/memory/cognitive training (95% CI)
ADHD symptoms total [PT, self-rated, 8 weeks, ASRS(0-54), CAARS]	97 (1 study) 8 weeks	⨁⨁⨁⊖ MODERATE[a] due to risk of bias		The mean ADHD symptoms total [pt, 8 weeks, asrs(0-54), caars] in the control groups was 47.25	The mean ADHD symptoms total [pt, 8 weeks, asrs(0-54), caars] in the intervention groups was 0.69 lower (5.3 lower to 3.92 higher)

Functioning/Behaviour [PT, 8 weeks, self-report Barkley Deficits in Executive Functioning scale short form, unclear range, higher is worse]	97 (1 study) 8 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean functioning/behaviour [pt, 8 weeks, barkley deficits in executive functioning scale short form, unclear range, higher is worse] in the control groups was 48.13	The mean functioning/behaviour [pt, 8 weeks, barkley deficits in executive functioning scale short form, unclear range, higher is worse] in the intervention groups was 2.03 higher (2.57 lower to 6.63 higher)
Literacy [PT, 8 weeks, The Test of Word Reading Efficiency-II, unclear range, higher is better]	97 (1 study) 8 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean literacy [pt, 8 weeks, the test of word reading efficiency-ii, unclear range, higher is better] in the control groups was 153.58	The mean literacy [pt, 8 weeks, the test of word reading efficiency-ii, unclear range, higher is better] in the intervention groups was 2.78 lower (9.33 lower to 3.77 higher)
Numeracy [PT, 8 weeks, The Woodcock Johnson-III, unclear range, higher is better]	97 (1 study) 8 weeks	⊕⊕⊖⊖ LOW[a,b] due to risk of bias, imprecision		The mean numeracy [pt, 8 weeks, the woodcock johnson-iii, unclear range, higher is better] in the control groups was 114.66	The mean numeracy [pt, 8 weeks, the woodcock johnson-iii, unclear range, higher is better] in the intervention groups was 2.34 higher (9.08 lower to 13.76 higher)

(a) Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
(b) Downgraded by 1 increment if the confidence interval crossed 1 MID.

Table 29: Clinical evidence summary: CBT/DBT versus attention/memory/cognitive training

Outcomes	No of	Quality of	Relative	Anticipated absolute effects

	Participants (studies) Follow up	the evidence (GRADE)	effect (95% CI)	Risk with Attention/memory/cognitive training	Risk difference with CBT/DBT (95% CI)
Quality of life [PT, self-rated,10 weeks, Q-LES-Q general, unclear range, higher is better]	15 (1 study) 10 weeks	⨁⊖⊖⊖ VERY LOW[a,b] due to risk of bias, imprecision		The mean quality of life [pt, self-rated, 10 weeks, q-les-q general, unclear range, higher is better] in the control groups was 65.2	The mean quality of life [pt, self-rated, 10 weeks, q-les-q general, unclear range, higher is better] in the intervention groups was 4.30 lower (18.96 lower to 10.36 higher)
Improvement of ADHD symptoms [PT, 10 weeks, BADDS, SCL-16, ASR,CGI]	37 (1 study) 10 weeks	⨁⊖⊖⊖ VERY LOW[a,c] due to risk of bias, imprecision	RR 2.06 (0.70 to 6.11)	Moderate	
				222 per 1000	235 more per 1000 (from 67 fewer to 1000 more)

(a) Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
(b) Downgraded by 2 increments if the confidence interval crossed both MIDs.
(c) Downgraded by 1 increment if the confidence interval crossed 1 MID.

See appendix F for full GRADE tables.

1.1.3 Economic evidence

1.1.3.1 Included studies

No relevant health economic studies were identified.

Original modelling was undertaken in CG72 for this question, however this model has been updated and the new guideline model supersedes the CG72 model.

See also the health economic study selection flow chart in appendix G.

1.1.3.2 Excluded studies

No health economic studies that were relevant to this question were excluded due to assessment of limited applicability or methodological limitations.

1.1.3.3 Summary of studies included in the economic evidence review

Table 30: Health economic evidence profile: Parent training versus no parent training

Study	Applicability	Limitations	Other comments	Incremental cost	Incremental effects (QALYs)	Cost-effectiveness	Uncertainty
NGC Original guideline model (UK)	Directly applicable [(a)]	Potentially serious limitations [(b)]	A 1 year decision tree model comparing parent training with no parent training in children with ADHD. A number of studies from the clinical review were used for effectiveness, mostly individually in a number of base case scenarios due to heterogeneity from pooling them. Costs included are resource use associated with the intervention, and resource use associated with response.	Base case_CHACKO + HANDEN = £262 Base case_CHACKO = £677 Base case_ HANDEN = £203 Base case_ PFFIFNER = £1,478 Base case_ OSTBERG = £564	Base case_CHACKO + HANDEN = 0.0079 Base case_CHACKO = 0.0073 Base case_ HANDEN = 0.0087 Base case_ PFFIFNER = 0.0221 Base case_ OSTBERG = 0.0068	Base case_CHACKO + HANDEN = £33,015 Base case_CHACKO = £92,531 Base case_ HANDEN = £23,393 Base case_ PFFIFNER = £66,891 Base case_ OSTBERG = £82,915	Probabilistic sensitivity analysis based on 10,000 simulations (for all abase case analyses). Threshold analyses on costs were also undertaken for all base case analyses. Sensitivity analysis using the outcomes from studies that measure behavioural outcomes dichotomously in the base case, rather than symptom measures, had an ICER of £49,944. Using data from the under 5's population showed that group treatment could be cost effective, but is highly dependent on effectiveness.

Abbreviations: ICER: incremental cost-effectiveness ratio; QALY: quality-adjusted life years;

(a) Directly applicable because comparing relevant interventions and from a UK NHS perspective

(b) Only based on a few studies and mostly individual studies, that have different components of behavioural therapy, some involving the child and teacher as well. This lack of pooling means we cannot be sure which ICER is most representative of the true cost effectiveness. Utilities are based on a study from children on medication, whereas quality of life of a responder or non-responder to a non-pharma therapy may be different to medication.

1.1.3.4 Health Economic Model

Model overview

A model was previously built in CG72 comparing parent training to no treatment in children with ADHD. It was decided to update this model so that more up to date clinical evidence could be used, and also because the model was a key part of the decision to recommend parent training in children in the previous guideline. Additionally, the decision was made that the committee would decide which interventions they felt were clinically effective based on continuous outcomes (the primary outcomes from the clinical review), and these interventions would then be taken forward and focused on in a model, therefore the committee decision was that parent training had some effect from the clinical review, and it is also commonly used in the NHS for ADHD in children, and so the previous model was updated.

The model was a decision tree model with a 1 year time horizon, comparing group parent training with no treatment. No treatment implies no parent training is being offered to the control group. However, in all of the studies included for treatment effect, a proportion of the children are on other current treatment/treatment as usual, which most often is medication but could also be a number of other things. Trials with a completely drug naïve population were not available. Therefore as there is some kind of current treatment (for at least some of the participants in each trial) ongoing, then the baselines (because there are multiple base case analyses) or underlying population for which the no treatment risk in this model is based on is assumed to be the underlying response rate of a general population whereby some children are on treatment and some children aren't. No assumptions have been made about any further treatment if a patient does not respond to parent training, as this would involve assumptions about sequencing of treatments as well as data lacking on sequencing as probabilities of response may be dependent, and so the model has been kept simple.

The intervention is group parent training and is dependent on what the studies report, and can range from 8 weeks of treatment to 12 weeks of treatment with a certain length of session per week. The intervention could also be only parent training, or also include child and/or teacher training. It was assumed there are 10 families per group. There are no booster sessions unlike the previous model. Children can either respond or not respond to the two comparisons. If they respond then they remain responding in the base case throughout the time horizon of the model.

Data

Studies were identified from the clinical review that had dichotomous outcomes, as this was the only way to link to quality of life outcomes. Treatment effect was informed by 5 studies in total.[90,205,362,351,151]

3 of these had similar post treatment timeframes (9 to 12 weeks)[90,205,362,] however attempting to pool these studies identified a large amount of heterogeneity (I^2 of 53%), and it could be seen from the studies that they were very different, as Pfiffner for example had a baseline risk and treatment risk that was much higher than that of the other studies. This heterogeneity suggested that it wasn't a good idea to pool these studies together as it would give a large amount of uncertainty, that when propagated in the model through the PSA would lead to a large variation in the results. It was therefore decided to keep the studies separate and model each of them separately. Pfiffner 2007 reported outcomes at two timepoints, and both of these were used in the analysis, as the study implied there would be deterioration in both the baseline and treatment effect between the two timepoints. Ostberg 2012 had a longer outcome timepoint and was also kept separate. Fabiano 2012 and Chacko 2009 reported behavioural outcomes (as well as Chacko reporting total symptom outcomes) which were outcomes analysed in a sensitivity analysis. ITT outcomes were used for all the clinical data.

Utilities were from Van Der Kolk 2014[465] which used the UK EQ-5D tariff.

Resource use associated with the intervention was elicited from the committee, and included 1 hour of preparation by the clinical psychologist (Band 8a) for every session, as well as the teaching time, and a Band 4 assistant to help set up, do the administrative tasks like contact families, and attend the course to assist. This significantly increased the cost of the course compared to the previous model where an assistant was not used and not as much time was spent on preparation. The intervention cost varied for each base case analysis depending on the resource use in the study/ies being used for treatment effect. No intervention cost was assigned to the comparator arm.

Resource use associated with response or no-response over the time horizon of the model was also included because committee opinion was that non-responders would usually be seen more frequently by a psychiatrist/paediatrician than responders. As the underlying population from the studies was children who were on a mix of concurrent treatments or no treatment, rather than a population that were all on medication for example, then it wasn't felt possible to assume that there would be the same underlying resource use for both arms of the model.

Results

A total of 5 analyses were undertaken as base case scenarios using various sources for treatment effect; 1) using Chacko 2009 and Handen 2015 pooled (as heterogeneity was smaller when excluding Pfiffner 2007), 2) using Chacko 2009 alone, 3) using Handen 2015 alone, 4) using Pfiffner 2007 alone, and 5) using Ostberg 2012 alone.

The ICERs ranged from £23,393 to £92,531 per QALY, depending on which study was used for treatment, as a higher relative treatment response from the intervention combined with lower cost (if say the intervention was parent training only) would lead to a higher ICER. Showing that the ICER is sensitive to the inputs and also that the treatment effects and intensity of the intervention can vary.

A sensitivity analysis was undertaken using studies that reported response on behavioural outcomes rather than total symptom outcomes. Two studies were pooled together for this analysis. The ICER was £49,944 per QALY.

It was also narratively explored what impact using the data from the under 5 population would have. Of the clinical studies included in the clinical review for the under 5's, only one had dichotomous total symptom outcomes. This was evaluating the New Forest Parenting Programme compared to no treatment. Using the outcomes from the study and amending the cost of the intervention, as this is a 1:1 intervention provided in the child's home, the ICER was around £38,000 per QALY. It was however around £900 per QALY if the intervention was provided in a group. These results have to interpreted with caution however as they are only based on one study.

Limitations of the model include; there are mostly individual studies informing the treatment effect in the model as only dichotomous outcomes could be used in the model, which led to a variation in the ICERs and uncertainty about the cost effectiveness of parent training. The studies have varying populations (in terms of medication status) and also varying intensities of treatments provided in the trials. Marrying up the dichotomous outcomes used in the model and the continuous outcomes that were prioritised in the clinical review is also a challenge, as dichotomous outcomes tend to show that the intervention is effective, which isn't always the case for all the continuous outcomes in the clinical review. No assumptions have been made about further treatment in the model.

See Table 30 for a summary of the model, and appendix 1 for the detailed model write-up.

1.1.3.5 Unit costs

Some unit costs are presented below of the staff that would be involved in providing a behavioural therapy type program such as parent training.

Table 31: Staff costs associated with providing behavioural therapy

Staff	Cost	Source
Clinical psychologist (Band 8a)	£62 per hour	PSSRU 2016[115]
Assistant (Band 4)	£30 per hour	PSSRU 2016[115]

1.1.4 Resource impact

It is likely that recommendations resulting from this review area will have a significant impact on resources.

Additional savings are likely to be incurred/made for the following reasons: Potential cost savings from educational support being recommended instead of parent training.

Further work is being carried out to quantify the potential resource impact in this area.

1.1.5 Evidence statements

1.1.5.1 Clinical evidence statements

Children under 5

Parent/Family training versus waitlist/usual care

No evidence was identified for quality of life, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events, emotional dysregulation, literacy outcomes and numeracy outcomes.

There was a clinically important benefit for ADHD symptoms total (PT rated by parent; 2 studies moderate quality) (PT rated by clinician; 1 study moderate quality) (FU rated by parent; 1 study very low quality), ADHD symptoms inattention (PT rated by clinician; 1 study moderate quality) (PT parent rated; 3 studies low quality), ADHD symptoms hyperactivity (PT clinician rated; 1 study moderate quality) (PT parent rated; 2 studies moderate quality) and function/behaviour (PT parent rated; 2 studies very low quality).

There were no clinically important benefits for ADHD symptoms total (PT rated by teacher; 1 study low quality), ADHD symptoms inattention (PT teacher rated; 1 study moderate quality) and ADHD symptoms hyperactivity (PT teacher rated; 1 study low quality).

Children aged 5 to 18

Parent/family training versus waitlist/usual care

No evidence was identified for quality of life, discontinuation due to side effects, serious adverse events, minor adverse events and emotional dysregulation.

There was a clinically important benefit for ADHD symptoms total (PT rated by parent; 3 studies low quality) (FU parent rated; 2 studies low quality), ADHD symptoms inattention (PT parent/teacher rated; 1 study low quality) (FU parent/teacher rated; 1 study very low quality), clinical global impression scale (PT investigator rated; 1 study very low quality) and function/behaviour (FU self-rated; 1 study low quality).

There were no clinically important benefits for ADHD symptoms total (PT teacher rated; 2 studies moderate quality) (PT parent rated; 1 study low quality) (FU teacher rated; 1 study moderate quality), ADHD symptoms inattention (PT teacher rated; 4 studies low quality) (PT parent rated; 7 studies very low to low quality) (FU teacher rated; 2 studies moderate quality) (FU parent rated; 4 studies very low quality), ADHD symptoms hyperactivity (PT teacher rated; 3 studies low quality) (PT parent rated; 6 studies very low quality) (FU parent rated; 3 studies very low quality), function/behaviour outcomes (PT parent rated; 8 studies low quality) (PT teacher rated; 3 studies moderate to low quality) (PT self-rated; 1 study low quality) (FU parent reported; 5 studies very low quality) (FU teacher reported; 1 study moderate quality), academic literacy outcomes (PT; 1 study very low quality) and academic numeracy outcomes (PT; 1 study low quality).

There was a clinically important harm for ADHD symptoms hyperactivity (FU teacher rated; 1 study low quality).

Attention/memory/cognitive training versus waitlist/usual care

No evidence was identified for quality of life, clinical global impression scale, serious adverse events, minor adverse events and emotional dysregulation.

There was a clinically important benefit for ADHD symptoms total (PT parent rated; 1 study low quality), ADHD symptoms inattention (PT parent rated; 3 studies moderate quality) (PT investigator rated; 1 study moderate quality) (PT teacher rated; 1 study low quality) and discontinuation related to study intervention (PT; 1 study very low quality).

There were no clinically important benefits for ADHD symptoms total (PT parent rated; 1 study low quality) (PT teacher rated; 1 study low quality) (FU parent rated; 1 study low quality) (FU teacher rated; 1 study low quality), ADHD symptoms inattention (PT parent rated; 2 studies low quality) (FU parent rated; 2 studies low quality) (PT teacher rated; 5 studies low to moderate quality) (FU teacher rated; 1 study low quality), ADHD symptoms hyperactivity (PT parent rated; 5 studies low quality) (FU parent rated; 2 studies low quality) (PT teacher rated; 2 studies low quality) (FU teacher rated; 1 study low quality) (PT investigator rated; 1 study low quality) and function/behaviour outcomes (PT parent rated; 4 studies low quality) (FU parent rated; 2 studies low quality) (PT teacher rated; 2 studies moderate quality) (FU teacher rated; 1 study low quality) (PT investigator rated; 1 study very low quality) (FU investigator rated; very low quality), academic literacy outcomes (PT; 1 study low quality) (FU; 1 study low quality) and academic numeracy outcomes (PT; 1 study low quality) (FU; 1 study low quality).

There was a clinically important harm for ADHD symptoms inattention (FU teacher rated; 1 study low quality) and ADHD symptoms hypeactivity (PT teacher rated; 1 study low quality).

Neurofeedback versus waitlist/usual care

No evidence was identified for quality of life, ADHD symptoms total, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events, emotional dysregulation, literacy outcomes and numeracy outcomes.

There were no clinically important benefits for ADHD symptoms inattention (PT parent rated; 2 studies low quality) (FU parent rated; 1 study low quality) (PT teacher rated; 2 studies low quality) (FU self-rated; 1 study very low quality), ADHD symptoms hyperactivity (PT parent rated; 2 studies low quality) (FU parent rated; 1 study low quality) (PT teacher rated; 1 study very low quality) (FU self-rated; 1 study very low quality) and behavioural outcomes (PT parent rated; 1 study low quality) (FU parent rated; 1 study low quality) (PT investigator rated; 1 study very low quality) (FU investigator rated; 1 study low quality).

Psychoeducation versus waitlist/usual care

No evidence was identified for quality of life, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events, emotional dysregulation, literacy outcomes and numeracy outcomes.

There was a clinically important benefit for ADHD symptoms total (FU teacher rated; 1 study very low quality) (PT teacher rated; 1 study very low quality), ADHD symptoms inattention (PT teacher rated; 1 study very low quality) (FU teacher rated; 1 study very low quality), ADHD symptoms hyperactivity (PT teacher rated; 1 study low quality) (FU teacher rated; 1 study very low quality).

There were no clinically important benefits for ADHD symptoms inattention (PT parent rated; 1 study low quality), ADHD symptoms hyperactivity (PT parent rated; 1 study low quality) and function/behaviour (PT parent rated; 1 study low quality) (FU parent rated; 1 study low quality) (FU teacher rated; 1 study low quality).

There was a clinically important harm for function/behaviour (PT teacher rated; 1 study low quality).

Relaxation versus waitlist/usual care

No evidence was identified for quality of life, ADHD symptoms inattention, ADHD symptoms hyperactivity, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events, function/behaviour outcomes, emotional dysregulation, literacy outcomes and numeracy outcomes.

There were no clinically important benefits for ADHD symptoms total (PT parent rated; 1 study very low quality) (PT teacher rated; 1 study very low quality).

Exercise versus waitlist/usual care

No evidence was identified for quality of life, ADHD symptoms total, ADHD symptoms hyperactivity, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events and emotional dysregulation.

There was a clinically important benefit for ADHD symptoms inattention (PT teacher rated; 1 study low quality) and academic performance (PT teacher rated; 1 study low quality).

There was a clinically important harm for function/behaviour (PT teacher rated; 1 study very low quality).

Organisation/School-based versus waitlist/usual care

No evidence was identified for quality of life, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events and emotional dysregulation.

There were no clinically important benefits for ADHD symptoms total (PT teacher rated; 1 study very low quality), ADHD symptoms inattention (PT parent rated; 4 studies low to moderate quality) (FU parent rated; 1 study high quality) (PT teacher rated; 3 studies high quality) (FU teacher rated; 1 study high quality), ADHD symptoms hyperactivity (PT parent rated; 4 studies very low to high quality) (PT teacher rated; 3 studies high quality) (FU parent rated; 1 study high quality) (FU teacher rated; 1 study high quality), behavioural outcomes (PT parent rated; 2 studies high quality) (FU parent rated; 1 study high quality) (PT teacher rated; 3 studies high quality) (FU teacher rated; 1 study high quality), academic literacy outcomes (PT; 1 study very low quality), academic outcomes (FU teacher rated; 1 study high quality) (PT teacher rated; 1 study high quality), academic numeracy outcomes (PT; 3 studies very low quality) (during intervention; 1 study very low quality) and academic performance (PT parent rated; 1 study very low quality) (PT; 1 study low quality).

Parent/family training & Organisation/school based versus Waitlist/usual care

No evidence was identified for quality of life, clinical global impression scale, discontinuation due to side effects, serious adverse events and minor adverse events.

There were no clinically important benefits for ADHD symptoms total (FU parent rated; 1 study moderate quality), ADHD symptoms inattention (PT parent rated; 2 studies moderate quality) (PT teacher rated; 1 study low quality), ADHD symptoms hyperactivity (PT parent rated; 2 studies high quality) (PT teacher rated; 1 study low quality), behavioural outcomes (PT parent rated; 1 study moderate quality) (PT teacher rated; 1 study low quality) (PT classroom observer; 1 study very low quality), emotional dysregulation (PT parent rated; 1 study low quality) (PT teacher rated; 1 study very low quality), academic literacy outcomes (PT; 1 study moderate quality) (FU; 1 study moderate quality), academic numeracy outcomes (PT; 1 study moderate quality) and academic performance (PT teacher rated; 1 study low quality).

There was a clinically important harm for ADHD symptoms hyperactivity (PT classroom observer; 1 study very low quality).

Cognitive training & exercise versus waitlist/usual care

No evidence was identified for quality of life, ADHD symptoms inattention, ADHD symptoms hyperactivity, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events, function/behaviour, emotional dysregulation, literacy outcomes and numeracy outcomes.

There were no clinically important benefits for ADHD symptoms total (PT clinician rated; 1 study low quality) (PT parent rated; 1 study low quality) (PT teacher rated; 1 study moderate quality).

CBT/DBT versus Non-specific supportive therapy

No evidence was identified for quality of life, ADHD symptoms total, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events, function/behaviour, emotional dysregulation, literacy outcomes and numeracy outcomes.

There was a clinically important benefit for ADHD symptoms inattention (PT parent rated; 1 study low quality) (PT teacher rated; 1 study low quality) and ADHD symptoms hyperactivity (PT parent rated; 1 study low quality) (FU parent rated; 1 study low quality).

There were no clinically important benefits for ADHD symptoms inattention (FU parent rated; 1 study low quality) (FU teacher rated; 1 study very low quality).

Organisation/School-based versus Non-specific supportive therapy

No evidence was identified for quality of life, ADHD symptoms total, ADHD symptoms inattention, ADHD symptoms hyperactivity, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events, literacy outcomes and numeracy outcomes.

There was a clinically important benefit for function/behaviour (PT adolescent rated; 1 study very low quality).

There was no clinically important benefit for emotional dysregulation (PT adolescent rated; 1 study very low quality).

Neurofeedback versus sham

No evidence was identified for quality of life, discontinuation due to side effects, minor adverse events, function/behaviour, emotional dysregulation, literacy outcomes and numeracy outcomes.

There was a clinically important benefit for clinical global impression scale (FU investigator rated; 1 study low quality).

There was no clinically important benefit for ADHD symptoms total (PT teacher rated; 1 study very low quality) (PT investigator rated; 1 study moderate quality), ADHD symptoms inattention (PT teacher rated; 1 study very low quality) (PT investigator rated; 2 studies moderate quality), ADHD symptoms hyperactivity (PT teacher rated; 1 study very low quality) (PT investigator rated; 2 studies moderate quality) and serious adverse events (PT; 1 study low quality).

Neurofeedback versus Exercise

No evidence was identified for quality of life, ADHD symptoms total, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events, emotional dysregulation, literacy outcomes and numeracy outcomes.

There was no clinically important benefit for ADHD symptoms hyperactivity (PT parent rated; 1 study low quality) (PT teacher rated; 1 study low quality), ADHD symptoms inattention (PT parent rated; 1 study moderate quality) (PT teacher rated; 1 study moderate quality) and function/behaviour (PT parent rated; 1 study low quality) (PT teacher rated; 1 study low quality).

Parent/family training versus relaxation

No evidence was identified for quality of life, ADHD symptoms total, ADHD symptoms inattention, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events and emotional dysregulation.

There was a clinically important benefit for ADHD symptoms hyperactivity (FU teacher rated; 1 study very low quality).

There was no clinically important benefit for ADHD symptoms hyperactivity (PT parent rated; 1 study very low quality) (FU parent rated; 1 study very low quality) (PT teacher rated; 1 study very low quality), function/behaviour (PT parent rated; 1 study very low quality) (FU parent rated; 1 study very low quality) (PT teacher rated; 1 study very low quality) (FU teacher rated; 1 study very low quality), academic literacy outcomes (PT; 1 study very low quality) (FU; 1 study very low quality) and academic numeracy outcomes (PT; 1 study very low quality) (FU; 1 study very low quality).

Parent/family training versus psychoeducation

No evidence was identified for quality of life, ADHD symptoms total, ADHD symptoms inattention, ADHD symptoms hyperactivity, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events, behavioural outcomes and emotional dysregulation.

There was no clinically important benefit for academic outcomes (FU teacher rated; 1 study moderate quality) (PT teacher rated; 1 study moderate quality).

Neurofeedback versus Attention/memory/cognitive training

No evidence was identified for quality of life, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events and academic outcomes.

There was a clinically important benefit for ADHD symptoms total (PT parent rated; 1 study low quality), ADHD symptoms inattention (PT parent rated; 1 study low quality) (PT teacher rated; 1 study low quality), ADHD symptoms hyperactivity (PT parent rated; 1 study low quality) (FU parent rated; 1 study low quality) (PT teacher rated; 1 study low quality), behavioural outcomes (PT parent rated; 1 study low quality) (PT teacher rated; 1 study low quality) and emotional dysregulation (PT parent rated; 1 study low quality).

There was no clinically important benefit for ADHD symptoms total (FU parent rated; 1 study very low quality) (PT teacher rated; 1 study moderate quality), ADHD symptoms inattention (PT parent rated; 2 studies low quality) (FU parent rated; 2 studies very low to moderate quality) (PT teacher rated; 2 studies low quality), ADHD symptoms hyperactivity (PT parent rated; 2 studies low quality) (FU parent rated; 1 study moderate quality) (PT teacher rated; 1 study low quality) and behavioural outcomes (PT parent rated; 1 study low quality) (FU parent rated; 2 studies very low quality) (PT investigator rated; 1 study low quality) (FU investigator rated; 1 study low quality).

There was a clinically important harm for emotional dysregulation (PT teacher rated; 1 study low quality).

Neurofeedback versus psychoeducation

No evidence was identified for quality of life, ADHD symptoms total, ADHD symptoms hyperactivity, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events, behavioural outcomes, emotional dysregulation and academic outcomes.

There was no clinically important benefit for ADHD symptoms inattention (PT parent rated; 1 study very low quality) (PT teacher rated; 1 study very low quality).

Parent/family training & relaxation versus parent/family training

No evidence was identified for quality of life, ADHD symptoms total, ADHD symptoms inattention, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events and emotional dysregulation.

There was a clinically important benefit for ADHD symptoms hyperactivity (PT teacher rated; 1 study very low quality) (FU teacher rated; 1 study very low quality) and function/behaviour (PT teacher rated; 1 study very low quality).

There was no clinically important benefit for ADHD symptoms hyperactivity (PT parent rated; 1 study very low quality) (FU parent rated; 1 study very low quality), function/behaviour (PT parent rated; 1 study very low quality) (FU parent rated; 1 study very low quality) (FU teacher rated; 1 study very low quality), academic literacy outcomes (PT; 1 study very low quality) (FU; 1 study very low quality) and academic numeracy outcomes (PT; 1 study very low quality) (FU; 1 study very low quality).

Parent/family training & relaxation versus relaxation

No evidence was identified for quality of life, ADHD symptoms total, ADHD symptoms inattention, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events and emotional dysregulation.

There was no clinically important benefit for ADHD symptoms hyperactivity (PT parent rated; 1 study very low quality) (FU parent rated; 1 study very low quality) (PT teacher rated; 1 study very low quality) (FU teacher rated; 1 study very low quality), function/behaviour (PT parent rated; 1 study very low quality) (FU parent rated; 1 study very low quality) (PT teacher rated; 1 study very low quality), academic literacy outcomes (PT; 1 study very low quality) (FU; 1 study very low quality) and academic numeracy outcomes (PT; 1 study very low quality) (FU; 1 study very low quality).

There was a clinically important harm of intervention for function/behaviour (FU teacher rated; 1 study very low quality).

Attention/memory/cognitive training & BPT versus Attention/memory/cognitive training

No evidence was identified for quality of life, ADHD symptoms total, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events, emotional dysregulation and academic outcomes.

There was no clinically important benefit for ADHD symptoms inattention (PT mother rated; 1 study moderate quality), ADHD symptoms hyperactivity (PT mother rated; 1 study very low quality) (PT teacher rated; 1 study low quality) and behavioural outcomes (PT mother rated; 1 study low quality) (PT teacher rated; 1 study very low quality).

There was a clinically important harm of intervention for ADHD symptoms inattention (PT teacher rated; 1 study moderate quality).

Adults over the age of 18

Neurofeedback versus waitlist/usual care

No evidence was identified for quality of life, ADHD symptoms total, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events, behavioural outcomes, emotional dysregulation and academic outcomes.

There was a clinically important benefit for ADHD symptoms inattention (PT self-rated; 1 study low quality) and ADHD symptoms hyperactivity (PT self-rated; 1 study low quality).

CBT/DBT versus waitlist/usual care

No evidence was identified for discontinuation due to side effects, serious adverse events, and minor adverse events.

There was a clinically important benefit for quality of life (PT self-rated; 2 studies low quality), ADHD symptoms total (PT self-rated; 3 studies very low quality) (PT investigator rated; 1 study very low quality), ADHD symptoms inattention (PT investigator rated; 1 study very low quality) (PT self-rated; 3 studies very low to low quality) (FU self-rated; 2 studies low quality), ADHD symptoms hyperactivity (PT investigator rated; 1 study very low quality), clinical global impression scale (FU; 1 study low quality) (PT self-rated; 1 study low quality) (PT; 2 studies very low quality) and function/behaviour (PT self-rated; 1 study very low quality).

There was no clinically important benefit for quality of life (FU self-rated; 1 study low quality), ADHD symptoms total (FU self-rated; 1 study low quality), ADHD symptoms hyperactivity (PT self-rated; 2 studies very low to low quality) (FU self-rated; 1 study low quality), emotional dysregulation (PT self-rated; 4 studies very low quality) (FU self-rated; 2 studies low quality) and academic outcomes (PT; 1 study very low quality) (FU; 1 study low quality).

Attention/memory/cognitive training versus waitlist/usual care

No evidence was identified for ADHD symptoms total, ADHD symptoms inattention, ADHD symptoms hyperactivity, discontinuation due to side effects, serious adverse events, minor adverse events, behavioural outcomes, emotional dysregulation and academic outcomes.

There was no clinically important benefit for quality of life (PT; 1 study very low quality) and clinical global impression scale (PT; 1 study very low quality).

There was a clinically important harm for clinical global impression scale (PT; 1 study very low quality).

CBT/DBT versus Non-specific supportive therapy

No evidence was identified for quality of life, discontinuation due to side effects, minor adverse events and academic outcomes.

There was a clnically important benefit for clinical global impression scale (PT self-rated; 1 study very low quality).

There was no clinically important benefit for ADHD symptoms total (PT self-rated; 2 studies moderate quality) (FU self-rated; 1 study moderate quality) (PT observer rated; 1 study moderate quality) (FU observer rated; 1 study moderate quality), ADHD symptoms inattention (PT investigator rated; 2 studies low quality) (FU observer rated; 1 study moderate quality), ADHD symptoms hyperactivity (PT observer rated; 1 study moderate quality) (FU observer rated; 1 study moderate quality), serious adverse events (PT; 1 study low quality), function/behaviour (PT self-rated; 1 study low quality) and emotional dysregulation (PT self-rated; 2 studies moderate quality) (FU self-rated; 1 study moderate quality).

Attention/memory/cognitive training versus Non-specific supportive therapy

No evidence was identified for quality of life, ADHD symptoms inattention, ADHD symptoms hyperactivity, clinical global impression scale, discontinuation due to side effects, serious adverse events, minor adverse events and emotional dysregulation.

There was no clinically important benefit for ADHD symptoms total (PT self-rated; 1 study moderate quality), function/behaviour (PT self-rated; 1 study low quality), academic literacy outcomes (PT; 1 study low quality) and academic numeracy outcomes (PT; 1 study low quality).

CBT/DBT versus attention/memory/cognitive training

No evidence was identified for ADHD symptoms total, ADHD symptoms inattention, ADHD symptoms hyperactivity, discontinuation due to side effects, serious adverse events, minor adverse events, behavioural outcomes, emotional dysregulation and academic outcomes.

There was a clinically important benefit for clinical global impression scale (PT; 1 study very low quality).

There was no clinically important benefit for quality of life (PT self-rated; 1 study very low quality).

1.1.5.2 Health economic evidence statements

- One original model found that parent training was not cost effective compared to no treatment for treating ADHD in children (ICER ranged from £23,393 to £92,531 in base case analyses). This analysis was assessed as directly applicable with potentially serious limitations.

1.2 Review question: What do people with ADHD feel are the adverse impacts of non-pharmacological treatment for ADHD?

1.2.1 Characteristics table

For full details see the review protocol in appendix A.

Table 32: Characteristics of review question

Objective	To identify what people with ADHD feel are the potential adverse impacts that may be associated with non-pharmacological treatments for ADHD to guide decisions on treatment between people with ADHD and their clinicians
Population and setting	Children, young people and adults with ADHD, parents and teachers and healthcare professionals
Context	Any themes that emerge relating to the following treatments: • Parent/family/carer training programmes • Cognitive behavioural therapies/dialectical behaviour therapy • Psychoeducation • Attention/memory/cognitive training • Neurofeedback • Relaxation techniques • Organisational skills/school or workplace targeted interventions • Sleep targeted interventions • Exercise • Ecotherapies/outdoor activities
Review strategy	Qualitative interview and focus group studies (including studies using grounded theory, phenomenology or other appropriate qualitative approaches); quantitative data from questionnaires will only be considered if insufficient qualitative evidence is identified

1.2.2 Methods and process

This evidence review was developed using the methods and process described in Developing NICE guidelines: the manual.[344] Methods specific to this review question are described in the review protocol in appendix A.

Declarations of interest were recorded according to NICE's 2014 conflicts of interest policy.

1.2.3 Qualitative evidence

1.2.3.1 Included studies

One qualitative study was included in the review;[422] this is summarised in Table 33 below. Key findings from this study are summarised in Section 1.2.3.4 below. See also the study selection flow chart in appendix C, and study evidence tables in appendix D.

1.2.3.2 Excluded studies

See the excluded studies list in appendix I.

1.2.3.3 Summary of qualitative studies included in the evidence review

Table 33: Summary of studies included in the review

Study	Design	Population	Research aim	Comments
Smith 2014[422]	Semi-structured focus groups and thematic analysis.	19 practitioners running services for preschool children with ADHD, and 13 parents of children with ADHD (pre-schoolers)	Understanding the factors related to low uptake and completion of parent interventions for ADHD	Setting: UK

See appendix D for full evidence tables.

1.2.3.4 Qualitative evidence synthesis

Table 34: Review findings

Main findings	Statement of finding
Isolation	Parents experienced feelings of isolation in group parent-training interventions

1.2.3.4.1 Narrative summary of review findings

Review finding 1: Isolation

Parents reported feeling isolated during parent-training intervention. They had expectations of gaining support when speaking to other parents of children diagnosed with ADHD. This meant that when they listened to the experiences of other parents and couldn't relate to them, they felt more isolated, causing feelings of distress

Explanation of quality assessment: rated as low quality due to moderate methodological limitations; minor concerns about coherence of the finding; no concerns about the relevance of the finding due to the study being conducted in the UK; substantial concerns about adequacy because the finding was based on only one study that did not offer rich and in depth information, and only provided information specifically on the experiences parents had in group parent training.

1.2.3.5 Qualitative evidence summary

Table 35: Summary of evidence

Study design and sample size		Finding	Quality assessment		
Number of studies contributing to the finding	**Design**	**Finding**	**Criteria**	**Rating**	**Overall assessment of confidence**
Isolation					
1	Focus groups (UK)	Parents experience feelings of isolation in group parent-training interventions	Limitations	Moderate limitations	LOW
			Coherence	Minor concerns	
			Relevance	No concerns about relevance	
			Adequacy	Substantial concerns about adequacy	

1.2.4 Economic evidence

1.2.4.1 Included studies

No relevant health economic studies were identified.

1.2.4.2 Excluded studies

No health economic studies that were relevant to this question were excluded due to assessment of limited applicability or methodological limitations.

See also the health economic study selection flow chart in appendix G

1.2.5 Resource impact

We do not expect recommendations resulting from this review area to have a significant impact on resources.

1.2.6 Evidence statements

1.2.6.1 Clinical evidence statements

- See section 1.2.3.4.1

1.2.6.2 Health economic evidence statements

- No relevant economic evaluations were identified

1.3 The committee's discussion of the evidence

1.3.1 Interpreting the evidence

1.3.1.1 Non-pharmacological efficacy

1.3.1.1.1 The outcomes that matter most

The committee considered quality of life, ADHD symptoms and CGI assessment of response to be critical outcomes. ADHD symptoms were separately considered as total, hyperactivity and inattention subscales. The committee did not prioritise any one subscale. ADHD symptoms were separately considered when reported by self, parent, teacher and investigator/observer.

Teacher and observer outcomes were prioritised by the committee to be the most objective assessment of effects.

The committee noted mainly ADHD symptoms were recorded compared to behavioural outcomes. There was no evidence recorded for minor adverse events.

The committee considered intervention related discontinuations, minor adverse events, serious adverse events, behavioural/functional measures, emotional dysregulation and academic outcomes to be important outcomes.

1.3.1.1.2 The quality of the evidence

The committee noted the majority of the body of evidence for this review was generally low or very low quality.

The largest body of evidence was for children aged 5 to 18, with the smallest body of evidence being for children under 5. The review included a large number of studies that met the review protocol, providing mainly imprecise results.

In determining the overall quality of evidence supporting the efficacy of any one intervention, the committee noted that the quality of each outcome had to be considered alongside the consistency across multiple outcomes (for example ADHD symptoms of different subcategories and rated by different persons) and also across multiple comparisons that broadly compared similar interventions. The committee noted the difficulty in separating out certain components, for example although the committee agreed that psychoeducation and behavioural family training were two distinct categories of intervention – typically the interventions included within trials had some degree of overlap.

The committee noted that the interventions which had the highest quality of evidence supporting their use were parent/family training for children (both children under 5 and those aged 5 to 18) and CBT/DBT for adults.

1.3.1.1.3 Benefits and harms

Children under the age of 5

The evidence identified here supported the previous recommendations in this age group in which non-pharmacological treatment, in the form of parent/family training was first line.

The committee noted that most evidence for children focussed on parent/family training. The evidence supported the intervention parent/family training with majority showing a clinically important benefit for ADHD total symptoms parent and clinician rated, ADHD inattention symptoms parent and clinician rated, ADHD hyperactivity symptoms parent and clinician rated and behavioural outcomes parent rated when compared to no waitlist/usual care. The committee noted that benefits generally appeared less impressive when rated by teachers, the committee's preferred rater but this was not a sufficient concern to deviate from current practice and previous recommendations. The committee also noted that in this youngest age group, teachers may spend less time with children compared with the older children.

Children aged 5 to 18

In this age group there was also a clinically important benefit of parent/family training for some outcomes which included ADHD symptoms total parent rated, ADHD inattention symptoms parent and teacher rated, CGI-I investigator rated and behaviour outcomes self-rated, when compared to waitlist/usual care. However the magnitude and consistency of the benefit was less obvious than for children under the age of 5. Psychoeducation was also noted by the committee to have a clinically important benefit compared to waitlist/usual care for the outcomes of ADHD total symptoms teacher rated, ADHD inattention symptoms teacher rated and ADHD hyperactivity/impulsivity symptoms teacher rated. Although the evidence for psychoeducation came from very small trials, the general consensus from the committee was that the techniques used in psychoeducation and parent/family training was quite similar and it would be difficult to truly classify an intervention as wholly one or other.

Other interventions (for example neurofeedback and attention/memory training) did show clinically important benefits for some outcomes including total ADHD symptoms as rated by parents and ADHD inattention and hyperactivity symptoms as rated by parents and teachers. However, the committee noted that many of these benefits were generally supported by smaller studies and lower quality studies than for parent training and were less consistent. The committee took into account current practice and their clinical experience and agreed that the current evidence base for these other interventions was insufficient to make specific recommendations for their use.

The committee were aware of the NICE conduct disorder guideline which is relevant to individuals with ADHD in whom there is co-existing oppositional behaviour/conduct disorder and agreed that the interventions in that guideline should be followed but with an emphasis on ADHD in any intervention.

The committee noted that at the older end of the 5 to 18 age range, CBT/DBT also showed a clinically important benefit for some outcomes ADHD inattention symptoms parent and teacher rated and ADHD hyperactivity/impulsivity symptoms parent rated when compared to non-specific supportive therapy. CBT/DBT alongside parent/family training may be considered for older adolescents. The committee noted that the evidence for other interventions in this age group may have had a similar quality of supportive evidence (for example attention training) however they did not have the additional support of the evidence extrapolated from the adult population. Recommendations to provide CBT for the older segment of this age group are also supported by service configuration, if CBT is already being provided for those over the age of 18 there will be less resource impact to extend that offer to those under 18 as opposed to establishing entirely new services.

The committee noted that the qualitative evidence suggested that some parents perceived group interventions to have harms in terms of the level of support gained from others not meeting expectations. The committee agreed that while this may be the case, in their experience, many parents do gain benefit from group therapy through the sharing of mutual experiences. The committee chose to recommend group therapy as the default option based primarily on cost effectiveness but did include weaker recommendations to consider individual therapy where group therapy was not appropriate.

Overall in this age group the committee recommended the use of parent/family training, incorporating elements of psychoeducation and noted that the use of strategies more commonly applied for adults may be appropriate at the older end of the age range.

Adults aged over 18

The evidence for CBT/DBT compared to waitlist/usual care was noted by the committee to primarily show a clinical benefit for quality of life, ADHD total symptoms (investigator and self-rated), ADHD inattention symptoms (investigator and self-rated), ADHD hyperactivity symptoms (investigator rated), CGI-I self-rated and behavioural outcomes self-rated. The committee also noted neurofeedback when compared to usual care/no treatment showed a clinical benefit but that this was generally based on lower quality evidence from smaller trials.

The evidence for CBT/DBT compared to non-specific supportive therapy showed no clinical difference. The committee was keen to emphasise that this did not necessarily imply a lack of efficacy of CBT and noted that the non-specific supportive therapies typically involved regular periods of face to face counselling.

Overall in this age group, the committee chose, when non-pharmacological treatment is indicated, to recommend interventions that may involve elements of CBT but certainly as a minimum involve a structured, supportive psychological intervention focused on ADHD with regular follow-up and information about ADHD. These minimum requirements were based on a combination of the details of the non-specific interventions in the studies that showed no difference between CBT and NSST and the consensus of the committee. Typically these studies featured an active control arm in which people with ADHD received face to face time with a healthcare professional in which they were given time to discuss their concerns, their condition and their treatment plan but the meetings did not follow any prescribed intervention protocol.

Subgroups

There was insufficient evidence in this review to inform specific recommendations about subgroups of people with ADHD, either based on the severity of their symptoms or on any co-existing disorders.

1.3.1.1.4 Cost effectiveness and resource use

No economic evidence was identified for this question.

An original economic model was conducted comparing parent training with no treatment for children with ADHD. This is an update of the previous guideline model. It was decided to update this model utilising more up to date clinical evidence, and also because the model was a key part of the decision to recommend parent training in children in the previous guideline.

The model was a decision tree model with a 1 year time horizon, comparing parent training with no treatment. No treatment implies no parent training is being offered to the control group. However, in all of the studies included for treatment effect, a proportion of the children are on other current treatment/treatment as usual, which most often is medication but could also be a number of other treatments. Therefore as there is some kind of current treatment (for at least some of the participants in each trial) ongoing, then the baselines or underlying populations represented by no treatment are assumed to be the underlying response rate of a general population, where some children are on treatment and some children aren't.

No assumptions have been made about further treatment if a patient does not respond to parent training, as this would involve assumptions about sequencing of treatments as well as data lacking on sequencing as probabilities of response may be dependent. Resource use associated with response or no-response over the time horizon – represented by psychiatric consultations – was also included because committee opinion was that non-responders would usually be seen more frequently by a psychiatrist/paediatrician than responders. As the underlying population from the studies was children who were on a mix of concurrent treatments or no treatment, rather than a population that were all on medication, then it wasn't felt possible to assume that there would be the same underlying resource use for both arms (as if they were all on drugs they would be seen regularly to monitor the drug anyway and there would be no duplication of resources specifically because of parent training). But as that is not the case, the GC though it was a fair assumption to conclude that patients would therefore be seen with a frequency based on their response to parent training, because they may not be seeing them at all.

Due to heterogeneity in the studies, a number of base case scenarios have been undertaken, most of which model the treatment effect from an individual study one at a time. For this reason, the intervention can vary in terms of the number of sessions, the length of sessions, and who the intervention is targeted at (parents only, parents and children, parents and children and teachers). With the cost of the intervention being based on the resource use from each study. No intervention cost was assigned to the comparator arm. Studies were identified from the clinical review that had dichotomous outcomes, as this was the only way to link to quality of life outcomes. 4 studies were used in the base case that reported total ADHD symptoms dichotomously, and 2 studies (one study in both the base case and the sensitivity analysis) informed a sensitivity analysis where the outcomes were based on behavioural outcomes. This led to 5 base case analyses (one with each of the studies separately and one with a pooling of two studies with similar outcome timeframes and that also showed no heterogeneity.

The probabilistic results showed an ICER ranging from £23,393 to £92,531 per QALY in the 5 analyses. This is because the effectiveness and resource use involved in the interventions varied, and the ICER being very sensitive to the inputs. As all the ICERs are above £20,000 per QALY then depending on the effectiveness of the intervention and the resources involved

(and also whether there is a relationship between the two – which we cannot be certain of), then at best cost effectiveness of parent training is uncertain.

A sensitivity analysis was undertaken using studies that reported response on behavioural outcomes rather than total symptom outcomes. Two studies were pooled together for this analysis. The ICER was £49,944 per QALY.

It was also explored what impact using the data from the under 5 population would have. Of the clinical studies included in the clinical review for the under 5's, only one had dichotomous total symptom outcomes. This was an evaluation of the New Forest Parenting Programme compared to no treatment. Using the outcomes from the study and amending the cost of the intervention, as this is a 1:1 intervention provided in the child's home, the ICER was around £38,000 per QALY. It was however around £900 per QALY if the intervention was provided in a group. These results have to interpreted with caution however as they are only based on one study.

This analysis was rated as directly applicable with potentially serious limitations. Limitations of the model include; there are mostly individual studies informing the treatment effect in the model as only dichotomous outcomes could be used in the model, which led to a variation in the ICERs and uncertainty about the cost effectiveness of parent training. The studies have varying populations (in terms of medication status) and also varying intensities of treatments provided in the trials. Marrying up the dichotomous outcomes used in the model and the continuous outcomes that were prioritised in the clinical review is also a challenge, as dichotomous outcomes tend to show that the intervention is effective, which isn't always the case for all the continuous outcomes in the clinical review. The committee view was also that it is likely the review in general has underestimated effect of non-pharmacological treatments because these are not well captured in trials which focus more on ADHD outcomes rather than wider emotional outcomes. No assumptions have been made about further treatment in the model.

In summary; the model showed that the cost effectiveness of parent training is uncertain given the results and the limitations of the model. Parent training is a staff intensive intervention, and even more so if provided individually than in a group. The trade-off between costs and benefits remains uncertain because it is dependent on the effectiveness of parent training, the costs of the intervention (e.g. how many sessions, how many children per group). The effectiveness remains from a small sample of studies which it is uncertain if these represent the overall body of clinical evidence.

Children under the age of 5

In the under 5's age group the committee discussed that parent training was likely to be effective based on the clinical evidence. As discussed above, a sensitivity analysis using the under 5's clinical data that had dichotomous outcomes showed that parent training may be cost effective if provided in a group. However this has limitations as is based on a single study that had a large difference in response rates between the control and intervention groups, hence the low ICER. An intervention not so effective relative to a control group may not be cost effective. The committee felt that; given parent training is already current practice in this group, and because medication was not felt to be an alternative given the ages of the children, and also taking the sensitivity analysis results for this age group, parent training should remain recommended.

The committee noted that children under the age of 5 will present with behavioural problems such as disruptiveness and oppositional behaviour rather than the DSM V diagnostic ADHD inattentive symptoms. These behavioural symptoms have an overlap with those of oppositional defiant disorder (ODD) and it can be hard to distinguish between ODD and ADHD in this age group. Parent training programmes for the parents of children under the

age of 5 is recommended in the NICE guideline CG158 Antisocial behaviour and conduct disorders in childrenand young people. The committee agreed it would be in line with CG158 to support recommending parent training programmes with the same underlying principles.

The committee agreed that it was important that the wording of the recommendation about parent training in this guideline wasADHD focused. As mentioned above children under the age of 5 generally present with behavioural issues and the majority of parent training programmes are generic or focused on conduct disorder. There may be some implementation costs involved in adapting current services to make parent training more ADHD focused. However in the longer term this reflects an existing recommendation and is unlikely to have a resource impact.

Children aged 5 to 18

In general, the committee's interpretation of the clinical evidence was that parent training was effective on some outcomes. Clinical benefit was shown for parent training on ADHD symptom outcomes using a pooling of 3 studies that had a large combined population (235 people). There were also other interventions that had some effectiveness but the committee view was that these were smaller studies, and the fact that parent training is the most common form of non-pharmacological treatment for children with ADHD in the NHS and therefore is already current practice was also a factor. Additionally, as previously mentioned, it is possible that there may be other beenfits associated with non-pharmacological treatments like parent training that have not been captured in RCTs, and therefore not translated into effectiveness that could be used in the model.

Linking to the above, there were other factors the committee felt the model may not have captured, such as the impact on families which quality of life may not have captured, particularly because parent training impacts the child through the parent but also because improvements in the child's ADHD could have a positive impact on family life. The long term effects of parent training are also uncertain. Deterioration from not receiving treatment is also something not considered in the model. However this would apply also to those whose parent training course ends, and a completely drug naïve group was not available to capture this impact of not being treated.

A compromise reached by the committee based on uncertainty in the cost effectiveness evidence, was that all those aged 5-18 should at minimum be receiving some education/psycho-social support. This was felt by the committee to be minimum standard of care – that people should have information about their condition. This is also touched upon in NICE's guideline on patient experience in adult NHS services. The recommendation also states that this could be as 'few as 1 or 2 sessions'. This is likely to be cost saving because it involves fewer resources than the previous recommendations on parent training in this age group (which it replaces). It is also possible that support is provided by the voluntary sector, with examples being discussed by the committee of where local support groups are run, and someone from the ADHD team is invited to speak.

Where non-pharmacological treatment is recommended for children, this is highlighted more prominently for individuals. This is a population that is outside the model, as it is a small group that would benefit more from individual treatment than in a group.

In older children/adolescents CBT may be more appropriate and was recommended. The effect could be extrapolated from the adults where CBT was shown to be effective in the clinical review. CBT is implied in combination with medication for this age group (and should be after medication has been optimised), and although combinations were shown not to be cost effective, the committee felt that there is likely to be benefit that hasn't been captured in trials from non-pharmacological treatment, particularly around the impact on wider outcomes

rather than more core ADHD symptoms. See the combination evidence review for more discussion on this.

These recommendations are unlikely to have a resource impact, as they are mostly based on previous recommendations. Educational/psychosocial support may have a cost saving if it is replacing parent training courses.

Adults aged over 18

CBT had the most data for adults, and also showed that this was effective on several outcomes. No modelling was undertaken in adults for this question nor was there any economic evidence identified. The costs of providing the interventions like CBT would be the same as for children if the resource use and mode of delivery was the same. Cost effectiveness is likely to depend on the additional benefit from the intervention compared to no treatment, and the cost, and remains uncertain in adults.

The committee felt that given current practice where medication is usually first line, with patients tending to use non-pharmacological treatments if they either; refuse medication, or it hasn't been effective/cannot be tolerated or adhered to, or if there are specific symptoms that remain following medication that behavioural therapy could help with, then this should remain recommended. Therefore in adults current practice based on the opinion of the committee is that there tends to be a stepwise approach to different types of treatments where one treatment type is tried first (pharmacological treatment), and following non-compliance/ ineffectiveness/ intolerance then non-pharmacological treatment is tried. This means that the population that will be using non-pharmacological treatment will be a subset of the adult ADHD population. Non-pharmacolgical treatments in combination with medication who have optimised their medication but still have some impairment is also recommended. Although this was shown to not be cost effective from the previous guideline model, the committee felt that there is likely to be benefit that hasn't been captured in trials from non-pharmacological treatment. See the combination evidence review for more discussion on this. As with the children the committee felt it is important for people to have choices about the treatments available.

This is an existing recommendation and is unlikely to have a resource impact.

1.3.1.1.5 Other factors the committee took into account

Throughout these recommendations the committee agreed that ideally any non-pharmacological intervention would be ADHD focused when provided to people with ADHD. This was particular relevant to parent training programmes, generic versions of which are more common as they are used for children without ADHD but with other behavioural problems.

The committee noted that there was insufficient evidence to recommend any specific content or format of ADHD parent training or ADHD focused support, beyond the default recommendation being for group rather than individual interventions. The committee agreed that the precise contents and delivery methods of each intervention will vary based on what is available in any area.

The committee noted that although there was insufficient evidence to specifically recommend an exercise focused intervention, it is likely that regular exercise as part of a healthy lifestyle will have benefits for people with ADHD. This was incorporated into the recommendations on discussions prior to starting treatment.

1.3.1.2 Impact of adverse events associated with non-pharmacological treatments of ADHD

1.3.1.2.1 The quality of the evidence

The review finding was of low quality. There were moderate methodological limitations in the contributing study. There were mainly only minor concerns about the coherence of the finding, and no concerns about the relevance of the finding, as the contributing study was conducted in the UK. There were substantial concerns about adequacy because the finding was based on only one study that did not offer rich and in depth information, and only provided information specifically on the experiences that parents had in group parent training.

1.3.1.2.2 Findings identified in the evidence synthesis

This review identified one review finding related to group parent-training interventions. Parents of children with ADHD reported feeling isolated during parent-training intervention. They had expectations of gaining support when speaking to other parents of children diagnosed with ADHD. This meant that when they listened to the experiences of other parents and couldn't relate to them, they felt more isolated, causing feelings of distress.

The committee felt that recommendations could not be made based only on one study that was investigating group parent training. They felt that this review finding was not detailed enough to make adequate recommendations, and could not be generalised to other types of non-pharmacological interventions.

1.3.1.2.3 Cost effectiveness and resource use

No economic evidence was identified for this question.

This was a qualitative question looking to identify what people with ADHD feel are the adverse impacts of non-pharmacological treatment for ADHD. There are often perceived to not be any adverse events associated with non-pharmacological treatment, however this is not the case. It may not be common for there to be physical adverse events like there would be from pharmacological treatments, but there can be behavioural adverse events or psychological impacts.

The aim of a non-pharmacological therapy is to target ADHD symptoms and other aspects of function affected by ADHD or commonly associated with it for example in young people and adults non pharma therapy might address how they feel ADHD impacts on them, their relationships learning, social life etc. Commonly associated behaviours in young children are oppositional behaviours and impact on peer friendships and learning. Treatments may be group based- more likely in children - or individual which is more usual in young people and adults. If a patient doesn't feel particularly supported from a non-pharmacological therapy then this may manifest itself through ADHD symptoms or through adherence to the treatment, and potentially impact quality of life of the patient and those around them, and possibly even impact resource use. Group based treatments can sometimes make people feel stigmatised or that they are not managing their condition appropriately, because being put together in a room with others may make them feel as though those individuals have been selected for a reason.

Therefore it is important that patients feel supported and it is stressed that participation in non-pharmacological therapy isn't any reflection on their ability to manage their condition or their parenting.

There may be some additional staff time involved in making patients feel supported, and explaining the purpose of the non-pharmacological treatment, which can help minimise any potential adverse events. But this should already be good practice as part of providing the treatment, and therefore this recommendation is not expected to have a resource impact.

References

1. A 14-month randomized clinical trial of treatment strategies for attention-deficit/hyperactivity disorder. The MTA Cooperative Group. Multimodal Treatment Study of Children with ADHD. Archives of General Psychiatry. 1999; 56(12):1073-1086

2. Abadi MS, Madgaonkar J, Venkatesan S. Effect of yoga on children with attention deficit/hyperactivity disorder. Psychological Studies. 2008; 53(2):154-159

3. Abdollahian E, Mokhber N, Balaghi A, Moharrari F. The effectiveness of cognitive-behavioural play therapy on the symptoms of attention-deficit/hyperactivity disorder in children aged 7-9 years. Attention Deficit and Hyperactivity Disorders. 2013; 5(1):41-46

4. Abikoff H, Gallagher R, Wells KC, Murray DW, Huang L, Lu F et al. Remediating organizational functioning in children with ADHD: immediate and long-term effects from a randomized controlled trial. Journal of Consulting and Clinical Psychology. 2013; 81(1):113-128

5. Abikoff HB, Thompson M, Laver-Bradbury C, Long N, Forehand RL, Miller Brotman L et al. Parent training for preschool ADHD: a randomized controlled trial of specialized and generic programs. Journal of Child Psychology and Psychiatry and Allied Disciplines. 2015; 56(6):618-631

6. Abrahamse ME, Junger M, Chavannes EL, Coelman FJ, Boer F, Lindauer RJ. Parent-child interaction therapy for preschool children with disruptive behaviour problems in the Netherlands. Child & Adolescent Psychiatry & Mental Health. 2012; 6(1):24

7. Accorsi A, Lucci C, Di Mattia L, Granchelli C, Barlafante G, Fini F et al. Effect of osteopathic manipulative therapy in the attentive performance of children with attention-deficit/hyperactivity disorder. Journal of the American Osteopathic Association. 2014; 114(5):374-381

8. Adler RH, Herschkowitz N, Minder CE. Homeopathic treatment of children with attention deficit disorder: a randomized, double blind, placebo-controlled crossover trial. H. Frei R. Everts, K.v. Ammon et al. Eur J Pediatr. 2005; 164: 758-767. European Journal of Pediatrics. 2007; 166(5):509

9. Aghebati A, Gharraee B, Hakim Shoshtari M, Gohari MR. Triple p-positive parenting program for mothers of ADHD children. Iranian Journal of Psychiatry & Behavioral Sciences. 2014; 8(1):59-65

10. Ahmed GM, Mohamed S. Effect of regular aerobic exercises on behavioral, cognitive and psychological response in patients with attention deficit-hyperactivity disorder. Life Science Journal. 2011; 8(2):366-371

11. Ahmed R, Borst J, Wei YC, Aslani P. Parents' perspectives about factors influencing adherence to pharmacotherapy for ADHD. Journal of Attention Disorders. 2017; 21(2):91-99

12. Ahmed R, Borst JM, Yong CW, Aslani P. Do parents of children with attention-deficit/hyperactivity disorder (ADHD) receive adequate information about the disorder and its treatments? A qualitative investigation. Patient Preference & Adherence. 2014; 8:661-670

13. Ahmed R, McCaffery KJ, Aslani P. Factors influencing parental decision making about stimulant treatment for attention-deficit/hyperactivity disorder. Journal of Child and Adolescent Psychopharmacology. 2013; 23(3):163-178

14. Akutsu K, Ishii M, Shinoda H, Suzuki K. Effects of neurofeedback training on event-related components and self-reported measures in healthy individuals. International Journal of Psychophysiology. 2014; 94(2):234-235

15. Alam N, Ansari S, Gurnani D, Sinha V, Sharma PK, Jindal S. Audiological assessment modalities in children with multiple handicaps and parents' perception. Indian Journal of Otology. 2014; 20(2):67-69

16. Aman MG, Bukstein OG, Gadow KD, Arnold LE, Molina BS, McNamara NK et al. What does risperidone add to parent training and stimulant for severe aggression in child attention-deficit/hyperactivity disorder? Journal of the American Academy of Child and Adolescent Psychiatry. 2014; 53(1):47-60.e41

17. Aman MG, Farmer CA, Hollway J, Arnold LE. Treatment of Inattention, overactivity, and impulsiveness in autism spectrum disorders. Child and Adolescent Psychiatric Clinics of North America. 2008; 17(4):713-738

18. Aman MG, McDougle CJ, Scahill L, Handen B, Arnold LE, Johnson C et al. Medication and parent training in children with pervasive developmental disorders and serious behavior problems: results from a randomized clinical trial. Journal of the American Academy of Child and Adolescent Psychiatry. 2009; 48(12):1143-1154

19. Anastopoulos AD, Shelton TL, DuPaul GJ, Guevremont DC. Parent training for attention-deficit hyperactivity disorder: its impact on parent functioning. Journal of Abnormal Child Psychology. 1993; 21(5):581-596

20. Ansari NJR, Dhongade RK, Lad PS, Borade A, Suvarna YG, Yadav V et al. Study of parental perceptions on health & social needs of children with neuro-developmental disability and it's impact on the family. Journal of Clinical and Diagnostic Research. 2016; 10(12):SC16-SC20

21. Arango C. To treat or not to treat? and How to treat? Two questions whose answers are far removed from evidence informed practice in child psychiatry. European Child and Adolescent Psychiatry. 2013; 22(9):521-522

22. Arnold LE, Amato A, Bozzolo H, Hollway J, Cook A, Ramadan Y et al. Acetyl-L-carnitine (ALC) in attention-deficit/hyperactivity disorder: A multi-site, placebo-controlled pilot trial. Journal of Child and Adolescent Psychopharmacology. 2007; 17(6):791-801

23. Arnold LE, Gadow KD, Farmer CA, Findling RL, Bukstein O, Molina BS et al. Comorbid anxiety and social avoidance in treatment of severe childhood aggression: response to adding risperidone to stimulant and parent training; mediation of disruptive symptom response. Journal of Child and Adolescent Psychopharmacology. 2015; 25(3):203-212

24. Au A, Lau KM, Wong AHC, Lam C, Leung C, Lau J et al. The efficacy of a group Triple P (positive parenting program) for Chinese parents with a child diagnosed with ADHD in Hong Kong: A pilot randomised controlled study. Australian Psychologist. 2014; 49(3):151-162

25. Axberg U, Broberg AG. Evaluation of "the incredible years" in Sweden: the transferability of an American parent-training program to Sweden. Scandinavian Journal of Psychology. 2012; 53(3):224-232

26. Ayaz AB, Ayaz M, Yazgan Y, Akin E. The relationship between motor coordination and social behavior problems in adolescents with Attention-Deficit/Hyperactivity Disorder. Bulletin of Clinical Psychopharmacology. 2013; 23(1):33-41

27. Azevedo AF, Seabra-Santos MJ, Gaspar MF, Homem TC. The Incredible Years Basic Parent Training for Portuguese preschoolers with AD/HD behaviors: Does it make a difference? Child & Youth Care Forum. 2013; 42(5):403-424

28. Babinski DE, Waxmonsky JG, Pelham WE, Jr. Treating parents with attention-deficit/hyperactivity disorder: the effects of behavioral parent training and acute stimulant medication treatment on parent-child interactions. Journal of Abnormal Child Psychology. 2014; 42(7):1129-1140

29. Bachman JA, Brennan PF, Patrick TB, Cole M. A World Wide Web-based health resource. Survey of Missouri school nurses to determine priority health information resources for SchoolhealthLink. Journal of School Nursing. 2000; 16(1):28-33

30. Bagner DM, Eyberg SM. Parent-child interaction therapy for disruptive behavior in children with mental retardation: a randomized controlled trial. Journal of Clinical Child and Adolescent Psychology. 2007; 36(3):418-429

31. Bai GN, Wang YF, Yang L, Niu WY. Effectiveness of a focused, brief psychoeducation program for parents of ADHD children: improvement of medication adherence and symptoms. Neuropsychiatrie. 2015; 11:2721-2735

32. Bakhshayesh AR, Hansch S, Wyschkon A, Rezai MJ, Esser G. Neurofeedback in ADHD: a single-blind randomized controlled trial. European Child and Adolescent Psychiatry. 2011; 20(9):481-491

33. Bakhtadze S, Beridze M, Geladze N, Khachapuridze N, Bornstein N. Effect of EEG biofeedback on cognitive flexibility in children with attention deficit hyperactivity disorder with and without epilepsy. Applied Psychophysiology and Biofeedback. 2015; 41(1):71-79

34. Ball C. Attention-deficit hyperactivity disorder and the use of methylphenidate: A survey of the views of general practitioners. Psychiatric Bulletin. 2001; 25(8):301-304

35. Bartlett R, Rowe TS, Shattell MM. Perspectives of college students on their childhood ADHD. MCN, American Journal of Maternal Child Nursing. 2010; 35(4):226-231

36. Baumeister S, Wolf I, Holz N, Boecker-Schlier R, Adamo N, Holtmann M et al. Neurofeedback training effects on inhibitory brain activation in ADHD: A matter of learning? Neuroscience. 2016; Epublication

37. Beck SJ, Hanson CA, Puffenberger SS, Benninger KL, Benninger WB. A controlled trial of working memory training for children and adolescents with ADHD. Journal of Clinical Child and Adolescent Psychology. 2010; 39(6):825-836

38. Bedard AC, Tannock R. Anxiety, methylphenidate response, and working memory in children with ADHD. Journal of Attention Disorders. 2008; 11(5):546-557

39. Bekle B. Knowledge and attitudes about attention-deficit hyperactivity disorder (ADHD): a comparison between practicing teachers and undergraduate education students. Journal of Attention Disorders. 2004; 7(3):151-161

40. Benzing V, Schmidt M. Cognitively and physically demanding exergaming to improve executive functions of children with attention deficit hyperactivity disorder: a randomised clinical trial. BMC Pediatrics. 2017; 17:8

41. Berger I, Dor T, Nevo Y, Goldzweig G. Attitudes toward attention-deficit hyperactivity disorder (ADHD) treatment: Parents' and children's perspectives. Journal of Child Neurology. 2008; 23(9):1036-1042

42. Berger NP. The creative use of the ADHD diagnosis in probationers' self-narratives. Journal of Scandinavian Studies in Criminology and Crime Prevention. 2015; 16(1):122-139

43. Bernat DH, August GJ, Hektner JM, Bloomquist ML. The Early Risers preventive intervention: testing for six-year outcomes and mediational processes. Journal of Abnormal Child Psychology. 2007; 35(4):605-617

44. Biederman J, Fried R, Petty CR, Wozniak J, Doyle AE, Henin A et al. Cognitive development in adults with attention-deficit/hyperactivity disorder: a controlled study in medication-naive adults across the adult life cycle. Journal of Clinical Psychiatry. 2011; 72(1):11-16

45. Bierman KL, Coie J, Dodge K, Greenberg M, Lochman J, McMohan R et al. School outcomes of aggressive-disruptive children: prediction from kindergarten risk factors and impact of the fast track prevention program. Aggressive Behavior. 2013; 39(2):114-130

46. Bierman KL, Nix RL, Heinrichs BS, Domitrovich CE, Gest SD, Welsh JA et al. Effects of Head Start REDI on children's outcomes 1 year later in different kindergarten contexts. Child Development. 2014; 85(1):140-159

47. Bigorra A, Garolera M, Guijarro S, Hervás A. Long-term far-transfer effects of working memory training in children with adhd: A randomized controlled trial. European Child and Adolescent Psychiatry. 2015; 25(8):853-867

48. Bink M, Bongers IL, Popma A, Janssen TW, van Nieuwenhuizen C. 1-year follow-up of neurofeedback treatment in adolescents with attention-deficit hyperactivity disorder: randomised controlled trial. BJPsych Open. 2016; 2(2):107-115

49. Bink M, Nieuwenhuizen C, Popma A, Bongers IL, Boxtel GJM. Behavioral effects of neurofeedback in adolescents with ADHD: A randomized controlled trial. European Child and Adolescent Psychiatry. 2014; 24(9):1035-1048

50. Bink M, van Nieuwenhuizen C, Popma A, Bongers IL, van Boxtel GJ. Neurocognitive effects of neurofeedback in adolescents with ADHD: a randomized controlled trial. Journal of Clinical Psychiatry. 2014; 75(5):535-542

51. Bioulac S, Lallemand S, Fabrigoule C, Thoumy AL, Philip P, Bouvard MP. Video game performances are preserved in ADHD children compared with controls. Journal of Attention Disorders. 2014; 18(6):542-550

52. Bloomquist ML, August GJ, Ostrander R. Effects of a school-based cognitive-behavioral intervention for ADHD children. Journal of Abnormal Child Psychology. 1991; 19(5):591-605

53. Bögels S, Hoogstad B, van Dun L, de Schutter S, Restifo K. Mindfulness training for adolescents with externalizing disorders and their parents. Behavioural and Cognitive Psychotherapy. 2008; 36(2):193-209

54. Boisjoli R, Vitaro F, Lacourse E, Barker ED, Tremblay RE. Impact and clinical significance of a preventive intervention for disruptive boys: 15-year follow-up. British Journal of Psychiatry. 2007; 191:415-419

55. Bor W, Sanders MR, Markie-Dadds C. The effects of the Triple P-Positive Parenting Program on preschool children with co-occurring disruptive behavior and

attentional/hyperactive difficulties. Journal of Abnormal Child Psychology. 2002; 30(6):571-587

56. Borsting E, Mitchell L, Rouse M. Academic behaviors in children with convergence insufficiency with parent-reported ADHD. Investigative Ophthalmology and Visual Science. 2008; 49(13):2569

57. Boyer BE, Geurts HM, Prins PJM, Oord S. Two novel cbts for adolescents with adhd: The value of planning skills. European Child and Adolescent Psychiatry. 2014; 24(9):1075-1090

58. Bramham J, Young S, Bickerdike A, Spain D, McCartan D, Xenitidis K. Evaluation of group cognitive behavioral therapy for adults with ADHD. Journal of Attention Disorders. 2009; 12(5):434-441

59. Bratton SC, Ceballos PL, Sheely-Moore AI, Meany-Walen K, Pronchenko Y, Jones LD. Head start early mental health intervention: Effects of child-centered play therapy on disruptive behaviors. International Journal of Play Therapy. 2013; 22(1):28-42

60. Bringewatt EH. Negotiating narratives surrounding children's mental health diagnoses: Children and their contribution to the discourse. Children and Youth Services Review. 2013; 35(8):1219-1226

61. Brinkman WB, Epstein JN. Treatment planning for children with attention-deficit/hyperactivity disorder: treatment utilization and family preferences. Patient Preference & Adherence. 2011; 5:45-56

62. Brinkman WB, Sherman SN, Zmitrovich AR, Visscher MO, Crosby LE, Phelan KJ et al. Parental angst making and revisiting decisions about treatment of attention-deficit/hyperactivity disorder. Pediatrics. 2009; 124(2):580-589

63. Brinkman WB, Sherman SN, Zmitrovich AR, Visscher MO, Crosby LE, Phelan KJ et al. In their own words: adolescent views on ADHD and their evolving role managing medication. Academic Pediatrics. 2012; 12(1):53-61

64. Brodin J, Ljusberg AL. Teaching children with attention deficit hyperactivity disorder in remedial classes. International Journal of Rehabilitation Research. 2008; 31(4):351-355

65. Brook U, Boaz M. Attention deficit and hyperactivity disorder (ADHD) and learning disabilities (LD): adolescents perspective. Patient Education and Counseling. 2005; 58(2):187-191

66. Brook U, Watemberg N, Geva D. Attitude and knowledge of attention deficit hyperactivity disorder and learning disability among high school teachers. Patient Education and Counseling. 2000; 40(3):247-252

67. Brown O, Howcroft G, Muthen T. Resilience in families living with a child diagnosed with hyperactivity/attention deficit disorder. South African Journal of Psychology. 2010; 40(3):338-350

68. Brown TE, Landgraf JM. Improvements in executive function correlate with enhanced performance and functioning and health-related quality of life: evidence from 2 large, double-blind, randomized, placebo-controlled trials in ADHD. Postgraduate Medicine. 2010; 122(5):42-51

69. Bubnik MG, Hawk LW, Jr., Pelham WE, Jr., Waxmonsky JG, Rosch KS. Reinforcement enhances vigilance among children with ADHD: comparisons to typically developing children and to the effects of methylphenidate. Journal of Abnormal Child Psychology. 2015; 43(1):149-161

70. Bueno VF, Kozasa EH, Da Silva MA, Alves TM, Louza MR, Pompeia S. Mindfulness meditation improves mood, quality of life, and attention in adults with attention deficit hyperactivity disorder. BioMed Research International. 2015; 2015:962857

71. Bul KC, Kato PM, Van der Oord S, Danckaerts M, Vreeke LJ, Willems A et al. Behavioral outcome effects of serious gaming as an adjunct to treatment for children with attention-deficit/hyperactivity disorder: a randomized controlled trial. Journal of Medical Internet Research. 2016; 18(2):e26

72. Bunnell BE, Beidel DC, Mesa F. A randomized trial of attention training for generalized social phobia: Does attention training change social behavior? Behavior Therapy. 2013; 44(4):662-673

73. Burke JD, Loeber R. The effectiveness of the Stop Now and Plan (SNAP) program for boys at risk for violence and delinquency. Prevention Science. 2015; 16(2):242-253

74. Bussing R, Koro-Ljungberg M, Noguchi K, Mason D, Mayerson G, Garvan CW. Willingness to use ADHD treatments: a mixed methods study of perceptions by adolescents, parents, health professionals and teachers. Social Science and Medicine. 2012; 74(1):92-100

75. Bussing R, Mason D, Garvan CW, Gurnani T, Koro-Ljungberg M, Noguchi K et al. Willingness to use ADHD self-management: mixed methods study of perceptions by adolescents and parents. Journal of Child & Family Studies. 2016; 25(2):562-573

76. Bussing R, Schoenberg NE, Perwien AR. Knowledge and information about ADHD: evidence of cultural differences among African-American and white parents. Social Science and Medicine. 1998; 46(7):919-928

77. Bustamante EE, Davis CL, Frazier SL, Rusch D, Fogg LF, Atkins MS et al. Randomized controlled trial of exercise for ADHD and disruptive behavior disorders. Medicine and Science in Sports and Exercise. 2016; 48(7):1397-1407

78. Butler AM, Titus C. Systematic review of engagement in culturally adapted parent training for disruptive behavior. Journal of Early Intervention. 2015; 37(4):300-318

79. Cabiya JJ, Padilla-Cotto L, González K, Sanchez-Cestero J, Martínez-Taboas A, Sayers S. Effectiveness of a cognitive-behavioral intervention for Puerto Rican children. Revista Interamericana de Psicología. 2008; 42(2):195-202

80. Cachoeira CT, Leffa DT, Mittelstadt SD, Mendes LS, Brunoni AR, Pinto JV et al. Positive effects of transcranial direct current stimulation in adult patients with attention-deficit/hyperactivity disorder - A pilot randomized controlled study. Psychiatry Research. 2017; 247:28-32

81. Canela C, Buadze A, Dube A, Eich D, Liebrenz M. Attitudes toward stimulant treatment of offspring of adult patients with attention-deficit/hyperactivity disorder. Journal of Child and Adolescent Psychopharmacology. 2017; Epublication

82. Capodieci A, Gola ML, Cornoldi C, Re AM. Effects of a working memory training program in preschoolers with symptoms of attention-deficit/hyperactivity disorder. Journal of Clinical and Experimental Neuropsychology. 2017; Epublication

83. Carpenter-Song E. Familial responses to ADHD and bipolar spectrum disorders: Perspectives from a diverse group of families in the United States. Directions in Psychiatry. 2010; 30(1):53-62

84. Carter SL. College students' acceptance of potential treatments for ADHD. Psychological Reports. 2005; 97(1):258-264

85. Castellanos-Ryan N, Seguin JR, Vitaro F, Parent S, Tremblay RE. Impact of a 2-year multimodal intervention for disruptive 6-year-olds on substance use in adolescence: randomised controlled trial. British Journal of Psychiatry. 2013; 203(3):188-195

86. Cerrillo-Urbina AJ, García-Hermoso A, Sánchez-López M, Pardo-Guijarro MJ, Santos Gómez JL, Martínez-Vizcaíno V. The effects of physical exercise in children with attention deficit hyperactivity disorder: A systematic review and meta-analysis of randomized control trials. Child: Care, Health and Development. 2015; 41(6):779-788

87. Chacko A, Bedard AC, Marks DJ, Feirsen N, Uderman JZ, Chimiklis A et al. A randomized clinical trial of Cogmed Working Memory Training in school-age children with ADHD: a replication in a diverse sample using a control condition. Journal of Child Psychology and Psychiatry and Allied Disciplines. 2014; 55(3):247-255

88. Chacko A, Feirsen N, Bedard AC, Marks D, Uderman JZ, Chimiklis A. Cogmed working memory training for youth with ADHD: A closer examination of efficacy utilizing evidence-based criteria. Journal of Clinical Child and Adolescent Psychology. 2013; 42(6):769-783

89. Chacko A, Wymbs BT, Chimiklis A, Wymbs FA, Pelham WE. Evaluating a comprehensive strategy to improve engagement to group-based behavioral parent training for high-risk families of children with ADHD. Journal of Abnormal Child Psychology. 2012; 40(8):1351-1362

90. Chacko A, Wymbs BT, Wymbs FA, Pelham WE, Swanger-Gagne MS, Girio E et al. Enhancing traditional behavioral parent training for single mothers of children with ADHD. Journal of Clinical Child and Adolescent Psychology. 2009; 38(2):206-218

91. Chang YK, Liu S, Yu HH, Lee YH. Effect of acute exercise on executive function in children with attention deficit hyperactivity disorder. Archives of Clinical Neuropsychology. 2012; 27(2):225-237

92. Charach A, Skyba A, Cook L, Antle BJ. Using stimulant medication for children with ADHD: what do parents say? A brief report. Journal of the Canadian Academy of Child & Adolescent Psychiatry. 2006; 15(2):75-83

93. Charach A, Volpe T, Boydell KM, Gearing RE. A theoretical approach to medication adherence for children and youth with psychiatric disorders. Harvard Review of Psychiatry. 2008; 16(2):126-135

94. Charach A, Yeung E, Volpe T, Goodale T, Dosreis S. Exploring stimulant treatment in ADHD: narratives of young adolescents and their parents. BMC Psychiatry. 2014; 14:110

95. Cheung KK, Wong IC, Ip P, Chan PK, Lin CH, Wong LY et al. Experiences of adolescents and young adults with ADHD in Hong Kong: treatment services and clinical management. BMC Psychiatry. 2015; 15:95

96. Choi ES, Lee WK. Comparative effects of emotion management training and social skills training in Korean children with ADHD. Journal of Attention Disorders. 2015; 19(2):138-146

97. Chou CC, Huang CJ. Effects of an 8-week yoga program on sustained attention and discrimination function in children with attention deficit hyperactivity disorder. PeerJ. 2017; 5:e2883

98. Christiansen H, Hirsch O, König A, Steinmayr R, Roehrle B. Prevention of ADHD related problems: A universal preschool program. Health Education. 2015; 115(3-4):285-300

99. Christiansen H, Reh V, Schmidt MH, Rief W. Slow cortical potential neurofeedback and self-management training in outpatient care for children with ADHD: study protocol and first preliminary results of a randomized controlled trial. Frontiers in Human Neuroscience. 2014; 8:943

100. Chu S, Reynolds F. Occupational therapy for children with attention deficit hyperactivity disorder (ADHD), Part 2: A multicentre evaluation of an assessment and treatment package. British Journal of Occupational Therapy. 2007; 70(10):439-448

101. Clarke JN. Surplus suffering: The search for help when a child has mental-health issues. Child & Family Social Work. 2013; 18(2):217-225

102. Clarke JN, Lang L. Mothers whose children have ADD/ADHD discuss their children's medication use: An investigation of blogs. Social Work in Health Care. 2012; 51(5):402-416

103. Classen S, Monahan M. Evidence-based review on interventions and determinants of driving performance in teens with attention deficit hyperactivity disorder or autism spectrum disorder. Traffic Injury Prevention. 2013; 14(2):188-193

104. Clay D, Farris K, McCarthy AM, Kelly MW, Howarth R. Family perceptions of medication administration at school: errors, risk factors, and consequences. Journal of School Nursing. 2008; 24(2):95-102

105. Coates J, Taylor JA, Sayal K. Parenting interventions for ADHD: a systematic literature review and meta-analysis. Journal of Attention Disorders. 2015; 19(10):831-843

106. Coletti DJ, Pappadopulos E, Katsiotas NJ, Berest A, Jensen PS, Kafantaris V. Parent perspectives on the decision to initiate medication treatment of attention-deficit/hyperactivity disorder. Journal of Child and Adolescent Psychopharmacology. 2012; 22(3):226-237

107. Comer JS, Chow C, Chan PT, Cooper-Vince C, Wilson LA. Psychosocial treatment efficacy for disruptive behavior problems in very young children: a meta-analytic examination. Journal of the American Academy of Child and Adolescent Psychiatry. 2013; 52(1):26-36

108. Cooper P, Shea T. Pupils' perceptions of AD/HD. Emotional & Behavioural Difficulties. 1998; 3(3):36-48

109. Corcoran J, Schildt B, Hochbrueckner R, Abell J. Parents of children with attention deficit/hyperactivity disorder: A meta-synthesis, part I. Child & Adolescent Social Work Journal. 2016:1-55

110. Corkum P, Lingley-Pottie P, Davidson F, McGrath P, Chambers CT, Mullane J et al. Better nights/better days-distance intervention for insomnia in school-aged children with/without ADHD: A randomized controlled trial. Journal of Pediatric Psychology. 2016; 41(6):701-713

111. Corkum PV, McKinnon MM, Mullane JC. The effect of involving classroom teachers in a parent training program for families of children with ADHD. Child & Family Behavior Therapy. 2005; 27(4):29-49

112. Cormier E. How parents make decisions to use medication to treat their child's ADHD: a grounded theory study. Journal of the American Psychiatric Nurses Association. 2012; 18(6):345-356

113. Couture C, Royer E, Dupuis FA, Potvin P. Comparison of Quebec and British teachers' beliefs about, training in and experience with attention deficit hyperactivity disorder. Emotional and Behavioural Difficulties. 2003; 8(4):284-302

114. Cowley B, Holmstrom E, Juurmaa K, Kovarskis L, Krause CM. Computer enabled neuroplasticity treatment: a clinical trial of a novel design for neurofeedback therapy in adult ADHD. Frontiers in Human Neuroscience. 2016; 10:205

115. Curtis L, Burns A. Unit costs of health and social care 2016. Canterbury. Personal Social Services Research Unit University of Kent, 2016. Available from: http://www.pssru.ac.uk/project-pages/unit-costs/2016/

116. Daley D, O'Brien M. A small-scale randomized controlled trial of the self-help version of the New Forest Parent Training Programme for children with ADHD symptoms. European Child and Adolescent Psychiatry. 2013; 22(9):543-552

117. Daley D, Van der Oord S, Ferrin M, Danckaerts M, Doepfner M, Cortese S et al. Behavioral interventions in attention-deficit/hyperactivity disorder: a meta-analysis of randomized controlled trials across multiple outcome domains. Journal of the American Academy of Child and Adolescent Psychiatry. 2014; 53(8):835-847

118. Darredeau C, Barrett SP, Jardin B, Pihl RO. Patterns and predictors of medication compliance, diversion, and misuse in adult prescribed methylphenidate users. Human Psychopharmacology. 2007; 22(8):529-536

119. Davis-Berman JL, Pestello FG. Medicating for ADD/ADHD: Personal and social issues. International Journal of Mental Health and Addiction. 2010; 8(3):482-492

120. Davis CC, Claudius M, Palinkas LA, Wong JB, Leslie LK. Putting families in the center: family perspectives on decision making and ADHD and implications for ADHD care. Journal of Attention Disorders. 2012; 16(8):675-684

121. Day C, Michelson D, Thomson S, Penney C, Draper L. Evaluation of a peer led parenting intervention for disruptive behaviour problems in children: community based randomised controlled trial. BMJ. 2012; 344:e1107

122. de Vries M, Prins PJ, Schmand BA, Geurts HM. Working memory and cognitive flexibility-training for children with an autism spectrum disorder: a randomized controlled trial. Journal of Child Psychology and Psychiatry and Allied Disciplines. 2015; 56(5):566-576

123. Deane H, Young S. Navigating adolescence: an epidemiological follow-up of adaptive functioning in girls with childhood ADHD symptoms and conduct disorder. Journal of Attention Disorders. 2014; 18(1):44-51

124. Dennis T, Davis M, Johnson U, Brooks H, Humbi A. Attention deficit hyperactivity disorder: parents' and professionals' perceptions. Community Practitioner. 2008; 81(3):24-28

125. Deputy SR. Treatment of ADHD in children with tics: a randomized controlled trial. Clinical Pediatrics. 2002; 41(9):736

126. Dittman CK, Farruggia SP, Keown LJ, Sanders MR. Dealing with disobedience: an evaluation of a brief parenting intervention for young children showing noncompliant behavior problems. Child Psychiatry and Human Development. 2016; 47(1):102-112

127. Dittmann RW, Banaschewski T, Schacht A, Wehmeier PM. Findings from the observational COMPLY study in children and adolescents with ADHD: core symptoms, ADHD-related difficulties, and patients' emotional expression during

psychostimulant or nonstimulant ADHD treatment. Attention Deficit and Hyperactivity Disorders. 2014; 6(4):291-302

128. Dose C, Hautmann C, Buerger M, Schuermann S, Woitecki K, Doepfner M. Telephone-assisted self-help for parents of children with attention-deficit/hyperactivity disorder who have residual functional impairment despite methylphenidate treatment: a randomized controlled trial. Journal of Child Psychology and Psychiatry and Allied Disciplines. 2017; 58(6):682-690

129. DosReis S, Barksdale CL, Sherman A, Maloney K, Charach A. Stigmatizing experiences of parents of children with a new diagnosis of ADHD. Psychiatric Services. 2010; 61(8):811-816

130. DosReis S, Mychailyszyn MP, Evans-Lacko SE, Beltran A, Riley AW, Myers MA. The meaning of attention-deficit/hyperactivity disorder medication and parents' initiation and continuity of treatment for their child. Journal of Child and Adolescent Psychopharmacology. 2009; 19(4):377-383

131. dosReis S, Mychailyszyn MP, Myers M, Riley AW. Coming to terms with ADHD: how urban African-American families come to seek care for their children. Psychiatric Services. 2007; 58(5):636-641

132. dosReis S, Myers MA. Parental attitudes and involvement in psychopharmacological treatment for ADHD: a conceptual model. International Review of Psychiatry. 2008; 20(2):135-141

133. Duric NS, Asmus J, Elgen IB. Self-reported efficacy of neurofeedback treatment in a clinical randomized controlled study of ADHD children and adolescents. Neuropsychiatric Disease and Treatment. 2014; 10:1645-1654

134. Duric NS, Assmus J, Gundersen D, Elgen IB. Neurofeedback for the treatment of children and adolescents with ADHD: a randomized and controlled clinical trial using parental reports. BMC Psychiatry. 2012; 12:107

135. Edwards C, Howlett E. Putting knowledge to trial: 'ADHD parents' and the evaluation of alternative therapeutic regimes. Social Science and Medicine. 2013; 81:34-41

136. Egeland J, Aarlien AK, Saunes BK. Few effects of far transfer of working memory training in ADHD: a randomized controlled trial. PloS One. 2013; 8(10):e75660

137. Eichelberger I, Plucka J, Hautmann C, Hanisch C, Dopfner M. Effectiveness of the prevention program for externalizing problem behavior (PEP) in preschoolers with severe and no or mild ADHD symptoms. Zeitschrift fur Kinder-und Jugendpsychiatrie und Psychotherapie. 2016; 44(3):231-239

138. Einarsdottir J. Teaching children with ADHD: Icelandic early childhood teachers' perspectives. Early Child Development and Care. 2008; 178(4):375-397

139. Eisenberg D, Schneider H. Perceptions of academic skills of children diagnosed with ADHD. Journal of Attention Disorders. 2007; 10(4):390-397

140. Elias R, White SW. Autism goes to college: understanding the needs of a student population on the rise. Journal of Autism and Developmental Disorders. 2017; Epublication

141. Emilsson B, Gudjonsson G, Sigurdsson JF, Baldursson G, Einarsson E, Olafsdottir H et al. Cognitive behaviour therapy in medication-treated adults with ADHD and persistent symptoms: a randomized controlled trial. BMC Psychiatry. 2011; 11:116

142. Emilsson M, Gustafsson PA, Ohnstrom G, Marteinsdottir I. Beliefs regarding medication and side effects influence treatment adherence in adolescents with attention deficit hyperactivity disorder. European Child and Adolescent Psychiatry. 2017; 26(5):559-571

143. Epstein JN, Brinkman WB, Froehlich T, Langberg JM, Narad ME, Antonini TN et al. Effects of stimulant medication, incentives, and event rate on reaction time variability in children with ADHD. Neuropsychopharmacology. 2011; 36(5):1060-1072

144. Estrada RV, Bosch R, Nogueira M, Gomez-Barros N, Valero S, Palomar G et al. Psychoeducation for adults with attention deficit hyperactivity disorder vs. cognitive behavioral group therapy: a randomized controlled pilot study. Journal of Nervous and Mental Disease. 2013; 201(10):894-900

145. Evans SW, Langberg JM, Schultz BK, Vaughn A, Altaye M, Marshall SA et al. Evaluation of a school-based treatment program for young adolescents with ADHD. Journal of Consulting and Clinical Psychology. 2016; 84(1):15-30

146. Evans SW, Schultz BK, DeMars CE. High school-based treatment for adolescents with attention-deficit/hyperactivity disorder: Results from a pilot study examining outcomes and dosage. School Psychology Review. 2014; 43(2):185-202

147. Evans SW, Schultz BK, Demars CE, Davis H. Effectiveness of the Challenging Horizons After-School Program for young adolescents with ADHD. Behavioural and Cognitive Psychotherapy. 2011; 42(3):462-474

148. Evans SW, Serpell ZN, Schultz BK, Pastor DA. Cumulative benefits of secondary school-based treatment of students with attention deficit hyperactivity disorder. School Psychology Review. 2007; 36(2):256-273

149. Faber A, Kalverdijk LJ, de Jong-van den Berg LT, Hugtenburg JG, Minderaa RB, Tobi H. Parents report on stimulant-treated children in the Netherlands: initiation of treatment and follow-up care. Journal of Child and Adolescent Psychopharmacology. 2006; 16(4):432-440

150. Fabiano GA, Chacko A, Pelham WE, Jr., Robb J, Walker KS, Wymbs F et al. A comparison of behavioral parent training programs for fathers of children with attention-deficit/hyperactivity disorder. Behavior Therapy. 2009; 40(2):190-204

151. Fabiano GA, Pelham WE, Cunningham CE, Yu J, Gangloff B, Buck M et al. A waitlist-controlled trial of behavioral parent training for fathers of children with ADHD. Journal of Clinical Child and Adolescent Psychology. 2012; 41(3):337-345

152. Fabiano GA, Pelham WE, Jr., Gnagy EM, Burrows-MacLean L, Coles EK, Chacko A et al. The single and combined effects of multiple intensities of behavior modification and methylphenidate for children with attention deficit hyperactivity disorder in a classroom setting. School Psychology Review. 2007; 36(2):195-216

153. Fabiano GA, Vujnovic RK, Pelham WE, Waschbusch DA, Massetti GM, Pariseau ME et al. Enhancing the effectiveness of special education programming for children with attention deficit hyperactivity disorder using a daily report card. School Psychology Review. 2010; 39(2):219-239

154. Farmer C, Lecavalier L, Yu S, Eugene Arnold L, McDougle CJ, Scahill L et al. Predictors and moderators of parent training efficacy in a sample of children with autism spectrum disorders and serious behavioral problems. Journal of Autism and Developmental Disorders. 2012; 42(6):1037-1044

155. Farmer CA, Brown NV, Gadow KD, Arnold LE, Kolko DG, Findling RL et al. Comorbid symptomatology moderates response to risperidone, stimulant, and parent training in

children with severe aggression, disruptive behavior disorder, and attention-deficit/hyperactivity disorder. Journal of Child and Adolescent Psychopharmacology. 2015; 25(3):213-224

156. Fehlings DL, Roberts W, Humphries T, Dawe G. Attention deficit hyperactivity disorder: does cognitive behavioral therapy improve home behavior? Journal of Developmental and Behavioral Pediatrics. 1991; 12(4):223-228

157. Fernandes Azevedo A, Seabra-Santos MJ, Gaspar MF, Homem T. A parent-based intervention programme involving preschoolers with AD/HD behaviours: are children's and mothers' effects sustained over time? European Child and Adolescent Psychiatry. 2014; 23(6):437-450

158. Ferrin M, Moreno-Granados JM, Salcedo-Marin MD, Ruiz-Veguilla M, Perez-Ayala V, Taylor E. Evaluation of a psychoeducation programme for parents of children and adolescents with ADHD: immediate and long-term effects using a blind randomized controlled trial. European Child and Adolescent Psychiatry. 2014; 23(8):637-647

159. Ferrin M, Perez-Ayala V, El-Abd S, Lax-Pericall T, Jacobs B, Bilbow A et al. A randomized controlled trial evaluating the efficacy of a psychoeducation program for families of children and adolescents with ADHD in the United Kingdom: results after a 6-month follow-up. Journal of Attention Disorders. 2016; Epublication

160. Fiks AG, Hughes CC, Gafen A, Guevara JP, Barg FK. Contrasting parents' and pediatricians' perspectives on shared decision-making in ADHD. Pediatrics. 2011; 127(1):e188-196

161. Firmin MW, Phillips A. A qualitative study of families and children possessing diagnoses of ADHD. Journal of Family Issues. 2009; 30(9):1155-1174

162. Flannagan D, Pillow DR, Wise JC. Perceptions and communications about ADHD and ODD behaviors in children with combined type attention deficit hyperactivity disorder. Children's Health Care. 2002; 31(3):223-236

163. Fleischmann A, Miller EC. Online narratives by adults with ADHD who were diagnosed in adulthood. Learning Disability Quarterly. 2013; 36(1):47-60

164. Fleming AP, McMahon RJ, Moran LR, Peterson AP, Dreessen A. Pilot randomized controlled trial of dialectical behavior therapy group skills training for ADHD among college students. Journal of Attention Disorders. 2015; 19(3):260-271

165. Focalin XR for ADHD. Medical Letter on Drugs and Therapeutics. 2009; 51(1308):22-24

166. Forehand R, Parent J, Sonuga-Barke E, Peisch VD, Long N, Abikoff HB. Which type of parent training works best for preschoolers with comorbid ADHD and ODD? A secondary analysis of a randomized controlled trial comparing generic and specialized programs. Journal of Abnormal Child Psychology. 2016; 44(8):1503-1513

167. Fowler PJ, Henry DB, Schoeny M, Gorman-Smith D, Tolan PH. Effects of the SAFE Children preventive intervention on developmental trajectories of attention-deficit/hyperactivity disorder symptoms. Development and Psychopathology. 2014; 26(4 Pt 1):1161-1179

168. Frank E, Ozon C, Nair V, Othee K. Examining why patients with attention-deficit/hyperactivity disorder lack adherence to medication over the long term: a review and analysis. Journal of Clinical Psychiatry. 2015; 76(11):e1459-1468

169. Franke N, Keown LJ, Sanders MR. An RCT of an online parenting program for parents of preschool-aged children with ADHD symptoms. Journal of Attention Disorders. 2016; Epublication

170. Friars P, Mellor D. Drop-out from parenting training programmes: a retrospective study. Journal of Child & Adolescent Mental Health. 2009; 21(1):29-38

171. Fristad MA, Young AS, Vesco AT, Nader ES, Healy KZ, Gardner W et al. A randomized controlled trial of individual family psychoeducational psychotherapy and omega-3 fatty acids in youth with subsyndromal bipolar disorder. Journal of Child and Adolescent Psychopharmacology. 2015; 25(10):764-774

172. Fuentes J, Danckaerts M, Cardo E, Puvanendran K, Berquin P, De Bruyckere K et al. Long-term quality-of-life and functioning comparison of atomoxetine versus other standard treatment in pediatric attention-deficit/hyperactivity disorder. Journal of Clinical Psychopharmacology. 2013; 33(6):766-774

173. Gadow KD, Arnold LE, Molina BS, Findling RL, Bukstein OG, Brown NV et al. Risperidone added to parent training and stimulant medication: effects on attention-deficit/hyperactivity disorder, oppositional defiant disorder, conduct disorder, and peer aggression. Journal of the American Academy of Child and Adolescent Psychiatry. 2014; 53(9):948-959.e941

174. Gallichan DJ, Curle C. Fitting square pegs into round holes: the challenge of coping with attention-deficit hyperactivity disorder. Clinical Child Psychology and Psychiatry. 2008; 13(3):343-363

175. Garg J, Arun P. A follow-up study of academic functioning and social adjustment in children with attention deficit hyperactivity disorder. Indian Journal of Psychological Medicine. 2013; 35(1):47-52

176. Garro LC, Yarris KE. "A massive long way": interconnecting histories, a "special child," ADHD, and everyday family life. Culture, Medicine and Psychiatry. 2009; 33(4):559-607

177. Gau SS, Chiu CD, Shang CY, Cheng AT, Soong WT. Executive function in adolescence among children with attention-deficit/hyperactivity disorder in Taiwan. Journal of Developmental and Behavioral Pediatrics. 2009; 30(6):525-534

178. Gau SS, Shang CY. Improvement of executive functions in boys with attention deficit hyperactivity disorder: an open-label follow-up study with once-daily atomoxetine. International Journal of Neuropsychopharmacology. 2010; 13(2):243-256

179. Gawrilow C, Stadler G, Langguth N, Naumann A, Boeck A. Physical activity, affect, and cognition in children with symptoms of ADHD. Journal of Attention Disorders. 2016; 20(2):151-162

180. Gelade K, Janssen TW, Bink M, van Mourik R, Maras A, Oosterlaan J. Behavioral effects of neurofeedback compared to stimulants and physical activity in attention-deficit/hyperactivity disorder: a randomized controlled trial. Journal of Clinical Psychiatry. 2016; 77(10):e1270-e1277

181. Gerdes AC, Lawton KE, Haack LM, Schneider BW. Latino parental help seeking for childhood ADHD. Administration and Policy in Mental Health. 2014; 41(4):503-513

182. Gevensleben H, Holl B, Albrecht B, Schlamp D, Kratz O, Studer P et al. Neurofeedback training in children with ADHD: 6-month follow-up of a randomised controlled trial. European Child and Adolescent Psychiatry. 2010; 19(9):715-724

183. Gevensleben H, Holl B, Albrecht B, Schlamp D, Kratz O, Studer P et al. Distinct EEG effects related to neurofeedback training in children with ADHD: a randomized controlled trial. International Journal of Psychophysiology. 2009; 74(2):149-157

184. Gevensleben H, Holl B, Albrecht B, Vogel C, Schlamp D, Kratz O et al. Is neurofeedback an efficacious treatment for ADHD? A randomised controlled clinical trial. Journal of child psychology and psychiatry, and allied disciplines. 2009; 50(7):780-789

185. Gevensleben H, Moll GH, Heinrich H. [Neurofeedback training in children with ADHD: behavioral and neurophysiological effects]. Zeitschrift für Kinder- und Jugendpsychiatrie und Psychotherapie. 2010; 38(6):409-419; quiz 419-420

186. Ghanizadeh A, Zarei N. Are GPs adequately equipped with the knowledge for educating and counseling of families with ADHD children? BMC Family Practice. 2010; 11:5

187. Ghosh M, Fisher C, Preen DB, Holman CD. "It has to be fixed": a qualitative inquiry into perceived ADHD behaviour among affected individuals and parents in Western Australia. BMC Health Services Research. 2016; 16:141

188. Gibson BS, Gondoli DM, Johnson AC, Steeger CM, Dobrzenski BA, Morrissey RA. Component analysis of verbal versus spatial working memory training in adolescents with ADHD: a randomized, controlled trial. Child Neuropsychology. 2011; 17(6):546-563

189. Ginsberg ML. Attention-deficit/hyperactivity disorder: a personal perspective. Adolescent Medicine. 2008; 19(2):339-351, xi-xii

190. Goodwillie G. Protective vigilance: A parental strategy in caring for a child diagnosed with ADHD. Journal of Family Therapy. 2014; 36(3):255-267

191. Gray SA, Chaban P, Martinussen R, Goldberg R, Gotlieb H, Kronitz R et al. Effects of a computerized working memory training program on working memory, attention, and academics in adolescents with severe LD and comorbid ADHD: a randomized controlled trial. Journal of Child Psychology and Psychiatry and Allied Disciplines. 2012; 53(12):1277-1284

192. Griggs MS, Mikami AY. Parental attention-deficit/hyperactivity disorder predicts child and parent outcomes of parental friendship coaching treatment. Journal of the American Academy of Child and Adolescent Psychiatry. 2011; 50(12):1236-1246

193. Groom MJ, Liddle EB, Scerif G, Liddle PF, Batty MJ, Liotti M et al. Motivational incentives and methylphenidate enhance electrophysiological correlates of error monitoring in children with attention deficit/hyperactivity disorder. Journal of Child Psychology and Psychiatry and Allied Disciplines. 2013; 54(8):836-845

194. Gropper RJ, Gotlieb H, Kronitz R, Tannock R. Working memory training in college students with ADHD or LD. Journal of Attention Disorders. 2014; 18(4):331-345

195. Gu Y, Xu G, Zhu Y. A randomized controlled trial of mindfulness-based cognitive therapy for college students with ADHD. Journal of Attention Disorders. 2016; Epublication

196. Guo QF, Zhang YH, Zhang Z. The effect of family intervention on family environment and the parental rearing pattern of children with ADHD. Chinese Mental Health Journal. 2008; 22(6):423-428

197. Gustafsson PA, Birberg-Thornberg U, Duchen K, Landgren M, Malmberg K, Pelling H et al. EPA supplementation improves teacher-rated behaviour and oppositional symptoms in children with ADHD. Acta Paediatrica. 2010; 99(10):1540-1549

198. Gwernan-Jones R, Moore DA, Cooper P, Russell AE, Richardson M, Rogers M et al. A systematic review and synthesis of qualitative research: the influence of school context on symptoms of attention deficit hyperactivity disorder. Emotional and Behavioural Difficulties. 2016; 21(1):83-100

199. Gwernan-Jones R, Moore DA, Garside R, Richardson M, Thompson-Coon J, Rogers M et al. ADHD, parent perspectives and parent–teacher relationships: grounds for conflict. British Journal of Special Education. 2015; 42(3):279-300

200. Haack LM, Villodas M, McBurnett K, Hinshaw S, Pfiffner LJ. Parenting as a mechanism of change in psychosocial treatment for youth with ADHD, predominantly inattentive presentation. Journal of Abnormal Child Psychology. 2017; 45(5):841-855

201. Habibollahi S, Souri A, Arbabi FH, Ashoori J. Effects of neurofeedback training on sustain attention and planning in students with attention deficit disorder. Koomesh. 2016; 17(2):447-454

202. Hack S, Chow B. Pediatric psychotropic medication compliance: a literature review and research-based suggestions for improving treatment compliance. Journal of Child and Adolescent Psychopharmacology. 2001; 11(1):59-67

203. Haffner J, Roos J, Goldstein N, Parzer P, Resch F. [The effectiveness of body-oriented methods of therapy in the treatment of attention-deficit hyperactivity disorder (ADHD): results of a controlled pilot study]. Zeitschrift für Kinder- und Jugendpsychiatrie und Psychotherapie. 2006; 34(1):37-47

204. Hallberg U, Klingberg G, Reichenberg K, Möller A. Living at the edge of one's capability: Experiences of parents of teenage daughters diagnosed with ADHD. International Journal of Qualitative Studies on Health and Well-being. 2008; 3(1):52-58

205. Handen BL, Aman MG, Arnold LE, Hyman SL, Tumuluru RV, Lecavalier L et al. Atomoxetine, parent training, and their combination in children with autism spectrum disorder and attention-deficit/hyperactivity disorder. Journal of the American Academy of Child and Adolescent Psychiatry. 2015; 54(11):905-915

206. Handen BL, Taylor J, Tumuluru R. Psychopharmacological treatment of ADHD symptoms in children with autism spectrum disorder. International Journal of Adolescent Medicine and Health. 2011; 23(3):167-173

207. Hanisch C, Freund-Braier I, Hautmann C, Janen N, Pluck J, Brix G et al. Detecting effects of the indicated prevention Programme for Externalizing Problem behaviour (PEP) on child symptoms, parenting, and parental quality of life in a randomized controlled trial. Behavioural and Cognitive Psychotherapy. 2010; 38(1):95-112

208. Hansen DL, Hansen EH. Caught in a balancing act: parents' dilemmas regarding their ADHD child's treatment with stimulant medication. Qualitative Health Research. 2006; 16(9):1267-1285

209. Hansson Hallerod SL, Anckarsater H, Rastam M, Hansson Scherman M. Experienced consequences of being diagnosed with ADHD as an adult - a qualitative study. BMC Psychiatry. 2015; 15:31

210. Hantson J, Wang PP, Grizenko-Vida M, Ter-Stepanian M, Harvey W, Joober R et al. Effectiveness of a therapeutic summer camp for children with ADHD: Phase I Clinical Intervention Trial. Journal of Attention Disorders. 2012; 16(7):610-617

211. Harazni L, Alkaissi AAE. Experience of mothers and teachers of attention deficit/hyperactivity disorder children, and their management practices for the behaviors of the child: a descriptive phenomenological study...Middle Eastern Nurses Uniting in Human Caring, Third Annual Middle East Conference; Aqaba, Jordan, February 20-21, 2015. International Journal for Human Caring. 2015; 19(4):78-78

212. Harborne A, Wolpert M, Clare L. Making sense of ADHD: A battle for understanding? Parents' views of their children being diagnosed with ADHD. Clinical Child Psychology and Psychiatry. 2004; 9(3):327-339

213. Hariri AA, Faisal E. Effects of teaching art activities by using the playing method to develop skills in preschool children with attention deficit hyperactivity disorder. Journal on Developmental Disabilities. 2013; 19(1):79-89

214. Harvey WJ, Reid G, Bloom GA, Staples K, Grizenko N, Mbekou V et al. Physical activity experiences of boys with and without ADHD. Adapted Physical Activity Quarterly. 2009; 26(2):131-150

215. Hassink-Franke LJ, Janssen MM, Oehlen G, van Deurzen PA, Buitelaar JK, Wensing M et al. GPs' experiences with enhanced collaboration between psychiatry and general practice for children with ADHD. European Journal of General Practice. 2016; 22(3):196-202

216. Hazell P, Lewin T, Sly K. What is a clinically important level of improvement in symptoms of attention-deficit/hyperactivity disorder? Australian and New Zealand Journal of Psychiatry. 2005; 39(5):354-358

217. Hebert J, Polotskaia A, Joober R, Grizenko N. Adherence to psychostimulant medication in children with attention-deficit/hyperactivity disorder: the role of attitudes. Journal of the Canadian Academy of Child & Adolescent Psychiatry 2013; 22(4):317-323

218. Heinrich H. A multisite randomised controlled neurofeedback trial in adhd and methodical aspects. Clinical EEG and Neuroscience. 2013; 44(2):167

219. Hektner JM, August GJ, Bloomquist ML, Lee S, Klimes-Dougan B. A 10-year randomized controlled trial of the Early Risers conduct problems preventive intervention: effects on externalizing and internalizing in late high school. Journal of Consulting and Clinical Psychology. 2014; 82(2):355-360

220. Helseth SA, Waschbusch DA, Gnagy EM, Onyango AN, Burrows-MacLean L, Fabiano GA et al. Effects of behavioral and pharmacological therapies on peer reinforcement of deviancy in children with ADHD-only, ADHD and conduct problems, and controls. Journal of Consulting and Clinical Psychology. 2015; 83(2):280-292

221. Henry E, Jones SH. Experiences of older adult women diagnosed with attention deficit hyperactivity disorder. Journal of Women and Aging. 2011; 23(3):246-262

222. Hepark S, Janssen L, de Vries A, Schoenberg PL, Donders R, Kan CC et al. The efficacy of adapted MBCT on core symptoms and executive functioning in adults with ADHD: a preliminary randomized controlled trial. Journal of Attention Disorders. 2015; Epublication

223. Herbert SD, Harvey EA, Roberts JL, Wichowski K, Lugo-Candelas CI. A randomized controlled trial of a parent training and emotion socialization program for families of hyperactive preschool-aged children. Behavior Therapy. 2013; 44(2):302-316

224. Hill V, Turner H. Educational psychologists' perspectives on the medicalisation of childhood behaviour: A focus on attention deficit hyperactive disorder (ADHD). Educational and Child Psychology. 2016; 33(2):12-29

225. Hiltunen S, Virta M, Salakari A, Antila M, Chydenius E, Kaski M et al. Better long-term outcome for hypnotherapy than for CBT in adults with ADHD: Results of a six-month follow-up. Contemporary Hypnosis & Integrative Therapy. 2014; 30(3):118-134

226. Hirvikoski T, Waaler E, Alfredsson J, Pihlgren C, Holmstrom A, Johnson A et al. Reduced ADHD symptoms in adults with ADHD after structured skills training group: Results from a randomized controlled trial. Behaviour Research and Therapy. 2011; 49(3):175-185

227. Hirvikoski T, Waaler E, Lindstrom T, Bolte S, Jokinen J. Cognitive behavior therapy-based psychoeducational groups for adults with ADHD and their significant others (PEGASUS): an open clinical feasibility trial. Attention Deficit and Hyperactivity Disorders. 2015; 7(1):89-99

228. Hiscock H, Sciberras E, Efron D, Mensah F, Davey M, Oberklaid F. Impact of a behavioral sleep intervention on ADHD symptoms, child sleep and maternal mental health: a randomized controlled trial. Pediatric Academic Societies Annual Meeting. 2013;

229. Hiscock H, Sciberras E, Mensah F, Gerner B, Efron D, Khano S et al. Impact of a behavioural sleep intervention on symptoms and sleep in children with attention deficit hyperactivity disorder, and parental mental health: randomised controlled trial. BMJ. 2015; 350:h68

230. Ho SW, Chien WT, Wang LQ. Parents' perceptions of care-giving to a child with attention deficit hyperactivity disorder: an exploratory study. Contemporary Nurse. 2011; 40(1):41-56

231. Hoath F, Sanders M. A feasibility study of enhanced group Triple P - Positive Parenting Program for parents of children with attention-deficit/hyperactivity disorder. Behavioural Change. 2002; 2002(4):191-206

232. Hong Y. Teachers' perceptions of young children with ADHD in Korea. Early Child Development and Care. 2008; 178(4):399-414

233. Honkasilta J, Vehkakoski T, Vehmas S. Power struggle, submission and partnership: Agency constructions of mothers of children with ADHD diagnosis in their narrated school involvement. Scandinavian Journal of Educational Research. 2015; 59(6):674-690

234. Honkasilta J, Vehkakoski T, Vehmas S. 'The teacher almost made me cry' Narrative analysis of teachers' reactive classroom management strategies as reported by students diagnosed with ADHD. Teaching and Teacher Education. 2016; 55:100-109

235. Horn WF, Ialongo NS, Greenberg G, Packard T, Smith-Winberry C. Additive effect of behavioral parent training and self-control therapy with attention deficit hyperactivity disordered children. Journal of Clinical Child Psychology. 1990; 19:98-110

236. Hosainzadeh Maleki Z, Mashhadi A, Soltanifar A, Moharreri F, Ghanaei Ghamanabad A. Barkley's parent training program, working memory training and their combination for children with ADHD: attention deficit hyperactivity disorder. Iranian Journal of Psychiatry. 2014; 9(2):47-54

237. Hovik KT, Saunes BK, Aarlien AK, Egeland J. RCT of working memory training in ADHD: long-term near-transfer effects. PloS One. 2013; 8(12):e80561

238. Huang YH, Chung CY, Ou HY, Tzang RF, Huang KY, Liu HC et al. Treatment effects of combining social skill training and parent training in Taiwanese children with attention deficit hyperactivity disorder. Journal of the Formosan Medical Association. 2015; 114(3):260-267

239. Hughes L. The reality of living with AD/HD: children's concern about educational and medical support. Emotional & Behavioural Difficulties. 2007; 12(1):69-80

240. Hughes L. Engaging students with ADHD in mainstream education: Lessons from children, parents and teachers. The International Journal of Emotional Education. 2009; 1(1):108-117

241. Huizink AC, van Lier PA, Crijnen AA. Attention deficit hyperactivity disorder symptoms mediate early-onset smoking. European Addiction Research. 2009; 15(1):1-9

242. Ibrahim K, Vogt C, Donyai P. Caught in the eye of the storm: A qualitative study of views and experiences of planned drug holidays from methylphenidate in child and adolescent adhd treatment. Child and Adolescent Mental Health. 2016; 21(4):192-200

243. Ide-Okochi A, Tadaka E. A hybrid concept analysis of children of concern: Japanese healthcare professionals' views of children at a high risk of developmental disability. BMC Pediatrics. 2016; 16 171

244. Irvine AB, Gelatt VA, Hammond M, Seeley JR. A randomized study of internet parent training accessed from community technology centers. Prevention Science. 2015; 16(4):597-608

245. Ise E, Kierfeld F, Dopfner M. One-year follow-up of guided self-help for parents of preschool children with externalizing behavior. Journal of Primary Prevention. 2015; 36(1):33-40

246. Iseman JS, Naglieri JA. A cognitive strategy instruction to improve math calculation for children with ADHD and LD: a randomized controlled study. Journal of Learning Disabilities. 2011; 44(2):184-195

247. Jackson D, Peters K. Use of drug therapy in children with attention deficit hyperactivity disorder (ADHD): maternal views and experiences. Journal of Clinical Nursing. 2008; 17(20):2725-2732

248. Jans T, Jacob C, Warnke A, Zwanzger U, Gros-Lesch S, Matthies S et al. Does intensive multimodal treatment for maternal ADHD improve the efficacy of parent training for children with ADHD? A randomized controlled multicenter trial. Journal of Child Psychology and Psychiatry and Allied Disciplines. 2015; 56(12):1298-1313

249. Janssen TWP, Bink M, Geladé K, Mourik R, Maras A, Oosterlaan J. A randomized controlled trial into the effects of neurofeedback, methylphenidate, and physical activity on eeg power spectra in children with adhd. Journal of Child Psychology and Psychiatry. 2016; 57(5):633-644

250. Jensen PS, Arnold LE, Swanson JM, Vitiello B, Abikoff HB, Greenhill LL et al. 3-Year follow-up of the NIMH MTA study. Journal of the American Academy of Child and Adolescent Psychiatry. 2007; 46(8):989-1002

251. Jensen PS, Kenny DT. The effects of yoga on the attention and behavior of boys with attention-deficit/ hyperactivity disorder (ADHD). Journal of Attention Disorders. 2004; 7(4):205-216

252. Johnstone SJ, Roodenrys S, Phillips E, Watt AJ, Mantz S. A pilot study of combined working memory and inhibition training for children with AD/HD. Attention Deficit and Hyperactivity Disorders. 2010; 2(1):31-42

253. Jones K, Daley D, Hutchings J, Bywater T, Eames C. Efficacy of the Incredible Years Basic parent training programme as an early intervention for children with conduct problems and ADHD. Child: Care, Health and Development. 2007; 33(6):749-756

254. Jones K, Daley D, Hutchings J, Bywater T, Eames C. Efficacy of the Incredible Years Programme as an early intervention for children with conduct problems and ADHD: long-term follow-up. Child: Care, Health and Development. 2008; 34(3):380-390

255. Jonkman LM, Hurks PP, Schleepen TM. Effects of memory strategy training on performance and event-related brain potentials of children with ADHD in an episodic memory task. Neuropsychological Rehabilitation. 2016; 26(5-6):910-941

256. Kean B. The Risk Society and attention deficit hyperactivity disorder (ADHD): a critical social research analysis concerning the development and social impact of the ADHD diagnosis. Ethical Human Psychology and Psychiatry. 2005; 7(2):131-142

257. Kendall J. The use of qualitative methods in the study of wellness in children with attention deficit hyperactivity disorder. Journal of Child and Adolescent Psychiatric Nursing. 1997; 10(4):27-38

258. Kendall J, Hatton D, Beckett A, Leo M. Children's accounts of attention-deficit/hyperactivity disorder. Advances in Nursing Science. 2003; 26(2):114-130

259. Kendall L. 'The teacher said I'm thick!' Experiences of children with attention deficit hyperactivity disorder within a school setting. Support for Learning. 2016; 31(2):122-137

260. Keshavarzi Z, Bajoghli H, Mohamadi MR, Salmanian M, Kirov R, Gerber M et al. In a randomized case-control trial with 10-years olds suffering from attention deficit/hyperactivity disorder (ADHD) sleep and psychological functioning improved during a 12-week sleep-training program. World Journal of Biological Psychiatry. 2014; 15(8):609-619

261. Khalili Kermani F, Mohammadi MR, Yadegari F, Haresabadi F, Sadeghi SM. Working memory training in the form of structured games in children with attention deficit hyperactivity disorder. Iranian Journal of Psychiatry. 2016; 11(4):224-233

262. Kildea S, Wright J, Davies J. Making sense of ADHD in practice: a stakeholder review. Clinical Child Psychology and Psychiatry. 2011; 16(4):599-619

263. King K, Alexander D, Seabi J. Siblings' perceptions of their ADHD-diagnosed sibling's impact on the family system. International Journal of Environmental Research and Public Health. 2016; 13(9):13

264. Kisely S, Ong G, Takyar A. A survey of the quality of web based information on the treatment of schizophrenia and Attention Deficit Hyperactivity Disorder. Australian and New Zealand Journal of Psychiatry. 2003; 37(1):85-91

265. Klasen H, Goodman R. Parents and GPs at cross-purposes over hyperactivity: a qualitative study of possible barriers to treatment. British Journal of General Practice. 2000; 50(452):199-202

266. Knipp DK. Teens' perceptions about attention deficit/hyperactivity disorder and medications. Journal of School Nursing. 2006; 22(2):120-125

267. Ko CH, Yen JY, Chen CS, Chen CC, Yen CF. Psychiatric comorbidity of internet addiction in college students: an interview study. CNS Spectrums. 2008; 13(2):147-153

268. Koerting J, Smith E, Knowles MM, Latter S, Elsey H, McCann DC et al. Barriers to, and facilitators of, parenting programmes for childhood behaviour problems: a qualitative synthesis of studies of parents' and professionals' perceptions. European Child and Adolescent Psychiatry. 2013; 22(11):653-670

269. Kolko DJ, Campo J, Kilbourne AM, Hart J, Sakolsky D, Wisniewski S. Collaborative care outcomes for pediatric behavioral health problems: a cluster randomized trial. Pediatrics. 2014; 133(4):e981-992

270. Kollins SH. A qualitative review of issues arising in the use of psycho-stimulant medications in patients with ADHD and co-morbid substance use disorders. Current Medical Research and Opinion. 2008; 24(5):1345-1357

271. Koro-Ljungberg M, Bussing R, Williamson P, Wilder J, Mills T. African-American teenagers' stories of attention deficit/hyperactivity disorder. Journal of Child and Family Studies. 2008; 17(4):467-485

272. Kovshoff H, Williams S, Vrijens M, Danckaerts M, Thompson M, Yardley L et al. The decisions regarding ADHD management (DRAMa) study: uncertainties and complexities in assessment, diagnosis and treatment, from the clinician's point of view. European Child and Adolescent Psychiatry. 2012; 21(2):87-99

273. Kratter J. The use of meditation in the treatment of attention deficit disorder with hyperactivity. New York. St. John's University. 1983.

274. Krisanaprakornkit T, Ngamjarus C, Witoonchart C, Piyavhatkul N. Meditation therapies for attention-deficit/hyperactivity disorder (ADHD). Cochrane Database of Systematic Reviews 2010, Issue 6. Art. No.: CD006507. DOI: 10.1002/14651858.CD006507.pub2.

275. Kronenberg LM, Slager-Visscher K, Goossens PJ, van den Brink W, van Achterberg T. Everyday life consequences of substance use in adult patients with a substance use disorder (SUD) and co-occurring attention deficit/hyperactivity disorder (ADHD) or autism spectrum disorder (ASD): a patient's perspective. BMC Psychiatry. 2014; 14:264

276. Kutuk MO, Durmus E, Gokcen C, Toros F, Guler G, Evegu E. Determination of beliefs, attitudes of consulting teachers towards mental diseases, and referral reasons of their students to a child and adolescent psychiatrist. Düşünen Adam: Journal of Psychiatry and Neurological Sciences. 2016; 29(3):227-236

277. Laezer KL. Effectiveness of psychoanalytic psychotherapy and behavioral therapy treatment in children with attention deficit hyperactivity disorder and oppositional defiant disorder. Journal of Infant, Child & Adolescent Psychotherapy. 2015; 14(2):111-128

278. Langberg JM, Epstein JN, Becker SP, Girio-Herrera E, Vaughn AJ. Evaluation of the homework, organization, and planning skills (HOPS) intervention for middle school students with ADHD as implemented by school mental health providers. School of Psychology Review. 2012; 41(3):342-364

279. Langberg JM, Epstein JN, Urbanowicz CM, Simon JO, Graham AJ. Efficacy of an organization skills intervention to improve the academic functioning of students with attention-deficit/hyperactivity disorder. School Psychology Quarterly. 2008; 23(3):407-417

280. Lansbergen MM, van Dongen-Boomsma M, Buitelaar JK, Slaats-Willemse D. ADHD and EEG-neurofeedback: a double-blind randomized placebo-controlled feasibility study. Journal of Neural Transmission. 2011; 118(2):275-284

281. Larson JJ, Yoon Y, Stewart M, dosReis S. Influence of caregivers' experiences on service use among children with attention-deficit hyperactivity disorder. Psychiatric Services. 2011; 62(7):734-739

282. Laugesen B, Lauritsen MB, Jorgensen R, Sorensen EE, Rasmussen P, Gronkjaer M. Living with a child with attention deficit hyperactivity disorder: a systematic review. International Journal of Evidence Based Healthcare. 2016; 14(4):150-165

283. Lee H, Causgrove Dunn J, Holt NL. Youth sport experiences of individuals with attention deficit/hyperactivity disorder. Adapted Physical Activity Quarterly. 2014; 31(4):343-361

284. Lee K. ADHD in American early schooling: From a cultural psychological perspective. Early Child Development and Care. 2008; 178(4):415-439

285. Lefler EK, Sacchetti GM, Del Carlo DI. ADHD in college: A qualitative analysis. Attention Deficit and Hyperactivity Disorders. 2016; 8(2):79-93

286. Leggett C, Hotham E. Treatment experiences of children and adolescents with attention-deficit/hyperactivity disorder. Journal of Paediatrics and Child Health. 2011; 47(8):512-517

287. Leslie LK, Plemmons D, Monn AR, Palinkas LA. Investigating ADHD treatment trajectories: listening to families' stories about medication use. Journal of Developmental and Behavioral Pediatrics. 2007; 28(3):179-188

288. Lewis-Morton R, Dallos R, McClelland L, Clempson R. “There is something not quite right with Brad...”: The ways in which families construct ADHD before receiving a diagnosis. Contemporary Family Therapy. 2014; 36(2):260-280

289. Lewis EM, Feely M, Seay KD, Fedoravicis N, Kohl PL. Child welfare involved parents and pathways Triple P: perceptions of program acceptability and appropriateness. Journal of Child & Family Studies. 2016; 25(12):3760-3770

290. Lewis EM, Feely M, Seay KD, Fedoravicius N, Kohl PL. "Child welfare involved parents and pathways Triple P: Perceptions of program acceptability and appropriateness": Erratum. Journal of Child and Family Studies. 2016; 25(12):3782

291. Li JJ, Li ZW, Wang SZ, Qi FH, Zhao L, Lv H et al. Ningdong granule: a complementary and alternative therapy in the treatment of attention deficit/hyperactivity disorder. Psychopharmacology. 2011; 216(4):501-509

292. Li L, Yang L, Zhuo CJ, Wang YF. A randomised controlled trial of combined EEG feedback and methylphenidate therapy for the treatment of ADHD. Swiss Medical Weekly. 2013; 143:w13838

293. Li S, Yu B, Lin Z, Jiang S, He J, Kang L et al. Randomized-controlled study of treating attention deficit hyperactivity disorder of preschool children with combined electro-acupuncture and behavior therapy. Complementary Therapies in Medicine. 2010; 18(5):175-183

294. Li S, Yu B, Zhou D, He C, Kang L, Wang X et al. Acupuncture for attention deficit hyperactivity disorder (ADHD) in children and adolescents. Cochrane Database of Systematic Reviews 2011, Issue 4. Art. No.: CD007839. DOI: 10.1002/14651858.CD007839.pub2.

295. Liber JM, De Boo GM, Huizenga H, Prins PJ. School-based intervention for childhood disruptive behavior in disadvantaged settings: a randomized controlled trial with and without active teacher support. Journal of Consulting and Clinical Psychology. 2013; 81(6):975-987

296. Liebrenz M, Fisher CE, Nellen R, Frei A, Biechl A-C, Hiestand N et al. Adult attention-deficit/hyperactivity disorder and nicotine withdrawal: A qualitative study of patient perceptions. BMC Psychiatry. 2016; 16:11

297. Lin MJ, Huang XY, Hung BJ. The experiences of primary caregivers raising school-aged children with attention-deficit hyperactivity disorder. Journal of Clinical Nursing. 2009; 18(12):1693-1702

298. Liu J. Is electro-acupuncture, in combination with behaviour therapy, effective in preschool children with attention deficit hyperactivity disorder? Focus on Alternative and Complementary Therapies. 2011; 16(3):227-228

299. Ljusberg AL. Children's views on attending a remedial class - because of concentration difficulties. Child: Care, Health and Development. 2011; 37(3):440-445

300. Loe M, Cuttino L. Grappling with the medicated self: The case of ADHD college students. Symbolic Interaction. 2008; 31(3):303-323

301. Looyeh MY, Kamali K, Shafieian R. An exploratory study of the effectiveness of group narrative therapy on the school behavior of girls with attention-deficit/hyperactivity symptoms. Archives of Psychiatric Nursing. 2012; 26(5):404-410

302. Lopes T, Eloff I, Howie S, Maree JG. South African teachers' experiences of children in their classrooms who may have ADHD. Journal of Psychology in Africa. 2009; 19(3):347-354

303. Maassen EF, Schrevel SJ, Dedding CW, Broerse JE, Regeer BJ. Comparing patients' perspectives of "good care" in Dutch outpatient psychiatric services with academic perspectives of patient-centred care. Journal of Mental Health. 2017; 26(1):84-94

304. Maeir A, Fisher O, Bar-Ilan RT, Boas N, Berger I, Landau YE. Effectiveness of Cognitive-Functional (Cog-Fun) occupational therapy intervention for young children with attention deficit hyperactivity disorder: a controlled study. American Journal of Occupational Therapy. 2014; 68(3):260-267

305. Marcer H, Finlay F, Baverstock A. ADHD and transition to adult services--the experience of community paediatricians. Child: Care, Health and Development. 2008; 34(5):564-566

306. Mathers ME. Aspects of language in children with ADHD: applying functional analyses to explore language use. Journal of Attention Disorders. 2006; 9(3):523-533

307. Matheson L, Asherson P, Wong IC, Hodgkins P, Setyawan J, Sasane R et al. Adult ADHD patient experiences of impairment, service provision and clinical management in England: a qualitative study. BMC Health Services Research. 2013; 13:184

308. Matos M, Bauermeister JJ, Bernal G. Parent-child interaction therapy for Puerto Rican preschool children with ADHD and behavior problems: a pilot efficacy study. Family Process. 2009; 48(2):232-252

309. Matthys F, Soyez V, van den Brink W, Joostens P, Tremmery S, Sabbe B. Barriers to implementation of treatment guidelines for ADHD in adults with substance use disorder. Journal of Dual Diagnosis. 2014; 10(3):130-138

310. Maurizio S, Liechti MD, Heinrich H, Jancke L, Steinhausen HC, Walitza S et al. Comparing tomographic EEG neurofeedback and EMG biofeedback in children with attention-deficit/hyperactivity disorder. Biological Psychology. 2014; 95:31-44

311. Mawjee K, Woltering S, Tannock R. Working memory training in post-secondary students with ADHD: A randomized controlled study. PloS One. 2015; 10(9):e0137173

312. McCarthy AM, Kelly MW, Reed D. Medication administration practices of school nurses. Journal of School Health. 2000; 70(9):371-376

313. McDermott AF, Rose M, Norris T, Gordon E. A novel feed-forward modeling system leads to sustained improvements in attention and academic performance. Journal of Attention Disorders. 2016; Epublication

314. McGilloway S, Ni Mhaille G, Bywater T, Furlong M, Leckey Y, Kelly P et al. A parenting intervention for childhood behavioral problems: a randomized controlled trial in disadvantaged community-based settings. Journal of Consulting and Clinical Psychology. 2012; 80(1):116-127

315. McGoron L, Sturner R, Howard B, Barry TD, Seymour K, Tomeny TS et al. Parents' goals for ADHD care in a clinical pediatric sample. Clinical Pediatrics. 2014; 53(10):949-959

316. McGrath PJ, Lingley-Pottie P, Thurston C, MacLean C, Cunningham C, Waschbusch DA et al. Telephone-based mental health interventions for child disruptive behavior or anxiety disorders: randomized trials and overall analysis. Journal of the American Academy of Child and Adolescent Psychiatry. 2011; 50(11):1162-1172

317. McIntyre R, Hennessy E. 'He's just enthusiastic. Is that such a bad thing?' Experiences of parents of children with attention deficit hyperactivity disorder. Emotional and Behavioural Difficulties. 2012; 17(1):65-82

318. McKay MM, McCadam K, Gonzales JJ. Addressing the barriers to mental health services for inner city children and their caretakers. Community Mental Health Journal. 1996; 32(4):353-361

319. McMenamy JM, Perrin EC. The impact of experience on children's understanding of ADHD. Journal of Developmental and Behavioral Pediatrics. 2008; 29(6):483-492

320. Meaux JB, Green A, Broussard L. ADHD in the college student: a block in the road. Journal of Psychiatric and Mental Health Nursing. 2009; 16(3):248-256

321. Meaux JB, Hester C, Smith B, Shoptaw A. Stimulant medications: a trade-off? The lived experience of adolescents with ADHD. Journal for Specialists in Pediatric Nursing: JSPN. 2006; 11(4):214-226

322. Meisel V, Servera M, Garcia-Banda G, Cardo E, Moreno I. Neurofeedback and standard pharmacological intervention in ADHD: a randomized controlled trial with six-month follow-up. Biological Psychology. 2013; 94(1):12-21

323. Memarmoghaddam M, Torbati HT, Sohrabi M, Mashhadi A, Kashi A. Effects of a selected exercise programon executive function of children with attention deficit hyperactivity disorder. Journal of Medicine and Life. 2016; 9(4):373-379

324. Merrill BM, Morrow AS, Altszuler AR, Macphee FL, Gnagy EM, Greiner AR et al. Improving homework performance among children with ADHD: a randomized clinical trial. Journal of Consulting and Clinical Psychology. 2017; 85(2):111-122

325. Mesler CF, Holmberg HC, Sperlich B. Multimodal therapy involving high-intensity interval training improves the physical fitness, motor skills, social behavior, and quality of life of boys with ADHD: a randomized controlled study. Journal of Attention Disorders. 2016; Epublication

326. Meyer K, Kelley ML. Improving homework in adolescents with attention-deficit/hyperactivity disorder: Self vs. parent monitoring of homework behavior and study skills. Child & Family Behavior Therapy. 2007; 29(4):25-42

327. Michielsen M, de Kruif JT, Comijs HC, van Mierlo S, Semeijn EJ, Beekman AT et al. The burden of ADHD in older adults: a qualitative study. Journal of Attention Disorders. 2015; Epublication

328. Mikami AY, Griggs MS, Lerner MD, Emeh CC, Reuland MM, Jack A et al. A randomized trial of a classroom intervention to increase peers' social inclusion of children with attention-deficit/hyperactivity disorder. Journal of Consulting and Clinical Psychology. 2013; 81(1):100-112

329. Mills I. Understanding parent decision making for treatment of ADHD. School Social Work Journal. 2011; 36(1):41-60

330. Miranda A, Presentacion MJ. Efficacy of cognitive-behavioral therapy in the treatment of children with ADHD, with and without aggressiveness. Psychology in the Schools. 2000; 37(2):169-172

331. Mishra J, Sagar R, Joseph AA, Gazzaley A, Merzenich MM. Training sensory signal-to-noise resolution in children with ADHD in a global mental health setting. Transl Psychiatry Psychiatry. 2016; 6:e781

332. Moell B, Kollberg L, Nasri B, Lindefors N, Kaldo V. Living smart - a randomized controlled trial of a guided online course teaching adults with adhd or sub-clinical adhd to use smartphones to structure their everyday life. Internet Interventions. 2015; 2(1):24-31

333. Moen OL, Hall-Lord ML, Hedelin B. Contending and adapting every day: norwegian parents' lived experience of having a child with ADHD. Journal of Family Nursing. 2011; 17(4):441-462

334. Mohammadi MR, Soleimani AA, Farahmand Z, Keshavarzi S, Ahmadi N. A comparison of effectiveness of regulation of working memory function and methylphenidate on remediation of attention deficit hyperactivity disorder (ADHD). Iranian Journal of Psychiatry. 2014; 9(1):25-30

335. Molina BS, Flory K, Bukstein OG, Greiner AR, Baker JL, Krug V et al. Feasibility and preliminary efficacy of an after-school program for middle schoolers with ADHD: a randomized trial in a large public middle school. Journal of Attention Disorders. 2008; 12(3):207-217

336. Montoya A, Hervas A, Fuentes J, Cardo E, Polavieja P, Quintero J et al. Cluster-randomized, controlled 12-month trial to evaluate the effect of a parental psychoeducation program on medication persistence in children with attention-deficit/hyperactivity disorder. Neuropsychiatric Disease and Treatment. 2014; 10:1081-1092

337. Moretti-Altuna GE. The effects of meditation versus medication in the treatment of attention deficit disorder with hyperactivity. New York. St. John's University. 1987.

338. Morsink S, Sonuga-Barke E, Mies G, Glorie N, Lemiere J, Van der Oord S et al. What motivates individuals with ADHD? A qualitative analysis from the adolescent's point of view. European Child and Adolescent Psychiatry. 2017; Epublication

339. Muhlbacher AC, Slawik L, Kasper J, Nubling M. Patients preferences in adults with ADHD - A discrete choice experiment. Value in Health. 2009; 12 (7):A362

340. Murrell AR, Lester EG, Sandoz EK. Grounding turbulent minds: The challenges of mindfulness-based interventions for college students with ADHD and how to overcome them. Journal of College Student Psychotherapy. 2015; 29(4):314-328

341. Mychailyszyn MP, DosReis S, Myers M. African American caretakers' views of ADHD and use of outpatient mental health care services for children. Families, Systems & Health: The Journal of Collaborative Family HealthCare. 2008; 26(4):447-458

342. Myers K, Stoep AV, Lobdell C. Feasibility of conducting a randomized controlled trial of telemental health with children diagnosed with attention-deficit/hyperactivity disorder in underserved communities. Journal of Child and Adolescent Psychopharmacology. 2013; 23(6):372-378

343. Myers K, Vander Stoep A, Zhou C, McCarty CA, Katon W. Effectiveness of a telehealth service delivery model for treating attention-deficit/hyperactivity disorder: a community-based randomized controlled trial. Journal of the American Academy of Child and Adolescent Psychiatry. 2015; 54(4):263-274

344. National Institute for Health and Care Excellence. Developing NICE guidelines: the manual. London. National Institute for Health and Care Excellence, 2014. Available from: https://www.nice.org.uk/guidance/pmg20/resources/developing-nice-guidelines-the-manual-pdf-72286708700869

345. Nehlin C, Nyberg F, Oster C. The patient's perspective on the link between ADHD and substance use: a qualitative interview study. Journal of Attention Disorders. 2015; 19(4):343-350

346. Nouchi R, Taki Y, Takeuchi H, Nozawa T, Sekiguchi A, Kawashima R. Reading aloud and solving simple arithmetic calculation intervention (learning therapy) improves inhibition, verbal episodic memory, focus attention and processing speed in healthy elderly people: evidence from a randomized controlled trial. Frontiers in Human Neuroscience. 2016; 10:217

347. O'Callaghan P. Adherence to stimulants in adult ADHD. Attention Deficit and Hyperactivity Disorders. 2014; 6(2):111-120

348. Ogrim G, Hestad KA. Effects of neurofeedback versus stimulant medication in attention-deficit/hyperactivity disorder: a randomized pilot study. Journal of Child and Adolescent Psychopharmacology. 2013; 23(7):448-457

349. Olaniyan O, dosReis S, Garriett V, Mychailyszyn MP, Anixt J, Rowe PC et al. Community perspectives of childhood behavioral problems and ADHD among African American parents. Ambulatory Pediatrics. 2007; 7(3):226-231

350. Oruche UM, Draucker C, Alkhattab H, Knopf A, Mazurcyk J. Interventions for family members of adolescents with disruptive behavior disorders. Journal of Child and Adolescent Psychiatric Nursing. 2014; 27(3):99-108

351. Ostberg M, Rydell AM. An efficacy study of a combined parent and teacher management training programme for children with ADHD. Nordic Journal of Psychiatry. 2012; 66(2):123-130

352. Pan CY, Chu CH, Tsai CL, Lo SY, Cheng YW, Liu YJ. A racket-sport intervention improves behavioral and cognitive performance in children with attention-deficit/hyperactivity disorder. Research in Developmental Disabilities. 2016; 57:1-10

353. Parker J, Wales G, Chalhoub N, Harpin V. The long-term outcomes of interventions for the management of attention-deficit hyperactivity disorder in children and adolescents: a systematic review of randomized controlled trials. Psychology Research and Behavior Management. 2013; 6:87-99

354. Paz Y, Friedwald K, Levkovitz Y, Zangen A, Alyagon U, Nitzan U et al. Randomized sham-controlled study of high-frequency bilateral deep transcranial magnetic stimulation (dTMS) to treat adult attention hyperactive disorder (ADHD) - negative results. World Journal of Biological Psychiatry. 2017; Epublication

355. Pelham WE, Burrows-MacLean L, Gnagy EM, Fabiano GA, Coles EK, Wymbs BT et al. A dose-ranging study of behavioral and pharmacological treatment in social

settings for children with ADHD. Journal of Abnormal Child Psychology. 2014; 42(6):1019-1031

356. Perez-Alvarez F, Serra-Amaya C, Timoneda-Gallart CA. Cognitive versus behavioral ADHD phenotype: what is it all about? Neuropediatrics. 2009; 40(1):32-38

357. Perreau-Linck E, Lessard N, Levesque J, Beauregard M. Effects of neurofeed back training on inhibitory capacities in ADHD children: A single-blind, randomized, placebo-controlled study. Journal of Neurotherapy. 2010; 14(3):229-242

358. Perry CE, Hatton D, Kendall J. Latino parents' accounts of attention deficit hyperactivity disorder. Journal of Transcultural Nursing. 2005; 16(4):312-321

359. Pettersson R, Söderström S, Edlund-Söderström K, Nilsson KW. Internet-based cognitive behavioral therapy for adults with ADHD in outpatient psychiatric care: A randomized trial. Journal of Attention Disorders. 2017; 21(6):508-521

360. Pfiffner LJ, Hinshaw SP, Owens E, Zalecki C, Kaiser NM, Villodas M et al. A two-site randomized clinical trial of integrated psychosocial treatment for ADHD-inattentive type. Journal of Consulting and Clinical Psychology. 2014; 82(6):1115-1127

361. Pfiffner LJ, Rooney M, Haack L, Villodas M, Delucchi K, McBurnett K. A randomized controlled trial of a school-implemented school-home intervention for attention-deficit/hyperactivity disorder symptoms and impairment. Journal of the American Academy of Child and Adolescent Psychiatry. 2016; 55(9):762-770

362. Pfiffner LJ, Yee Mikami A, Huang-Pollock C, Easterlin B, Zalecki C, McBurnett K. A randomized, controlled trial of integrated home-school behavioral treatment for ADHD, predominantly inattentive type. Journal of the American Academy of Child and Adolescent Psychiatry. 2007; 46(8):1041-1050

363. Philipsen A, Graf E, Jans T, Matthies S, Borel P, Colla M et al. A randomized controlled multicenter trial on the multimodal treatment of adult attention-deficit hyperactivity disorder: enrollment and characteristics of the study sample. Attention Deficit and Hyperactivity Disorders. 2014; 6(1):35-47

364. Philipsen A, Jans T, Graf E, Matthies S, Borel P, Colla M et al. Effects of group psychotherapy, individual counseling, methylphenidate, and placebo in the treatment of adult attention-deficit/hyperactivity disorder: a randomized clinical trial. JAMA Psychiatry. 2015; 72(12):1199-1210

365. Philipsen A, Richter H, Peters J, Alm B, Sobanski E, Colla M et al. Structured group psychotherapy in adults with attention deficit hyperactivity disorder: Results of an open multicentre study. Journal of Nervous and Mental Disease. 2007; 195(12):1013-1019

366. Plueck J, Eichelberger I, Hautmann C, Hanisch C, Jaenen N, Doepfner M. Effectiveness of a teacher-based indicated prevention program for preschool children with externalizing problem behavior. Prevention Science. 2015; 16(2):233-241

367. Power TJ, Mautone JA, Soffer SL, Clarke AT, Marshall SA, Sharman J et al. A family-school intervention for children with ADHD: results of a randomized clinical trial. Journal of Consulting and Clinical Psychology. 2012; 80(4):611-623

368. Prada P, Nicastro R, Zimmermann J, Hasler R, Aubry JM, Perroud N. Addition of methylphenidate to intensive dialectical behaviour therapy for patients suffering from comorbid borderline personality disorder and ADHD: a naturalistic study. Attention Deficit and Hyperactivity Disorders. 2015; 7(3):199-209

369. Prins PJ, Dovis S, Ponsioen A, ten Brink E, van der Oord S. Does computerized working memory training with game elements enhance motivation and training efficacy in children with ADHD? Cyberpsychol Behavior and Social Networking. 2011; 14(3):115-122

370. Rabiner DL, Murray DW, Skinner AT, Malone PS. A randomized trial of two promising computer-based interventions for students with attention difficulties. Journal of Abnormal Child Psychology. 2010; 38(1):131-142

371. Ramsay JR. “Without a net”: CBT without medications for an adult with ADHD. Clinical Case Studies. 2012; 11(1):48-65

372. Raskind MH, Margalit M, Higgins EL. "My LD": Children's voices on the internet. Learning Disability Quarterly. 2006; 29(4):253-268

373. Re AM, Capodieci A, Cornoldi C. Effect of training focused on executive functions (attention, inhibition, and working memory) in preschoolers exhibiting ADHD symptoms. Frontiers in Psychology. 2015; 6:1161

374. Reading R. Evaluation of a peer led parenting intervention for disruptive behaviour problems in children: Community based randomised controlled trial. Child: Care, Health and Development. 2012; 38(4):605-606

375. Reale L, Frassica S, Gollner A, Bonati M. Transition to adult mental health services for young people with attention deficit hyperactivity disorder in Italy: Parents' and clinicians' experiences. Postgraduate Medicine. 2015; 127(7):671-676

376. Reid R, Hertzog M, Snyder M. Educating every teacher, every year: the public schools and parents of children with ADHD. Seminars in Speech and Language. 1996; 17(1):73-90

377. Riddle MA. New findings from the Preschoolers with Attention-Deficit/Hyperactivity Disorder Treatment Study (PATS). Journal of Child and Adolescent Psychopharmacology. 2007; 17(5):543-546

378. Riggs PD, Winhusen T, Davies RD, Leimberger JD, Mikulich-Gilbertson S, Klein C et al. Randomized controlled trial of osmotic-release methylphenidate with cognitive-behavioral therapy in adolescents with attention-deficit/hyperactivity disorder and substance use disorders. Journal of the American Academy of Child and Adolescent Psychiatry. 2011; 50(9):903-914

379. Rogalin MT, Nencini A. Consequences of the “Attention-Deficit/Hyperactivity Disorder” (ADHD) diagnosis. An investigation with education professionals. Psychological Studies. 2015; 60(1):41-49

380. Rooney M, Hinshaw S, McBurnett K, Pfiffner L. Parent adherence in two behavioral treatment strategies for the predominantly inattentive presentation of ADHD. Journal of Clinical Child and Adolescent Psychology. 2016; Epublication

381. Rosenberg L, Maeir A, Yochman A, Dahan I, Hirsch I. Effectiveness of a cognitive-functional group intervention among preschoolers with attention deficit hyperactivity disorder: A pilot study. American Journal of Occupational Therapy. 2015; 69(3):1-8

382. Rubia K, Halari R, Cubillo A, Mohammad AM, Brammer M, Taylor E. Methylphenidate normalises activation and functional connectivity deficits in attention and motivation networks in medication-naive children with ADHD during a rewarded continuous performance task. Neuropharmacology. 2009; 57(7-8):640-652

383. Russell AE, Moore DA, Ford T. Educational practitioners' beliefs and conceptualisation about the cause of ADHD: A qualitative study. Emotional and Behavioural Difficulties. 2016; 21(1):101-118

384. Safren SA, Sprich S, Mimiaga MJ, Surman C, Knouse L, Groves M et al. Cognitive behavioral therapy vs relaxation with educational support for medication-treated adults with ADHD and persistent symptoms: a randomized controlled trial. JAMA. 2010; 304(8):875-880

385. Salehi B, Imani R, Mohammadi MR, Fallah J, Mohammadi M, Ghanizadeh A et al. Ginkgo biloba for attention-deficit/hyperactivity disorder in children and adolescents: A double blind, randomized controlled trial. Progress in Neuro-Psychopharmacology and Biological Psychiatry. 2010; 34(1):76-80

386. Salomone S, Fleming GR, Shanahan JM, Castorina M, Bramham J, O'Connell RG et al. The effects of a Self-Alert Training (SAT) program in adults with ADHD. Frontiers in Human Neuroscience. 2015; 9:45

387. Salt N, Parkes E, Scammell A. GPs' perceptions of the management of ADHD in primary care: A study of Wandsworth GPs. Primary Health Care Research and Development. 2005; 6(2):162-171

388. Sanchez-Lopez M, Pardo-Guijarro MJ, Del Campo DG, Silva P, Martinez-Andres M, Gulias-Gonzalez R et al. Physical activity intervention (Movi-Kids) on improving academic achievement and adiposity in preschoolers with or without attention deficit hyperactivity disorder: study protocol for a randomized controlled trial. Trials. 2015; 16:456

389. Sanders M, Calam R, Durand M, Liversidge T, Carmont SA. Does self-directed and web-based support for parents enhance the effects of viewing a reality television series based on the Triple P - Positive Parenting Programme? Journal of Child Psychology and Psychiatry and Allied Disciplines. 2008; 49(9):924-932

390. Sanders MR, Bor W, Morawska A. Maintenance of treatment gains: a comparison of enhanced, standard, and self-directed Triple P-Positive Parenting Program. Journal of Abnormal Child Psychology. 2007; 35(6):983-998

391. Sanders MR, Dittman CK, Farruggia SP, Keown LJ. A comparison of online versus workbook delivery of a self-help positive parenting program. Journal of Primary Prevention. 2014; 35(3):125-133

392. Sandler A, Glesne C, Geller G. Children's and parents' perspectives on open-label use of placebos in the treatment of ADHD. Child: Care, Health and Development. 2008; 34(1):111-120

393. Sayal K, Owen V, White K, Merrell C, Tymms P, Taylor E. Impact of early school-based screening and intervention programs for ADHD on children's outcomes and access to services: follow-up of a school-based trial at age 10 years. Archives of Pediatrics and Adolescent Medicine. 2010; 164(5):462-469

394. Schatz NK, Fabiano GA, Cunningham CE, dosReis S, Waschbusch DA, Jerome S et al. Systematic review of patients' and parents' preferences for ADHD treatment options and processes of care. The Patient: Patient-Centered Outcomes Research. 2015; 8(6):483-497

395. Schramm SA, Hennig T, Linderkamp F. Training problem solving and organizational skills in adolescents with attention-deficit/hyperactivity disorder: A randomized controlled trial. Journal of Cognitive Education and Psychology. 2016; 15(3):391-411

396. Schreuer N, Dorot R. Experiences of employed women with attention deficit hyperactive disorder: A phenomenological study. Work. 2017; 56(3):429-441

397. Schrevel SJ, Dedding C, van Aken JA, Broerse JE. 'Do I need to become someone else?' A qualitative exploratory study into the experiences and needs of adults with ADHD. Health Expectations. 2016; 19(1):39-48

398. Schubert SJ, Hansen S, Dyer KR, Rapley M. 'ADHD patient' or 'illicit drug user'?: Managing medico-moral membership categories in drug dependence services. Discourse & Society. 2009; 20(4):499-516

399. Schuck SE, Emmerson NA, Fine AH, Lakes KD. Canine-assisted therapy for children with ADHD: preliminary findings from the positive assertive cooperative kids study. Journal of Attention Disorders. 2015; 19(2):125-137

400. Sciberras E, Fulton M, Efron D, Oberklaid F, Hiscock H. Managing sleep problems in school aged children with ADHD: a pilot randomised controlled trial. Sleep Medicine. 2011; 12(9):932-935

401. Scott S, Sylva K, Doolan M, Price J, Jacobs B, Crook C et al. Randomised controlled trial of parent groups for child antisocial behaviour targeting multiple risk factors: the SPOKES project. Journal of Child Psychology and Psychiatry and Allied Disciplines. 2010; 51(1):48-57

402. Seeley JR, Small JW, Walker HM, Feil EG, Severson HH, Golly AM et al. Efficacy of the First Step to Success intervention for students with attention-deficit/hyperactivity disorder. School Mental Health. 2009; 1(1):37-48

403. Segal ES. Learned mothering: Raising a child with ADHD. Child & Adolescent Social Work Journal. 2001; 18(4):263-279

404. Segal R, Frank G. The extraordinary construction of ordinary experience: scheduling daily life in families with children with attention deficit hyperactivity disorder. Scandinavian Journal of Occupational Therapy. 1998; 5(3):141-147

405. Shaffer A, Lindhiem O, Kolko D. Treatment effects of a primary care intervention on parenting behaviors: sometimes it's relative. Prevention Science. 2017; 18(3):305-311

406. Shakibaei F, Radmanesh M, Salari E, Mahaki B. Ginkgo biloba in the treatment of attention-deficit/hyperactivity disorder in children and adolescents. A randomized, placebo-controlled, trial. Complementary Therapies in Clinical Practice. 2015; 21(2):61-67

407. Shalev L, Tsal Y, Mevorach C. Computerized progressive attentional training (CPAT) program: effective direct intervention for children with ADHD. Child Neuropsychology. 2007; 13(4):382-388

408. Sharif F, Zarei S, Alavi Shooshtari A, Vossoughi M. The effect of stress management program using cognitive behavior approach on mental health of the mothers of the children with attention deficit hyperactivity disorder. Iranian Journal of Pediatrics. 2015; 25(3):e474

409. Shattell MM, Bartlett R, Rowe T. "I have always felt different": the experience of attention-deficit/hyperactivity disorder in childhood. Journal of Pediatric Nursing. 2008; 23(1):49-57

410. Shaw K, Wagner I, Eastwood H, Mitchell G. A qualitative study of Australian GPs' attitudes and practices in the diagnosis and management of attention-deficit/hyperactivity disorder (ADHD). Family Practice. 2003; 20(2):129-134

411. Sibley MH, Altszuler AR, Ross JM, Sanchez F, Pelham WE, Gnagy EM. A Parent-teen collaborative treatment model for academically impaired high school students with ADHD. Cognitive and Behavioral Practice. 2014; 21(1):32-42

412. Sibley MH, Graziano PA, Kuriyan AB, Coxe S, Pelham WE, Rodriguez L et al. Parent-teen behavior therapy + motivational interviewing for adolescents with ADHD. Journal of Consulting and Clinical Psychology. 2016; 84(8):699-712

413. Sibley MH, Pelham Jr WE, Derefinko KJ, Kuriyan AB, Sanchez F, Graziano PA. A pilot trial of supporting teens' academic needs daily (STAND): A parent-adolescent collaborative intervention for ADHD. Journal of Psychopathology and Behavioral Assessment. 2013; 35(4):436-449

414. Sikirica V, Flood E, Dietrich CN, Quintero J, Harpin V, Hodgkins P et al. Unmet needs associated with attention-deficit/hyperactivity disorder in eight European countries as reported by caregivers and adolescents: results from qualitative research. The Patient: Patient-Centered Outcomes Research. 2015; 8(3):269-281

415. Silverstein M, Hironaka LK, Walter HJ, Feinberg E, Sandler J, Pellicer M et al. Collaborative care for children with ADHD symptoms: a randomized comparative effectiveness trial. Pediatrics. 2015; 135(4):e858-867

416. Simons L, Valentine AZ, Falconer CJ, Groom M, Daley D, Craven MP et al. Developing mHealth remote monitoring technology for attention deficit hyperactivity disorder: a qualitative study eliciting user priorities and needs. JMIR MHealth and UHealth. 2016; 4(1):e31

417. Singh I. Boys will be boys: fathers' perspectives on ADHD symptoms, diagnosis, and drug treatment. Harvard Review of Psychiatry. 2003; 11(6):308-316

418. Singh I. Will the "real boy" please behave: dosing dilemmas for parents of boys with ADHD. American Journal of Bioethics. 2005; 5(3):34-47

419. Singh I. A disorder of anger and aggression: children's perspectives on attention deficit/hyperactivity disorder in the UK. Social Science and Medicine. 2011; 73(6):889-896

420. Singh SP, Tuomainen H. Transition from child to adult mental health services: Needs, barriers, experiences and new models of care. World Psychiatry. 2015; 14(3):358-361

421. Sleath B, Carpenter DM, Sayner R, Thomas K, Mann L, Sage A et al. Youth views on communication about ADHD and medication adherence. Community Mental Health Journal. 2017; 53(4):438-444

422. Smith E, Koerting J, Latter S, Knowles MM, McCann DC, Thompson M et al. Overcoming barriers to effective early parenting interventions for attention-deficit hyperactivity disorder (ADHD): parent and practitioner views. Child: Care, Health and Development. 2015; 41(1):93-102

423. Smith SD, Vitulano LA, Katsovich L, Li S, Moore C, Li F et al. A randomized controlled trial of an integrated brain, body, and social intervention for children with ADHD. Journal of Attention Disorders. 2016; Epublication

424. So CY, Leung PW, Hung SF. Treatment effectiveness of combined medication/behavioural treatment with Chinese ADHD children in routine practice. Behaviour Research and Therapy. 2008; 46(9):983-992

425. Soderqvist H, Kajsa E, Ahlstrom BH, Wentz E. The caregivers' perspectives of burden before and after an internet-based intervention of young persons with ADHD

or autism spectrum disorder. Scandinavian Journal of Occupational Therapy. 2017; Epublication

426. Soff C, Sotnikova A, Christiansen H, Becker K, Siniatchkin M. Transcranial direct current stimulation improves clinical symptoms in adolescents with attention deficit hyperactivity disorder. Journal of Neural Transmission. 2017; 124(1):133-144

427. Solanto MV, Marks DJ, Wasserstein J, Mitchell K, Abikoff H, Alvir JM et al. Efficacy of meta-cognitive therapy for adult ADHD. American Journal of Psychiatry. 2010; 167(8):958-968

428. Solberg BS, Haavik J, Halmoy A. Health care services for adults with ADHD: patient satisfaction and the role of psycho-education. Journal of Attention Disorders. 2015; 18:18

429. Somech LY, Elizur Y. Promoting self-regulation and cooperation in pre-kindergarten children with conduct problems: a randomized controlled trial. Journal of the American Academy of Child and Adolescent Psychiatry. 2012; 51(4):412-422

430. Sonuga-Barke EJ, Brandeis D, Cortese S, Daley D, Ferrin M, Holtmann M et al. Nonpharmacological interventions for ADHD: systematic review and meta-analyses of randomized controlled trials of dietary and psychological treatments. American Journal of Psychiatry. 2013; 170(3):275-289

431. Sonuga-Barke EJ, Daley D, Thompson M, Laver-Bradbury C, Weeks A. Parent-based therapies for preschool attention-deficit/hyperactivity disorder: a randomized, controlled trial with a community sample. Journal of the American Academy of Child and Adolescent Psychiatry. 2001; 40(4):402-408

432. Sonuga-Barke EJ, Thompson M, Daley D, Laver-Bradbury C. Parent training for Attention Deficit/Hyperactivity Disorder: is it as effective when delivered as routine rather than as specialist care? British Journal of Clinical Psychology. 2004; 43(Pt 4):449-457

433. Sourander A, McGrath PJ, Ristkari T, Cunningham C, Huttunen J, Lingley-Pottie P et al. Internet-Assisted Parent Training Intervention for Disruptive Behavior in 4-Year-Old Children: A Randomized Clinical Trial. JAMA Psychiatry. 2016; 73(4):378-387

434. Sox CM, Gribbons WM, Loring BA, Mandl KD, Batista R, Porter SC. Patient-centered design of an information management module for a personally controlled health record. Journal of Medical Internet Research. 2010; 12(3):e36

435. Sprich SE, Safren SA, Finkelstein D, Remmert JE, Hammerness P. A randomized controlled trial of cognitive behavioral therapy for ADHD in medication-treated adolescents. Journal of Child Psychology and Psychiatry and Allied Disciplines. 2016; 57(11):1218-1226

436. Srignanasoundari E, Vijayalakshmi S, Kokilavani N. A study to assess the knowledge on attention deficit hyperactivity disorder among primary school teachers at selected schools of Kancheepuram District, Tamilnadu. International Journal of Nursing Education. 2016; 8(4):66-70

437. Steeger CM, Gondoli DM, Gibson BS, Morrissey RA. Combined cognitive and parent training interventions for adolescents with ADHD and their mothers: A randomized controlled trial. Child Neuropsychology. 2016; 22(4):394-419

438. Steiner NJ, Frenette EC, Rene KM, Brennan RT, Perrin EC. In-school neurofeedback training for ADHD: Sustained improvements from a randomized control trial. Pediatrics. 2014; 133(3):483-492

439. Steiner NJ, Frenette EC, Rene KM, Brennan RT, Perrin EC. Neurofeedback and cognitive attention training for children with attention-deficit hyperactivity disorder in schools. Journal of Developmental and Behavioral Pediatrics. 2014; 35(1):18-27

440. Steiner NJ, Sheldrick RC, Gotthelf D, Perrin EC. Computer-based attention training in the schools for children with attention deficit/hyperactivity disorder: a preliminary trial. Clinical Pediatrics. 2011; 50(7):615-622

441. Stern A, Malik E, Pollak Y, Bonne O, Maeir A. The efficacy of computerized cognitive training in adults with ADHD: A randomized controlled trial. Journal of Attention Disorders. 2016; 20(12):991-1003

442. Storebo OJ, Gluud C, Winkel P, Simonsen E. Social-skills and parental training plus standard treatment versus standard treatment for children with ADHD--the randomised SOSTRA trial. PloS One. 2012; 7(6):e37280

443. Storebo OJ, Pedersen J, Skoog M, Thomsen PH, Winkel P, Gluud C et al. Randomised social-skills training and parental training plus standard treatment versus standard treatment of children with attention deficit hyperactivity disorder - the SOSTRA trial protocol. Trials. 2011; 12:18

444. Storebø OJ, Skoog M, Damm D, Thomsen PH, Simonsen E, Gluud C. Social skills training for Attention Deficit Hyperactivity Disorder (ADHD) in children aged 5 to 18 years. Cochrane Database of Systematic Reviews 2011, Issue 12. Art. No.: CD008223. DOI: 10.1002/14651858.CD008223.pub2.

445. Storebo OJ, Skoog M, Rasmussen PD, Winkel P, Gluud C, Pedersen J et al. Attachment competences in children with ADHD during the social-skills training and attachment (SOSTRA) randomized clinical trial. Journal of Attention Disorders. 2015; 19(10):865-871

446. Strand MT, Hawk LW, Jr., Bubnik M, Shiels K, Pelham WE, Jr., Waxmonsky JG. Improving working memory in children with attention-deficit/hyperactivity disorder: the separate and combined effects of incentives and stimulant medication. Journal of Abnormal Child Psychology. 2012; 40(7):1193-1207

447. Stroh J, Frankenberger W, Cornell-Swanson LV, Wood C, Pahl S. The use of stimulant medication and behavioral interventions for the treatment of attention deficit hyperactivity disorder: A survey of parents? knowledge, attitudes, and experiences. Journal of Child and Family Studies. 2008; 17(3):385-401

448. Suehs BT, Sikirica V, Mudumby P, Dufour R, Patel NC. Impact of a Step Therapy for Guanfacine Extended-Release on Medication Utilization and Health Care Expenditures Among Individuals Receiving Treatment for ADHD. Journal of Managed Care & Specialty Pharmacy. 2015; 21(9):793-802, 802a-802i

449. Surman CB, Thomas RJ, Aleardi M, Pagano C, Biederman J. Adults with ADHD and sleep complaints: a pilot study identifying sleep-disordered breathing using polysomnography and sleep quality assessment. Journal of Attention Disorders. 2006; 9(3):550-555

450. Swift KD, Hall CL, Marimuttu V, Redstone L, Sayal K, Hollis C. Transition to adult mental health services for young people with attention deficit/hyperactivity disorder (ADHD): a qualitative analysis of their experiences. BMC Psychiatry. 2013; 13:74

451. Tamm L, Epstein JN, Peugh JL, Nakonezny PA, Hughes CW. Preliminary data suggesting the efficacy of attention training for school-aged children with ADHD. Developmental Cognitive Neuroscience. 2013; 4:16-28

452. Tamm L, Nakonezny PA, Hughes CW. An open trial of a metacognitive executive function training for young children with ADHD. Journal of Attention Disorders. 2014; 18(6):551-559

453. Tatlow-Golden M, Prihodova L, Gavin B, Cullen W, McNicholas F. What do general practitioners know about ADHD? Attitudes and knowledge among first-contact gatekeepers: systematic narrative review. BMC Family Practice. 2016; 17:129

454. Taylor JA, Valentine AZ, Sellman E, Bransby-Adams K, Daley D, Sayal K. A qualitative process evaluation of a randomised controlled trial of a parenting intervention in community (school) settings for children at risk of attention deficit hyperactivity disorder (ADHD). BMC Psychiatry. 2015; 15:290

455. Taylor M, O'Donoghue T, Houghton S. To medicate or not to medicate? The decision-making process of Western Australian parents following their child's diagnosis with an attention deficit hyperactivity disorder. International Journal of Disability, Development and Education. 2006; 53(1):111-128

456. Thiruchelvam D, Charach A, Schachar RJ. Moderators and mediators of long-term adherence to stimulant treatment in children with ADHD. Journal of the American Academy of Child and Adolescent Psychiatry. 2001; 40(8):922-928

457. Thompson MJ, Laver-Bradbury C, Ayres M, Le PE, Mead S, Dodds C et al. A small-scale randomized controlled trial of the revised new forest parenting programme for preschoolers with attention deficit hyperactivity disorder. European Child and Adolescent Psychiatry. 2009; 18(10):605-616

458. Travell C, Visser J. ADHD does bad stuff to you': young people's and parents' experiences and perceptions of Attention Deficit Hyperactivity Disorder (ADHD). Emotional & Behavioural Difficulties. 2006; 11(3):205-216

459. Treatment of ADHD in children with tics. American Journal of Nursing. 2002; 102(9):24D

460. Treatment of ADHD in children with tics: a randomized controlled trial. Neurology. 2002; 58(4):527-536

461. Tucha O, Tucha L, Kaumann G, Konig S, Lange KM, Stasik D et al. Training of attention functions in children with attention deficit hyperactivity disorder. Attention Deficit and Hyperactivity Disorders. 2011; 3(3):271-283

462. van den Hoofdakker BJ, Nauta MH, van dV, Sytema S, Emmelkamp PM, Minderaa RB et al. Behavioral parent training as an adjunct to routine care in children with attention-deficit/hyperactivity disorder: moderators of treatment response. Journal of Pediatric Psychology. 2010; 35(3):317-326

463. van den Hoofdakker BJ, van dV, Sytema S, Emmelkamp PMG, Minderaa RB, Nauta MH. Effectiveness of behavioral parent training for children with ADHD in routine clinical practice: A randomized controlled study. Journal of the American Academy of Child and Adolescent Psychiatry. 2007; 46(10):1263-1271

464. van der Donk M, Hiemstra-Beernink AC, Tjeenk-Kalff A, van der Leij A, Lindauer R. Cognitive training for children with ADHD: a randomized controlled trial of cogmed working memory training and 'paying attention in class'. Frontiers in Psychology. 2015; 6:1081

465. van der Kolk A, Bouwmans CAM, Schawo SJ, Buitelaar JK, van Agthoven M, Hakkaart-van Roijen L. Association between quality of life and treatment response in children with attention deficit hyperactivity disorder and their parents. Journal of Mental Health Policy and Economics. 2014; 17(3):119-129

466. van der Oord S, Ponsioen AJ, Geurts HM, Ten Brink EL, Prins PJ. A pilot study of the efficacy of a computerized executive functioning remediation training with game elements for children with ADHD in an outpatient setting: outcome on parent- and teacher-rated executive functioning and ADHD behavior. Journal of Attention Disorders. 2014; 18(8):699-712

467. Van der Oord S, Prins PJ, Oosterlaan J, Emmelkamp PM. Efficacy of methylphenidate, psychosocial treatments and their combination in school-aged children with ADHD: a meta-analysis. Clinical Psychology Review. 2008; 28(5):783-800

468. Van der Oord S, Prins PJM, Oosterlaan J, Emmelkamp PMG. Does brief, clinically based, intensive multimodal behavior therapy enhance the effects of methylphenidate in children with ADHD? European Child and Adolescent Psychiatry. 2007; 16(1):48-57

469. van Dongen-Boomsma M, Vollebregt MA, Buitelaar JK, Slaats-Willemse D. Working memory training in young children with ADHD: a randomized placebo-controlled trial. Journal of Child Psychology and Psychiatry and Allied Disciplines. 2014; 55(8):886-896

470. van Dongen-Boomsma M, Vollebregt MA, Slaats-Willemse D, Buitelaar JK. A randomized placebo-controlled trial of electroencephalographic (EEG) neurofeedback in children with attention-deficit/hyperactivity disorder. Journal of Clinical Psychiatry. 2013; 74(8):821-827

471. Varley CK. Perspectives of adolescents with attention-deficit hyperactivity disorder do matter. Journal of Adolescent Health. 2011; 49(1):1-2

472. Vidal R, Castells J, Richarte V, Palomar G, Garcia M, Nicolau R et al. Group therapy for adolescents with attention-deficit/hyperactivity disorder: a randomized controlled trial. Journal of the American Academy of Child and Adolescent Psychiatry. 2015; 54(4):275-282

473. Virta M, Salakari A, Antila M, Chydenius E, Partinen M, Kaski M et al. Hypnotherapy for adults with attention deficit hyperactivity disorder: A randomized controlled study. Contemporary Hypnosis. 2010; 27(1):5-18

474. Virta M, Salakari A, Antila M, Chydenius E, Partinen M, Kaski M et al. Short cognitive behavioral therapy and cognitive training for adults with ADHD—A randomized controlled pilot study. Neuropsychiatric Disease and Treatment. 2010; 6:443-453

475. Vollebregt MA, van Dongen-Boomsma M, Buitelaar JK, Slaats-Willemse D. Does EEG-neurofeedback improve neurocognitive functioning in children with attention-deficit/hyperactivity disorder? A systematic review and a double-blind placebo-controlled study. Journal of Child Psychology and Psychiatry and Allied Disciplines. 2014; 55(5):460-472

476. Waite R, Tran M. ADHD among a cohort of ethnic minority women. Women and Health. 2010; 50(1):71-87

477. Wallace N. The perceptions of mothers of sons with ADHD. ANZJFT Australian and New Zealand Journal of Family Therapy. 2005; 26(4):193-199

478. Wan ESF, Ma JLC, Lai KYC, Lo JWK. The subjective experiences of attention deficit/ hyperactivity disorder of Chinese families in Hong Kong: co-construction of meanings in multiple family groups. Health and Social Work. 2016; 41(3):164-172

479. Wangler S, Gevensleben H, Albrecht B, Studer P, Rothenberger A, Moll GH et al. Neurofeedback in children with ADHD: specific event-related potential findings of a randomized controlled trial. Clinical Neurophysiology. 2011; 122(5):942-950

480. Waxmonsky J, Pelham WE, Gnagy E, Cummings MR, O'Connor B, Majumdar A et al. The efficacy and tolerability of methylphenidate and behavior modification in children with attention-deficit/hyperactivity disorder and severe mood dysregulation. Journal of Child and Adolescent Psychopharmacology. 2008; 18(6):573-588

481. Waxmonsky JG, Waschbusch DA, Pelham WE, Draganac-Cardona L, Rotella B, Ryan L. Effects of atomoxetine with and without behavior therapy on the school and home functioning of children with attention-deficit/hyperactivity disorder. Journal of Clinical Psychiatry. 2010; 71(11):1535-1551

482. Weber W, Vander SA, McCarty RL, Weiss NS, Biederman J, McClellan J. Hypericum perforatum (St John's wort) for attention-deficit/hyperactivity disorder in children and adolescents: a randomized controlled trial. JAMA. 2008; 299(22):2633-2641

483. Webster-Stratton C, Reid MJ, Beauchaine TP. One-year follow-up of combined parent and child intervention for young children with ADHD. Journal of Clinical Child and Adolescent Psychology. 2013; 42(2):251-261

484. Webster-Stratton CH, Reid MJ, Beauchaine T. Combining parent and child training for young children with ADHD. Journal of Clinical Child and Adolescent Psychology. 2011; 40(2):191-203

485. Weiss M, Hechtman L. A randomized double-blind trial of paroxetine and/or dextroamphetamine and problem-focused therapy for attention-deficit/hyperactivity disorder in adults. Journal of Clinical Psychiatry. 2006; 67(4):611-619

486. Weiss M, Murray C, Wasdell M, Greenfield B, Giles L, Hechtman L. A randomized controlled trial of CBT therapy for adults with ADHD with and without medication. BMC Psychiatry. 2012; 12:30

487. Whiting PF, Rutjes AWS, Westwood ME, Mallett S, Deeks JJ, Reitsma JB et al. QUADAS-2: a revised tool for the quality assessment of diagnostic accuracy studies. Annals of Internal Medicine. 2011; 155(8):529-536

488. Wiener J, Daniels L. School experiences of adolescents with attention-deficit/hyperactivity disorder. Journal of Learning Disabilities. 2016; 49(6):567-581

489. Wilkes-Gillan S, Bundy A, Cordier R, Lincoln M, Chen YW. A randomised controlled trial of a play-based intervention to improve the social play skills of children with attention deficit hyperactivity disorder (ADHD). PloS One. 2016; 11(8):e0160558

490. Wilkes-Gillan S, Bundy A, Cordier R, Lincoln M, Hancock N. Parents' perspectives on the appropriateness of a parent-delivered intervention for improving the social play skills of children with ADHD. British Journal of Occupational Therapy. 2015; 78(10):644-652

491. Wilkinson S, Harvey WJ, Bloom GA, Joober R, Grizenko N. Student teacher experiences in a service-learning project for children with attention-deficit hyperactivity disorder. Physical Education and Sport Pedagogy. 2013; 18(5):475-491

492. Williams NJ, Harries M, Williams AM. Gaining control: A new perspective on the parenting of children with AD/HD. Qualitative Research in Psychology. 2014; 11(3):277-297

493. Williamson D, Johnston C. Gender differences in adults with attention-deficit/hyperactivity disorder: A narrative review. Clinical Psychology Review. 2015; 40:15-27

494. Williamson P, Koro-Ljungberg ME, Bussing R. Analysis of critical incidents and shifting perspectives: transitions in illness careers among adolescents with ADHD. Qualitative Health Research. 2009; 19(3):352-365

495. Williford AP, Wolcott CS, Whittaker JV, Locasale-Crouch J. Program and teacher characteristics predicting the implementation of banking time with preschoolers who display disruptive behaviors. Prevention Science. 2015; 16(8):1054-1063

496. Winter H, Moncrieff J, Speed E. “Because you’re worth it”: A discourse analysis of the gendered rhetoric of the ADHD woman. Qualitative Research in Psychology. 2015; 12(4):415-434

497. Wright SF. "A little understood solution to a vaguely defined problem": Parental perceptions of Ritalin. Educational and Child Psychology. 1997; 14(1):50-59

498. Xie Y, Dixon JF, Yee OM, Zhang J, Chen YA, Deangelo S et al. A study on the effectiveness of videoconferencing on teaching parent training skills to parents of children with ADHD. Telemedicine Journal and e-Health. 2013; 19(3):192-199

499. Young S, Bramham J, Gray K, Rose E. The experience of receiving a diagnosis and treatment of ADHD in adulthood: a qualitative study of clinically referred patients using interpretative phenomenological analysis. Journal of Attention Disorders. 2008; 11(4):493-503

500. Young S, Chesney S, Sperlinger D, Misch P, Collins P. A qualitative study exploring the life-course experiences of young offenders with symptoms and signs of ADHD who were detained in a residential care setting. Criminal Behaviour and Mental Health. 2009; 19(1):54-63

501. Young S, Emilsson B, Sigurdsson JF, Khondoker M, Philipp-Wiegmann F, Baldursson G et al. A randomized controlled trial reporting functional outcomes of cognitive-behavioural therapy in medication-treated adults with ADHD and comorbid psychopathology. European Archives of Psychiatry and Clinical Neuroscience. 2017; 267(3):267-276

502. Young S, Gray K, Bramham J. A phenomenological analysis of the experience of receiving a diagnosis and treatment of ADHD in adulthood: a partner's perspective. Journal of Attention Disorders. 2009; 12(4):299-307

503. Young S, Khondoker M, Emilsson B, Sigurdsson JF, Philipp-Wiegmann F, Baldursson G et al. Cognitive–behavioural therapy in medication-treated adults with attention-deficit/hyperactivity disorder and co-morbid psychopathology: A randomized controlled trial using multi-level analysis. Psychological Medicine. 2015; 45(13):2793-2804

504. Zentall SS, Lee J. A reading motivation intervention with differential outcomes for students at risk for reading disabilities, ADHD, and typical comparisons: "Clever is and clever does". Learning Disability Quarterly. 2012; 35(4):248-259

505. Zhang D, Chan SKC, Lo HHM, Chan CYH, Chan JCY, Ting KT et al. Mindfulness-based intervention for Chinese children with adhd and their parents: A pilot mixed-method study. Mindfulness. 2016; Epublication

506. Zwi M, Jones H, Thorgaard C, York A, Dennis JA. Parent training interventions for attention deficit hyperactivity disorder. Cochrane Database of Systematic Reviews 2009, Issue 3. Art. No.: CD003018. DOI: 10.1002/14651858.CD003018.pub2.

Appendices

Appendix A:Review protocols

A.1 Efficacy of non-pharmacological treatment

Table 36: Review protocol: Non-pharmacological efficacy

Field	Content
Review question	What is the most clinically and cost-effective non-pharmacological treatment, and combination of treatments, for people with ADHD?
Type of review question	Intervention A review of health economic evidence related to the same review question was conducted in parallel with this review. For details see the health economic review protocol for this NICE guideline.
Objective of the review	Inform recommendations about which non-pharmacological treatments for ADHD are clinically and cost effective
Eligibility criteria – population / disease / condition / issue / domain	Children, young people and adults with ADHD Stratified by age: • Children (<5 years) • Children and young people (5 to 18 years) • Adults (>18 years)
Eligibility criteria – intervention(s)	The following non-pharmacological interventions intended to alleviate the symptoms of ADHD or improve management of the symptoms of ADHD, including: • Cognitive behavioural therapy (CBT)/dialectical behaviour therapy (DBT) • Coaching, mentoring and other counselling approaches • Attention/memory/cognitive training • Neurofeedback • Parent/family/carer training (+/- teacher involvement) • Psychoeducation • Relaxation techniques • Organisational skills/school or workplace targeted interventions • Interventions to improve sleep • Exercise • Play based therapies (for children) • Ecotherapies/outdoor activities • Non-specific supportive therapy (attention matched control without specific intervention aim) • Combinations of the above • Usual care/waitlist • Placebo/sham
Eligibility criteria – comparator(s) / control or reference (gold) standard	All interventions will be compared to each other
Outcomes and prioritisation	Critical:

	• Quality of life [continuous] • ADHD symptoms (total; parent) [continuous] [children and young people] • ADHD symptoms (total; teacher) [continuous] [children and young people] • ADHD symptoms (total; self-rated in children 13-18 years and adults) [continuous] • ADHD symptoms (total; carer/partner) [continuous] [adults] • ADHD symptoms (total; investigator) [continuous] • ADHD symptoms (inattention; parent) [continuous] [children and young people] • ADHD symptoms (inattention; teacher) [continuous] [children and young people] • ADHD symptoms (inattention; self-rated in children 13-18 years and adults) [continuous] • ADHD symptoms (inattention; carer/partner) [continuous] [adults] • ADHD symptoms (inattention; investigator) [continuous] • ADHD symptoms (hyperactivity; parent) [continuous] [children and young people] • ADHD symptoms (hyperactivity; teacher) [continuous] [children and young people] • ADHD symptoms (hyperactivity; self-rated in children 13-18 years and adults) [continuous] • ADHD symptoms (hyperactivity; carer/partner) [continuous] [adults] • ADHD symptoms (hyperactivity; investigator) [continuous] • Clinical Global Impressions scale (improved or much improved) [dichotomous] Important: • Reduction in adverse events [dichotomous] • Serious adverse events (all) [dichotomous] • Behavioural (children)/Functional (adults) measures [continuous] • Emotional dysregulation [continuous] • Academic outcomes (children) [continuous] • Substance use (alcohol and drug use) [dichotomous] • Self-harm [dichotomous] Outcomes to be extracted for end of intervention and latest follow-up if both available. Outcomes to be stratified into short term (up to 3 months follow-up) and long term (>3 months follow-up). Where multiple timepoints are reported within each definition, the longest timepoint only will be extracted. ADHD symptoms outcomes to be preferentially extracted as continuous outcomes where available. If only dichotomous outcomes available from individual study, dichotomous outcomes will be extracted.
Eligibility criteria – study design	RCT Systematic review
Other inclusion exclusion criteria	• Unit of randomisation: Patient • Crossover study: Not permitted • Minimum duration: Not defined • Other exclusions:

	○ Dietary interventions unless in combination with above ○ Inappropriate method of diagnosis: studies not using criteria of DSM-III/ICD-10 or later versions for diagnosis, except for ASD population in whom evidence of moderate to severe symptoms of hyperactivity/impulsivity/inattention is demonstrated
Proposed sensitivity / subgroup analysis, or meta-regression	Sensitivity/other analysis: • Risk of bias • Funding Subgroup analyses if heterogeneity: • Comorbidities (ID, ASD, epilepsy, affective disorders, tic disorder, personality disorders, addiction) • Age (<5, 5-12, 13-17, 18-30, 30-65, >65) • Severity (mild, moderate, severe) • Population (secure estate) • Mode of delivery (self-help, remote, 1:1, group) • Place of delivery (education/workplace, home, clinic, secure estate) • Intervention subclasses (e.g. PT/FT + teacher versus – teachers) • Concurrent care (<10% medication use versus 10-80% medication use)
Selection process – duplicate screening / selection / analysis	A sample of at least 10% of the abstract lists were double-sifted by a senior research fellow and discrepancies rectified, with committee input where consensus could not be reached, for more information please see the separate Methods report for this guideline.
Data management (software)	• Pairwise meta-analyses were performed using Cochrane Review Manager (RevMan5). • GRADEpro was used to assess the quality of evidence for each outcome. • Endnote for bibliography, citations, sifting and reference management.
Information sources – databases and dates	Clinical search databases to be used: Medline, Embase, Cochrane Library,PsycINFO Date: From October 2007 Health economics search databases to be used: Medline, Embase, NHSEED, HTA Date: Medline, Embase from 2014 NHSEED, HTA – from 2008 Language: Restrict to English only Supplementary search techniques: backward citation searching Key papers: Not known
Identify if an update	Not an update
Author contacts	https://www.nice.org.uk/guidance/cg72
Highlight if amendment to previous protocol	Not an amendment
Search strategy – for one database	For details please see appendix B
Data collection process – forms / duplicate	A standardised evidence table format will be used, and published as appendix D of the evidence report.

Data items – define all variables to be collected	For details please see evidence tables in Appendix D (clinical evidence tables) or H (health economic evidence tables).
Methods for assessing bias at outcome / study level	Standard study checklists were used to critically appraise individual studies. For details please see section 6.2 of Developing NICE guidelines: the manual The risk of bias across all available evidence was evaluated for each outcome using an adaptation of the 'Grading of Recommendations Assessment, Development and Evaluation (GRADE) toolbox' developed by the international GRADE working group http://www.gradeworkinggroup.org/
Criteria for quantitative synthesis	For details please see section 6.4 of Developing NICE guidelines: the manual.
Methods for quantitative analysis – combining studies and exploring (in)consistency	For details please see the separate Methods report for this guideline.
Meta-bias assessment – publication bias, selective reporting bias	For details please see section 6.2 of Developing NICE guidelines: the manual.
Confidence in cumulative evidence	For details please see sections 6.4 and 9.1 of Developing NICE guidelines: the manual and the methods section of this guideline.
Rationale / context – what is known	For details please see the introduction to the evidence review.
Describe contributions of authors and guarantor	A multidisciplinary committee developed the evidence review. The committee was convened by the National Guideline Centre (NGC) and chaired by Gillian Baird in line with section 3 of Developing NICE guidelines: the manual and the methods section of this guideline. Staff from NGC undertook systematic literature searches, critically appraised the evidence, conducted meta-analysis and cost-effectiveness analysis where appropriate, and drafted the evidence review in collaboration with the committee. For details please see Developing NICE guidelines: the manual.
Sources of funding / support	NGC is funded by NICE and hosted by the Royal College of Physicians.
Name of sponsor	NGC is funded by NICE and hosted by the Royal College of Physicians.
Roles of sponsor	NICE funds NGC to develop guidelines for those working in the NHS, public health and social care in England.
PROSPERO registration number	Not registered

A.2 Adverse events associated with non-pharmacological treatments of ADHD

Table 37: Review protocol: Adverse events associated with non-pharmacological treatments of ADHD

Field	Content
Review question	What do people with ADHD feel are the adverse impacts of non-pharmacological treatment for ADHD?
Type of review question	Qualitative
Objective of the review	To identify what people with ADHD feel are the potential adverse impacts that may be associated with non-pharmacological treatments for ADHD to guide decisions on treatment between people with ADHD and their clinicians.

Eligibility criteria – population / disease / condition / issue / domain	Children, young people and adults with ADHD, parents, teachers and healthcare professionals Stratify by age (<5 years old, 5 to 18, >18 years old).
Eligibility criteria – intervention(s) / exposure(s) / prognostic factor(s)	The following treatments will be considered relevant: • Parent/family/carer training programmes • Cognitive behavioural therapies/dialectical behaviour therapy • Psychoeducation • Attention/memory/cognitive training • Neurofeedback • Relaxation techniques • Organisational skills/school or workplace targeted interventions • Sleep targeted interventions • Exercise • Ecotherapies/outdoor activities • Combinations of the above
Eligibility criteria – comparator(s) / control or reference (gold) standard	Not applicable
Outcomes and prioritisation	Themes will be identified from the papers, and not specified in advance. However, relevant themes may include: • inconvenience (attendance at sessions, homework with interventions) • stigma • psychological distress (including distress for parents who may feel like a parenting workshop reflects poorly on their parenting) • exacerbation of mental health difficulties self-harm
Eligibility criteria – study design	Qualitative interview and focus group studies (including studies using grounded theory, phenomenology or other appropriate qualitative approaches); quantitative data from questionnaires will only be considered if insufficient qualitative evidence is identified
Other inclusion exclusion criteria	Exclusions: ADHD diagnosis made not using DSM-III/ICD-10 or later versions of these (note that studies evaluating treatments for ADHD in a population of people with autistic spectrum disorder will be included if no formal diagnosis of ADHD has been made using these, but evidence of moderate to severe symptoms of hyperactivity, impulsivity, and/or inattention is demonstrated according to validated symptom questionnaires). Note that studies where the population are diagnosed with ADHD but diagnostic criteria is not specified will be included, if diagnosis was clearly stated as being after DSM-III or ICD-10 were published.
Proposed sensitivity / subgroup analysis, or meta-regression	Particular attention should be paid to studies that incorporate views from the following key groups, as experience of treatment may vary in these groups: • Looked after children, including the viewpoints of foster carers • Secure estate • Older adults (>65 years) • Black, Asian and minority ethnic groups (BAME) • Women • Students

	• Young people who have recently transitioned to adult services 17-25
Selection process – duplicate screening / selection / analysis	No duplicate screening was deemed necessary for this question, for more information please see the separate Methods report for this guideline. Appraisal of methodological quality: The methodological quality of each study will be assessed using NICE checklists and amended GRADE. Evidence will be analysed using thematic analysis; findings will be presented narratively and diagrammatically where appropriate. Findings will be reported according to GRADE CERQual standards Additional qualitative studies will be added to the review until themes within the analysis become saturated; i.e. studies will only be included if they contribute towards the development of existing themes or to the development of new themes.
Data management (software)	• Endnote for bibliography, citations, sifting and reference management.
Information sources – databases and dates	Clinical search databases to be used: Medline, Embase, CINAHL,PsycINFO Date: All years Health economics search databases to be used: Medline, Embase, NHSEED, HTA Date: Medline, Embase from 2014 NHSEED, HTA – all years Language: Restrict to English only Supplementary search techniques: backward citation searching Key papers: Not known
Identify if an update	Not an update
Author contacts	https://www.nice.org.uk/guidance/cg72
Highlight if amendment to previous protocol	For details please see section 4.5 of Developing NICE guidelines: the manual.
Search strategy – for one database	For details please see appendix B
Data collection process – forms / duplicate	A standardised evidence table format will be used, and published as appendix D of the evidence report.
Data items – define all variables to be collected	For details please see evidence tables in Appendix D (clinical evidence tables) or F (health economic evidence tables).
Methods for assessing bias at outcome / study level	Standard study checklists were used to critically appraise individual studies. For details please see section 6.2 of Developing NICE guidelines: the manual The risk of bias across all available evidence was evaluated for each outcome according to GRADE CERQual standards.
Criteria for quantitative synthesis	For details please see section 6.4 of Developing NICE guidelines: the manual.
Methods for quantitative analysis – combining studies and exploring (in)consistency	For details please see the separate Methods report for this guideline.

Meta-bias assessment – publication bias, selective reporting bias	For details please see section 6.2 of Developing NICE guidelines: the manual.
Confidence in cumulative evidence	For details please see sections 6.4 and 9.1 of Developing NICE guidelines: the manual.
Rationale / context – what is known	For details please see the introduction to the evidence review.
Describe contributions of authors and guarantor	A multidisciplinary committee developed the evidence review. The committee was convened by the National Guideline Centre (NGC) and chaired by Gillian Baird in line with section 3 of Developing NICE guidelines: the manual. Staff from NGC undertook systematic literature searches, appraised the evidence, conducted meta-analysis and cost-effectiveness analysis where appropriate, and drafted the evidence review in collaboration with the committee. For details please see Developing NICE guidelines: the manual.
Sources of funding / support	NGC is funded by NICE and hosted by the Royal College of Physicians.
Name of sponsor	NGC is funded by NICE and hosted by the Royal College of Physicians.
Roles of sponsor	NICE funds NGC to develop guidelines for those working in the NHS, public health and social care in England.
PROSPERO registration number	Not registered

Table 38: Health economic review protocol

Review question	All questions – health economic evidence
Objectives	To identify health economic studies relevant to any of the review questions.
Search criteria	Populations, interventions and comparators must be as specified in the clinical review protocols in appendix A above. Studies must be of a relevant health economic study design (cost–utility analysis, cost-effectiveness analysis, cost–benefit analysis, cost–consequences analysis, comparative cost analysis). Studies must not be a letter, editorial or commentary, or a review of health economic evaluations. (Recent reviews will be ordered although not reviewed. The bibliographies will be checked for relevant studies, which will then be ordered.) Unpublished reports will not be considered unless submitted as part of a call for evidence. Studies must be in English.
Search strategy	A health economic study search will be undertaken using population-specific terms and a health economic study filter – see appendix B. For questions being updated, the search will be run from December 2007, which was the cut-off date for the searches conducted for NICE guideline CG72
Review strategy	Studies not meeting any of the search criteria above will be excluded. Studies published before 2001, abstract-only studies and studies from non-OECD countries or the USA will also be excluded. Studies published after 2001 that were included in the previous guideline will be reassessed for inclusion and may be included or selectively excluded based on their relevance to the questions covered in this update and whether more applicable evidence is also identified. Each remaining study will be assessed for applicability and methodological limitations using the NICE economic evaluation checklist which can be found in appendix H of Developing NICE guidelines: the manual (2014).[344]

Review question	All questions – health economic evidence
	Inclusion and exclusion criteria If a study is rated as both 'Directly applicable' and with 'Minor limitations' then it will be included in the guideline. A health economic evidence table will be completed and it will be included in the health economic evidence profile. If a study is rated as either 'Not applicable' or with 'Very serious limitations' then it will usually be excluded from the guideline. If it is excluded then a health economic evidence table will not be completed and it will not be included in the health economic evidence profile. If a study is rated as 'Partially applicable', with 'Potentially serious limitations' or both then there is discretion over whether it should be included. Where there is discretion The health economist will make a decision based on the relative applicability and quality of the available evidence for that question, in discussion with the guideline committee if required. The ultimate aim is to include health economic studies that are helpful for decision-making in the context of the guideline and the current NHS setting. If several studies are considered of sufficiently high applicability and methodological quality that they could all be included, then the health economist, in discussion with the committee if required, may decide to include only the most applicable studies and to selectively exclude the remaining studies. All studies excluded on the basis of applicability or methodological limitations will be listed with explanation as excluded health economic studies in appendix I. The health economist will be guided by the following hierarchies. Setting: UK NHS (most applicable). OECD countries with predominantly public health insurance systems (for example, France, Germany, Sweden). OECD countries with predominantly private health insurance systems (for example, Switzerland). Studies set in non-OECD countries or in the USA will be excluded before being assessed for applicability and methodological limitations. Health economic study type: Cost–utility analysis (most applicable). Other type of full economic evaluation (cost–benefit analysis, cost-effectiveness analysis, cost–consequences analysis). Comparative cost analysis. Non-comparative cost analyses including cost-of-illness studies will be excluded before being assessed for applicability and methodological limitations. Year of analysis: The more recent the study, the more applicable it will be. Studies published in 2001 or later (including any such studies included in the previous guideline) but that depend on unit costs and resource data entirely or predominantly from before 2001 will be rated as 'Not applicable'. Studies published before 2001 (including any such studies included in the previous guideline) will be excluded before being assessed for applicability and methodological limitations. Quality and relevance of effectiveness data used in the health economic analysis: The more closely the clinical effectiveness data used in the health economic analysis match with the outcomes of the studies included in the clinical review the more useful the analysis will be for decision-making in the guideline. Economic evaluations that are based on studies excluded from the clinical review will be excluded.

Appendix B:Literature search strategies

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual, Oct 2014, updated 2017 https://www.nice.org.uk/guidance/pmg20/resources/developing-nice-guidelines-the-manual-pdf-72286708700869

For more detailed information, please see the Methodology Review.

B.1 Non-pharmacological efficacy

B.1.1 Clinical search literature search strategy

Searches for were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies for interventions as these concepts may not be well described in title, abstract or indexes and therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 39: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	01 October 2007 – 28 April 2017	Exclusions Randomised controlled trials Systematic review studies
Embase (OVID)	01 October 2007 – 28 April 2017	Exclusions Randomised controlled trials Systematic review studies
The Cochrane Library (Wiley)	Cochrane Reviews 2007 to 2017 Issue 4 of 12 CENTRAL 2007 to 2017 Issue 3 of 12 DARE and NHSEED 2007 to 2015 Issue 1 of 4 HTA 2007 to 2017 Issue 1 of 4	None
PsycINFO (ProQuest)	01 October 2007 – 28 April 2017	Exclusions Randomised controlled trials Systematic review studies

Medline (Ovid) search terms

1.	"attention deficit and disruptive behavior disorders"/ or attention deficit disorder with hyperactivity/
2.	((attenti* or disrupt*) adj3 (adolescent* or adult* or behav* or child* or class or classes or classroom* or condition* or difficult* or disorder* or learn* or people or person* or poor or problem* or process* or youngster*)).ti.
3.	((attenti* or disrupt*) adj3 disorder*).ab.
4.	(adhd or addh or ad hd or ad??hd).ti,ab.
5.	(attenti* adj3 deficit*).ti,ab.
6.	(((hyperkin* or hyper kin*) adj1 (syndrome* or disorder*)) or hkd).ti,ab.
7.	(minimal brain adj2 (dysfunct* or disorder*)).ti,ab.
8.	or/1-7
9.	exp Child Development Disorders, Pervasive/

10.	(autistic or autism or asperger*).ti,ab.
11.	pervasive developmental disorder*.ti,ab.
12.	(asd or pdd or pdd-nos).ti,ab.
13.	or/9-12
14.	hyperkinesis/
15.	(hyperactiv* or inattent* or hyperkin* or hyper-kin*).ti,ab.
16.	14 or 15
17.	13 and 16
18.	8 or 17
19.	limit 18 to English language
20.	letter/
21.	editorial/
22.	news/
23.	exp historical article/
24.	Anecdotes as Topic/
25.	comment/
26.	case report/
27.	(letter or comment*).ti.
28.	or/20-27
29.	randomized controlled trial/ or random*.ti,ab.
30.	28 not 29
31.	animals/ not humans/
32.	Animals, Laboratory/
33.	exp animal experiment/
34.	exp animal model/
35.	exp Rodentia/
36.	(rat or rats or mouse or mice).ti.
37.	or/30-36
38.	19 not 37
39.	randomized controlled trial.pt.
40.	controlled clinical trial.pt.
41.	randomi#ed.ab.
42.	placebo.ab.
43.	drug therapy.fs.
44.	randomly.ab.
45.	trial.ab.
46.	groups.ab.
47.	or/39-46
48.	Clinical Trials as topic.sh.
49.	trial.ti.
50.	or/39-42,44,48-49
51.	Meta-Analysis/
52.	Meta-Analysis as Topic/
53.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
54.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.

55.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
56.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
57.	(search* adj4 literature).ab.
58.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
59.	cochrane.jw.
60.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
61.	or/51-60
62.	38 and (50 or 61)

Embase (Ovid) search terms

1.	attention deficit disorder/
2.	((attenti* or disrupt*) adj3 (adolescent* or adult* or behav* or child* or class or classes or classroom* or condition* or difficult* or disorder* or learn* or people or person* or poor or problem* or process* or youngster*)).ti.
3.	((attenti* or disrupt*) adj3 disorder*).ab.
4.	(adhd or addh or ad hd or ad??hd).ti,ab.
5.	(attenti* adj3 deficit*).ti,ab.
6.	(((hyperkin* or hyper kin*) adj1 (syndrome* or disorder*)) or hkd).ti,ab.
7.	(minimal brain adj2 (dysfunct* or disorder*)).ti,ab.
8.	or/1-7
9.	exp autism/
10.	(autistic or autism or asperger*).ti,ab.
11.	pervasive developmental disorder*.ti,ab.
12.	(asd or pdd or pdd-nos).ti,ab.
13.	or/9-12
14.	hyperactivity/
15.	hyperkinesia/
16.	(hyperactiv* or inattent* or hyperkin* or hyper-kin*).ti,ab.
17.	or/14-16
18.	13 and 17
19.	8 or 18
20.	limit 19 to English language
21.	letter.pt. or letter/
22.	note.pt.
23.	editorial.pt.
24.	case report/ or case study/
25.	(letter or comment*).ti.
26.	or/21-25
27.	randomized controlled trial/ or random*.ti,ab.
28.	26 not 27
29.	animal/ not human/
30.	nonhuman/
31.	exp Animal Experiment/

32.	exp Experimental Animal/
33.	animal model/
34.	exp Rodent/
35.	(rat or rats or mouse or mice).ti.
36.	or/28-35
37.	20 not 36
38.	random*.ti,ab.
39.	factorial*.ti,ab.
40.	(crossover* or cross over*).ti,ab.
41.	((doubl* or singl*) adj blind*).ti,ab.
42.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
43.	crossover procedure/
44.	single blind procedure/
45.	randomized controlled trial/
46.	double blind procedure/
47.	or/38-46
48.	systematic review/
49.	meta-analysis/
50.	(meta analy* or metanaly* or metaanaly* or meta regression).ti,ab.
51.	((systematic or evidence) adj3 (review* or overview*)).ti,ab.
52.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
53.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
54.	(search* adj4 literature).ab.
55.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
56.	cochrane.jw.
57.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
58.	or/48-57
59.	37 and (47 or 58)

Cochrane Library (Wiley) search terms

#1.	[mh ^"attention deficit and disruptive behavior disorders"]
#2.	[mh ^"attention deficit disorder with hyperactivity"]
#3.	((attenti* or disrupt*) near/3 (adolescent* or adult* or behav* or child* or class or classes or classroom* or condition* or difficult* or disorder* or learn* or people or person* or poor or problem* or process* or youngster*)):ti
#4.	((attenti* or disrupt*) near/3 disorder*):ab
#5.	(adhd or addh or ad next hd or ad-hd):ti,ab
#6.	(attenti* near/3 deficit*):ti,ab
#7.	(((hyperkin* or (hyper near/1 kin*)) near/1 (syndrome* or disorder*)) or hkd):ti,ab
#8.	(minimal near/1 brain near/2 (dysfunct* or disorder*)):ti,ab
#9.	(or #1-#8)
#10.	[mh "Child Development Disorders, Pervasive"]
#11.	(autistic or autism or asperger*):ti,ab

#12.	(pervasive next developmental next disorder*):ti,ab
#13.	(asd or pdd or pdd-nos):ti,ab
#14.	(or #10-#13)
#15.	[mh ^hyperkinesis]
#16.	(hyperactiv* or inattent* or hyperkin* or hyper-kin*):ti,ab
#17.	#15 or #16
#18.	#14 and #17

PsycINFO (ProQuest) search terms

1.	(SU.EXACT.EXPLODE("Attention Deficit Disorder") OR TI((attenti* OR disrupt*) NEAR/3 (adolescent* OR adult* OR behav* OR child* OR class OR classes OR classroom* OR condition* OR difficult* OR disorder* OR learn* OR people OR person* OR poor OR problem* OR process* OR youngster*)) OR AB((attenti* OR disrupt*) NEAR/3 disorder*) OR TI,AB(adhd OR addh OR ad-hd OR ad??hd) OR TI,AB(attenti* NEAR/3 deficit*) OR TI,AB(((hyperkin* OR (hyper-kin*)) NEAR/1 (syndrome* OR disorder*)) OR hkd) OR TI,AB(minimal NEAR/1 brain NEAR/2 (dysfunct* OR disorder*))) OR ((SU.EXACT.EXPLODE("Autism Spectrum Disorders") or TI,AB(autistic or autism or asperger*) or TI,AB(pervasive-developmental-disorder*) or TI,AB(asd or pdd or pdd-nos)) AND (SU.EXACT("Hyperkinesis") or TI,AB(hyperactiv* or inattent* or hyperkin* or hyper-kin*)))
2.	(su.exact.explode("clinical trials") OR ti,ab((clinical OR control*) NEAR/3 trial*) OR ti,ab((single* OR double* OR treble* OR triple*) NEAR/5 (blind* OR mask*)) OR ti,ab(volunteer* OR control-group OR controls) OR su.exact("placebo") OR ti,ab(placebo*))
3.	((SU.EXACT("Literature Review") or RTYPE(review) or ti(review) or me(literature review)) AND (ti,ab(systematic or evidence or methodol* or quantitative*))) or (SU.EXACT("Meta Analysis") or ti,ab(meta-analys* or metanalys* or metaanalys* or meta analys*) or ti,ab((systematic or evidence* or methodol* or quantitative*) near/3 (review* or overview*)) or ti,ab((pool* or combined or combining) near/2 (data or trials or studies or results)) or RTYPE(systematic or meta*) or ME(meta analysis or systematic review))
4.	1 AND (2 OR 3)
5.	Limit to English
6.	NOT (Dissertations & Theses AND Books)

B.1.2 Health Economics literature search strategies

B.1.2.1 Health economics search strategy

Health economic evidence was identified by conducting a broad search relating to ADHD population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA). NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional searches were run on Medline and Embase.

Table 40: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	2014 – 28 April 2017	Exclusions Health economics
Embase	2014 – 28 April 2017	Exclusions Health economics
Centre for Research and	HTA - 2008 – 28 April 2017	None

Database	Dates searched	Search filter used
Dissemination (CRD)	NHSEED - 2008 to March 2015	

Medline (Ovid) search terms

1.	"attention deficit and disruptive behavior disorders"/ or attention deficit disorder with hyperactivity/
2.	((attenti* or disrupt*) adj3 (adolescent* or adult* or behav* or child* or class or classes or classroom* or condition* or difficult* or disorder* or learn* or people or person* or poor or problem* or process* or youngster*)).ti.
3.	((attenti* or disrupt*) adj3 disorder*).ab.
4.	(adhd or addh or ad hd or ad??hd).ti,ab.
5.	(attenti* adj3 deficit*).ti,ab.
6.	(((hyperkin* or hyper kin*) adj1 (syndrome* or disorder*)) or hkd).ti,ab.
7.	(minimal brain adj2 (dysfunct* or disorder*)).ti,ab.
8.	or/1-7
9.	limit 8 to English language
10.	letter/
11.	editorial/
12.	news/
13.	exp historical article/
14.	Anecdotes as Topic/
15.	comment/
16.	case report/
17.	(letter or comment*).ti.
18.	or/10-17
19.	randomized controlled trial/ or random*.ti,ab.
20.	18 not 19
21.	animals/ not humans/
22.	Animals, Laboratory/
23.	exp animal experiment/
24.	exp animal model/
25.	exp Rodentia/
26.	(rat or rats or mouse or mice).ti.
27.	or/20-26
28.	9 not 27
29.	Economics/
30.	Value of life/
31.	exp "Costs and Cost Analysis"/
32.	exp Economics, Hospital/
33.	exp Economics, Medical/
34.	Economics, Nursing/
35.	Economics, Pharmaceutical/
36.	exp "Fees and Charges"/
37.	exp Budgets/
38.	budget*.ti,ab.

39.	cost*.ti.
40.	(economic* or pharmaco?economic*).ti.
41.	(price* or pricing*).ti,ab.
42.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
43.	(financ* or fee or fees).ti,ab.
44.	(value adj2 (money or monetary)).ti,ab.
45.	or/29-44
46.	exp models, economic/
47.	*Models, Theoretical/
48.	*Models, Organizational/
49.	markov chains/
50.	monte carlo method/
51.	exp Decision Theory/
52.	(markov* or monte carlo).ti,ab.
53.	econom* model*.ti,ab.
54.	(decision* adj2 (tree* or analy* or model*)).ti,ab.
55.	or/46-54
56.	28 and (45 or 55)

Embase (Ovid) search terms

1.	attention deficit disorder/
2.	((attenti* or disrupt*) adj3 (adolescent* or adult* or behav* or child* or class or classes or classroom* or condition* or difficult* or disorder* or learn* or people or person* or poor or problem* or process* or youngster*)).ti.
3.	((attenti* or disrupt*) adj3 disorder*).ab.
4.	(adhd or addh or ad hd or ad??hd).ti,ab.
5.	(attenti* adj3 deficit*).ti,ab.
6.	(((hyperkin* or hyper kin*) adj1 (syndrome* or disorder*)) or hkd).ti,ab.
7.	(minimal brain adj2 (dysfunct* or disorder*)).ti,ab.
8.	or/1-7
9.	limit 8 to English language
10.	letter.pt. or letter/
11.	note.pt.
12.	editorial.pt.
13.	case report/ or case study/
14.	(letter or comment*).ti.
15.	or/10-14
16.	randomized controlled trial/ or random*.ti,ab.
17.	15 not 16
18.	animal/ not human/
19.	nonhuman/
20.	exp Animal Experiment/
21.	exp Experimental Animal/

22.	animal model/
23.	exp Rodent/
24.	(rat or rats or mouse or mice).ti.
25.	or/17-24
26.	9 not 25
27.	statistical model/
28.	exp economic aspect/
29.	27 and 28
30.	*theoretical model/
31.	*nonbiological model/
32.	stochastic model/
33.	decision theory/
34.	decision tree/
35.	monte carlo method/
36.	(markov* or monte carlo).ti,ab.
37.	econom* model*.ti,ab.
38.	(decision* adj2 (tree* or analy* or model*)).ti,ab.
39.	or/29-38
40.	*health economics/
41.	exp *economic evaluation/
42.	exp *health care cost/
43.	exp *fee/
44.	budget/
45.	funding/
46.	budget*.ti,ab.
47.	cost*.ti.
48.	(economic* or pharmaco?economic*).ti.
49.	(price* or pricing*).ti,ab.
50.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
51.	(financ* or fee or fees).ti,ab.
52.	(value adj2 (money or monetary)).ti,ab.
53.	or/40-52
54.	26 and (39 or 53)

NHS EED and HTA (CRD) search terms

#1.	MeSH DESCRIPTOR Attention Deficit and Disruptive Behavior Disorders
#2.	MeSH DESCRIPTOR Attention Deficit Disorder with Hyperactivity
#3.	(((attenti* or disrupt*) adj3 (adolescent* or adult* or behav* or child* or class or classes or classroom* or condition* or difficult* or disorder* or learn* or people or person* or poor or problem* or process* or youngster*))):TI
#4.	(((attenti* or disrupt*) adj3 disorder*))
#5.	((adhd or addh or ad hd or ad??hd))
#6.	((attenti* adj3 deficit*))
#7.	((((hyperkin* or hyper kin*) adj1 (syndrome* or disorder*)) or hkd))

#8.	((minimal brain adj2 (dysfunct* or disorder*)))
#9.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
#10.	(#9) IN NHSEED, HTA

B.1.2.2 Quality of Life search strategy

Quality of life evidence was identified by conducting a broad search relating to ADHD population in Medline and Embase.

Table 41: Database date parameters and filters used

Database	Dates searched	Search filters used
Medline	2008 – 28 September 2015	Exclusions Quality of life
Embase	2008 – 28 September 2015	Exclusions Quality of life

Medline (Ovid) search terms

1.	"attention deficit and disruptive behavior disorders"/ or attention deficit disorder with hyperactivity/
2.	((attenti* or disrupt*) adj3 (adolescent* or adult* or behav* or child* or class or classes or classroom* or condition* or difficult* or disorder* or learn* or people or person* or poor or problem* or process* or youngster*)).ti.
3.	((attenti* or disrupt*) adj3 disorder*).ab.
4.	(adhd or addh or ad hd or ad??hd).ti,ab.
5.	(attenti* adj3 deficit*).ti,ab.
6.	(((hyperkin* or hyper kin*) adj1 (syndrome* or disorder*)) or hkd).ti,ab.
7.	(minimal brain adj2 (dysfunct* or disorder*)).ti,ab.
8.	or/1-7
9.	limit 8 to English language
10.	letter/
11.	editorial/
12.	news/
13.	exp historical article/
14.	Anecdotes as Topic/
15.	comment/
16.	case report/
17.	(letter or comment*).ti.
18.	or/10-17
19.	randomized controlled trial/ or random*.ti,ab.
20.	18 not 19
21.	animals/ not humans/
22.	Animals, Laboratory/
23.	exp animal experiment/
24.	exp animal model/
25.	exp Rodentia/
26.	(rat or rats or mouse or mice).ti.
27.	or/20-26

28.	9 not 27
29.	quality-adjusted life years/
30.	sickness impact profile/
31.	(quality adj2 (wellbeing or well being)).ti,ab.
32.	sickness impact profile.ti,ab.
33.	disability adjusted life.ti,ab.
34.	(qal* or qtime* or qwb* or daly*).ti,ab.
35.	(euroqol* or eq5d* or eq 5*).ti,ab.
36.	(qol* or hql* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
37.	(health utility* or utility score* or disutilit* or utility value*).ti,ab.
38.	(hui or hui1 or hui2 or hui3).ti,ab.
39.	(health* year* equivalent* or hye or hyes).ti,ab.
40.	discrete choice*.ti,ab.
41.	rosser.ti,ab.
42.	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
43.	(sf36* or sf 36* or short form 36* or shortform 36* or shortform36*).ti,ab.
44.	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
45.	(sf12* or sf 12* or short form 12* or shortform 12* or shortform12*).ti,ab.
46.	(sf8* or sf 8* or short form 8* or shortform 8* or shortform8*).ti,ab.
47.	(sf6* or sf 6* or short form 6* or shortform 6* or shortform6*).ti,ab.
48.	or/29-47
49.	28 and 48

Embase (Ovid) search terms

1.	attention deficit disorder/
2.	((attenti* or disrupt*) adj3 (adolescent* or adult* or behav* or child* or class or classes or classroom* or condition* or difficult* or disorder* or learn* or people or person* or poor or problem* or process* or youngster*)).ti.
3.	((attenti* or disrupt*) adj3 disorder*).ab.
4.	(adhd or addh or ad hd or ad??hd).ti,ab.
5.	(attenti* adj3 deficit*).ti,ab.
6.	(((hyperkin* or hyper kin*) adj1 (syndrome* or disorder*)) or hkd).ti,ab.
7.	(minimal brain adj2 (dysfunct* or disorder*)).ti,ab.
8.	or/1-7
9.	limit 8 to English language
10.	letter.pt. or letter/
11.	note.pt.
12.	editorial.pt.
13.	case report/ or case study/
14.	(letter or comment*).ti.
15.	or/10-14
16.	randomized controlled trial/ or random*.ti,ab.
17.	15 not 16
18.	animal/ not human/

19.	nonhuman/
20.	exp Animal Experiment/
21.	exp Experimental Animal/
22.	animal model/
23.	exp Rodent/
24.	(rat or rats or mouse or mice).ti.
25.	or/17-24
26.	9 not 25
27.	quality adjusted life year/
28.	"quality of life index"/
29.	short form 12/ or short form 20/ or short form 36/ or short form 8/
30.	sickness impact profile/
31.	(quality adj2 (wellbeing or well being)).ti,ab.
32.	sickness impact profile.ti,ab.
33.	disability adjusted life.ti,ab.
34.	(qal* or qtime* or qwb* or daly*).ti,ab.
35.	(euroqol* or eq5d* or eq 5*).ti,ab.
36.	(qol* or hql* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
37.	(health utility* or utility score* or disutilit* or utility value*).ti,ab.
38.	(hui or hui1 or hui2 or hui3).ti,ab.
39.	(health* year* equivalent* or hye or hyes).ti,ab.
40.	discrete choice*.ti,ab.
41.	rosser.ti,ab.
42.	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
43.	(sf36* or sf 36* or short form 36* or shortform 36* or shortform36*).ti,ab.
44.	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
45.	(sf12* or sf 12* or short form 12* or shortform 12* or shortform12*).ti,ab.
46.	(sf8* or sf 8* or short form 8* or shortform 8* or shortform8*).ti,ab.
47.	(sf6* or sf 6* or short form 6* or shortform 6* or shortform6*).ti,ab.
48.	or/27-47
49.	26 and 48

B.2 Impact of adverse events associated with non-pharmacological treatments of ADHD

B.2.1 Clinical search literature search strategy

Searches for patient views were run in Medline (OVID), Embase (OVID), CINAHL, Current Nursing and Allied Health Literature (EBSCO) and PsycINFO (ProQuest). Search filters were applied to the search where appropriate.

Table 42: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline (OVID)	1948 – 28 April 2017	Exclusions Patient views/qualitative

Database	Dates searched	Search filter used
		studies
Embase (OVID)	1974– 28 April 2017	Exclusions Patient views/qualitative studies
CINAHL (EBSCO)	Inception– 28 April 2017	Exclusions Patient views/qualitative studies
PsycINFO (ProQuest)	Inception– 28 April 2017	Exclusions Patient views/qualitative studies

Medline (Ovid) search terms

63.	"attention deficit and disruptive behavior disorders"/ or attention deficit disorder with hyperactivity/
64.	((attenti* or disrupt*) adj3 (adolescent* or adult* or behav* or child* or class or classes or classroom* or condition* or difficult* or disorder* or learn* or people or person* or poor or problem* or process* or youngster*)).ti.
65.	((attenti* or disrupt*) adj3 disorder*).ab.
66.	(adhd or addh or ad hd or ad??hd).ti,ab.
67.	(attenti* adj3 deficit*).ti,ab.
68.	(((hyperkin* or hyper kin*) adj1 (syndrome* or disorder*)) or hkd).ti,ab.
69.	(minimal brain adj2 (dysfunct* or disorder*)).ti,ab.
70.	or/1-7
71.	limit 8 to English language
72.	letter/
73.	editorial/
74.	news/
75.	exp historical article/
76.	Anecdotes as Topic/
77.	comment/
78.	case report/
79.	(letter or comment*).ti.
80.	or/10-17
81.	randomized controlled trial/ or random*.ti,ab.
82.	18 not 19
83.	animals/ not humans/
84.	Animals, Laboratory/
85.	exp animal experiment/
86.	exp animal model/
87.	exp Rodentia/
88.	(rat or rats or mouse or mice).ti.
89.	or/20-26
90.	9 not 27
91.	Qualitative research/ or Narration/ or exp Interviews as Topic/ or exp "Surveys and Questionnaires"/ or Health care surveys/
92.	(qualitative or interview* or focus group* or theme* or questionnaire* or survey*).ti,ab.
93.	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them* or ethno* or emic or etic or phenomenolog* or

	grounded theory or constant compar* or (thematic* adj3 analys*) or theoretical sampl* or purposive sampl* or hermeneutic* or heidegger* or husserl* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).ti,ab.
94.	or/29-31
95.	28 and 32

Embase (Ovid) search terms

1.	attention deficit disorder/
2.	((attenti* or disrupt*) adj3 (adolescent* or adult* or behav* or child* or class or classes or classroom* or condition* or difficult* or disorder* or learn* or people or person* or poor or problem* or process* or youngster*)).ti.
3.	((attenti* or disrupt*) adj3 disorder*).ab.
4.	(adhd or addh or ad hd or ad??hd).ti,ab.
5.	(attenti* adj3 deficit*).ti,ab.
6.	(((hyperkin* or hyper kin*) adj1 (syndrome* or disorder*)) or hkd).ti,ab.
7.	(minimal brain adj2 (dysfunct* or disorder*)).ti,ab.
8.	or/1-7
9.	limit 8 to English language
10.	letter.pt. or letter/
11.	note.pt.
12.	editorial.pt.
13.	case report/ or case study/
14.	(letter or comment*).ti.
15.	or/10-14
16.	randomized controlled trial/ or random*.ti,ab.
17.	15 not 16
18.	animal/ not human/
19.	nonhuman/
20.	exp Animal Experiment/
21.	exp Experimental Animal/
22.	animal model/
23.	exp Rodent/
24.	(rat or rats or mouse or mice).ti.
25.	or/17-24
26.	9 not 25
27.	health survey/ or exp questionnaire/ or exp interview/ or qualitative research/ or narrative/
28.	(qualitative or interview* or focus group* or theme* or questionnaire* or survey*).ti,ab.
29.	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them* or ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic* adj3 analys*) or theoretical sampl* or purposive sampl* or hermeneutic* or heidegger* or husserl* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).ti,ab.
30.	or/27-29
31.	26 and 30

CINAHL (EBSCO) search terms

S1.	(MH "Attention Deficit Hyperactivity Disorder")
S2.	((attenti* or disrupt*) n3 (adolescent* or adult* or behav* or child* or class or classes or classroom* or condition* or difficult* or disorder* or learn* or people or person* or poor or problem* or process* or youngster*))
S3.	adhd or addh or ad hd or ad/hd
S4.	attenti* n3 deficit*
S5.	(((hyperkin* or hyper kin*) n1 (syndrome* or disorder*)) or hkd)
S6.	(minimal brain n2 (dysfunct* or disorder*))
S7.	S1 OR S2 OR S3 OR S4 OR S5 OR S6
S8.	(MH "Qualitative Studies+")
S9.	(MH "Qualitative Validity+")
S10.	(MH "Interviews+") OR (MH "Focus Groups") OR (MH "Surveys") OR (MH "Questionnaires+")
S11.	(qualitative or interview* or focus group* or theme* or questionnaire* or survey*)
S12.	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them* or ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic* n3 analys*) or theoretical sampl* or purposive sampl* or hermeneutic* or heidegger* or husserl* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*)
S13.	S8 OR S9 OR S10 OR S11 OR S12
S14.	S7 AND S13
S15.	PT anecdote or PT audiovisual or PT bibliography or PT biography or PT book or PT book review or PT brief item or PT cartoon or PT commentary or PT computer program or PT editorial or PT games or PT glossary or PT historical material or PT interview or PT letter or PT listserversus or PT masters thesis or PT obituary or PT pamphlet or PT pamphlet chapter or PT pictorial or PT poetry or PT proceedings or PT “questions and answers” or PT response or PT software or PT teaching materials or PT website
S16.	S14 NOT S15 Limiters - English Language; Exclude MEDLINE records

PsycINFO (ProQuest) search terms

1.	SU.EXACT.EXPLODE("Attention Deficit Disorder") OR TI((attenti* OR disrupt*) NEAR/3 (adolescent* OR adult* OR behav* OR child* OR class OR classes OR classroom* OR condition* OR difficult* OR disorder* OR learn* OR people OR person* OR poor OR problem* OR process* OR youngster*)) OR AB((attenti* OR disrupt*) NEAR/3 disorder*) OR TI,AB(adhd OR addh OR ad-hd OR ad??hd) OR TI,AB(attenti* NEAR/3 deficit*) OR TI,AB(((hyperkin* OR (hyper-kin*)) NEAR/1 (syndrome* OR disorder*)) OR hkd) OR TI,AB(minimal NEAR/1 brain NEAR/2 (dysfunct* OR disorder*))
2.	SU.EXACT("Qualitative Research") OR (SU.EXACT("Narratives") OR SU.EXACT("Interviews")) OR (SU.EXACT("Questionnaires") OR SU.EXACT.EXPLODE("Surveys")) OR (qualitative OR interview*) OR (focus-group* OR theme*) OR (questionnaire* OR survey*) OR (metasynthes* OR meta-synthes*) OR (metasummar* OR meta-summar*) OR (metastud* OR meta-stud*) OR (metathem* OR meta-them*) OR ethno* OR (emic OR etic) OR (phenomenolog* OR "grounded theory") OR (constant-compar* OR thematic* NEAR/3 analys*) OR (theoretical-sampl* OR purposive-sampl*) OR (hermeneutic* OR heidegger*) OR (husserl* OR colaizzi*) OR (van-kaam* OR van-manen*) OR (giorgi* OR glaser*) OR (strauss* OR ricoeur*) OR (spiegelberg* OR merleau*)
3.	1 AND 2
4.	NOT (Dissertations & Theses AND Books)

5.	English

B.2.2 Health Economics literature search strategy

Health economic evidence was identified by conducting a broad search relating to ADHD population in NHS Economic Evaluation Database (NHS EED – this ceased to be updated after March 2015) and the Health Technology Assessment database (HTA) with no date restrictions. NHS EED and HTA databases are hosted by the Centre for Research and Dissemination (CRD). Additional searches were run on Medline and Embase.

Table 43: Database date parameters and filters used

Database	Dates searched	Search filter used
Medline	2014 – 28 April 2017	Exclusions Health economics
Embase	2014 – 28 April 2017	Exclusions Health economics
Centre for Research and Dissemination (CRD)	HTA - 2008 – 28 April 2017 NHSEED - 2008 to March 2015	None

Medline (Ovid) search terms

57.	"attention deficit and disruptive behavior disorders"/ or attention deficit disorder with hyperactivity/
58.	((attenti* or disrupt*) adj3 (adolescent* or adult* or behav* or child* or class or classes or classroom* or condition* or difficult* or disorder* or learn* or people or person* or poor or problem* or process* or youngster*)).ti.
59.	((attenti* or disrupt*) adj3 disorder*).ab.
60.	(adhd or addh or ad hd or ad??hd).ti,ab.
61.	(attenti* adj3 deficit*).ti,ab.
62.	(((hyperkin* or hyper kin*) adj1 (syndrome* or disorder*)) or hkd).ti,ab.
63.	(minimal brain adj2 (dysfunct* or disorder*)).ti,ab.
64.	or/1-7
65.	limit 8 to English language
66.	letter/
67.	editorial/
68.	news/
69.	exp historical article/
70.	Anecdotes as Topic/
71.	comment/
72.	case report/
73.	(letter or comment*).ti.
74.	or/10-17
75.	randomized controlled trial/ or random*.ti,ab.
76.	18 not 19
77.	animals/ not humans/
78.	Animals, Laboratory/
79.	exp animal experiment/
80.	exp animal model/

81.	exp Rodentia/
82.	(rat or rats or mouse or mice).ti.
83.	or/20-26
84.	9 not 27
85.	Economics/
86.	Value of life/
87.	exp "Costs and Cost Analysis"/
88.	exp Economics, Hospital/
89.	exp Economics, Medical/
90.	Economics, Nursing/
91.	Economics, Pharmaceutical/
92.	exp "Fees and Charges"/
93.	exp Budgets/
94.	budget*.ti,ab.
95.	cost*.ti.
96.	(economic* or pharmaco?economic*).ti.
97.	(price* or pricing*).ti,ab.
98.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
99.	(financ* or fee or fees).ti,ab.
100.	(value adj2 (money or monetary)).ti,ab.
101.	or/29-44
102.	exp models, economic/
103.	*Models, Theoretical/
104.	*Models, Organizational/
105.	markov chains/
106.	monte carlo method/
107.	exp Decision Theory/
108.	(markov* or monte carlo).ti,ab.
109.	econom* model*.ti,ab.
110.	(decision* adj2 (tree* or analy* or model*)).ti,ab.
111.	or/46-54
112.	28 and (45 or 55)

Embase (Ovid) search terms

55.	attention deficit disorder/
56.	((attenti* or disrupt*) adj3 (adolescent* or adult* or behav* or child* or class or classes or classroom* or condition* or difficult* or disorder* or learn* or people or person* or poor or problem* or process* or youngster*)).ti.
57.	((attenti* or disrupt*) adj3 disorder*).ab.
58.	(adhd or addh or ad hd or ad??hd).ti,ab.
59.	(attenti* adj3 deficit*).ti,ab.
60.	(((hyperkin* or hyper kin*) adj1 (syndrome* or disorder*)) or hkd).ti,ab.
61.	(minimal brain adj2 (dysfunct* or disorder*)).ti,ab.

62.	or/1-7
63.	limit 8 to English language
64.	letter.pt. or letter/
65.	note.pt.
66.	editorial.pt.
67.	case report/ or case study/
68.	(letter or comment*).ti.
69.	or/10-14
70.	randomized controlled trial/ or random*.ti,ab.
71.	15 not 16
72.	animal/ not human/
73.	nonhuman/
74.	exp Animal Experiment/
75.	exp Experimental Animal/
76.	animal model/
77.	exp Rodent/
78.	(rat or rats or mouse or mice).ti.
79.	or/17-24
80.	9 not 25
81.	statistical model/
82.	exp economic aspect/
83.	27 and 28
84.	*theoretical model/
85.	*nonbiological model/
86.	stochastic model/
87.	decision theory/
88.	decision tree/
89.	monte carlo method/
90.	(markov* or monte carlo).ti,ab.
91.	econom* model*.ti,ab.
92.	(decision* adj2 (tree* or analy* or model*)).ti,ab.
93.	or/29-38
94.	*health economics/
95.	exp *economic evaluation/
96.	exp *health care cost/
97.	exp *fee/
98.	budget/
99.	funding/
100.	budget*.ti,ab.
101.	cost*.ti.
102.	(economic* or pharmaco?economic*).ti.
103.	(price* or pricing*).ti,ab.
104.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
105.	(financ* or fee or fees).ti,ab.

106.	(value adj2 (money or monetary)).ti,ab.
107.	or/40-52
108.	26 and (39 or 53)

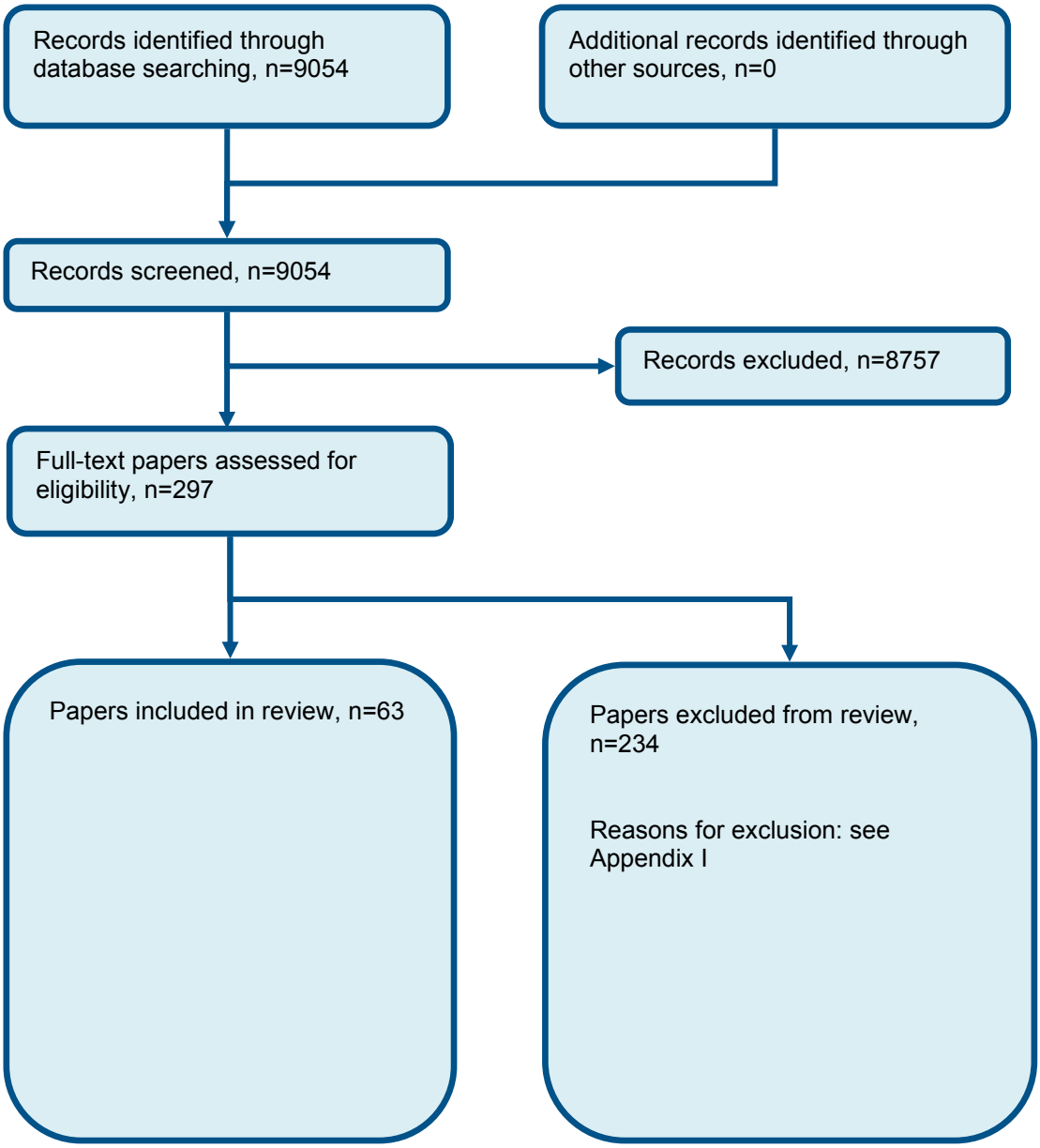
NHS EED and HTA (CRD) search terms

#1.	MeSH DESCRIPTOR Attention Deficit and Disruptive Behavior Disorders
#2.	MeSH DESCRIPTOR Attention Deficit Disorder with Hyperactivity
#3.	(((attenti* or disrupt*) adj3 (adolescent* or adult* or behav* or child* or class or classes or classroom* or condition* or difficult* or disorder* or learn* or people or person* or poor or problem* or process* or youngster*))):TI
#4.	(((attenti* or disrupt*) adj3 disorder*))
#5.	((adhd or addh or ad hd or ad??hd))
#6.	((attenti* adj3 deficit*))
#7.	((((hyperkin* or hyper kin*) adj1 (syndrome* or disorder*)) or hkd))
#8.	((minimal brain adj2 (dysfunct* or disorder*)))
#9.	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
#10.	(#9) IN NHSEED, HTA

Appendix C:Clinical evidence selection

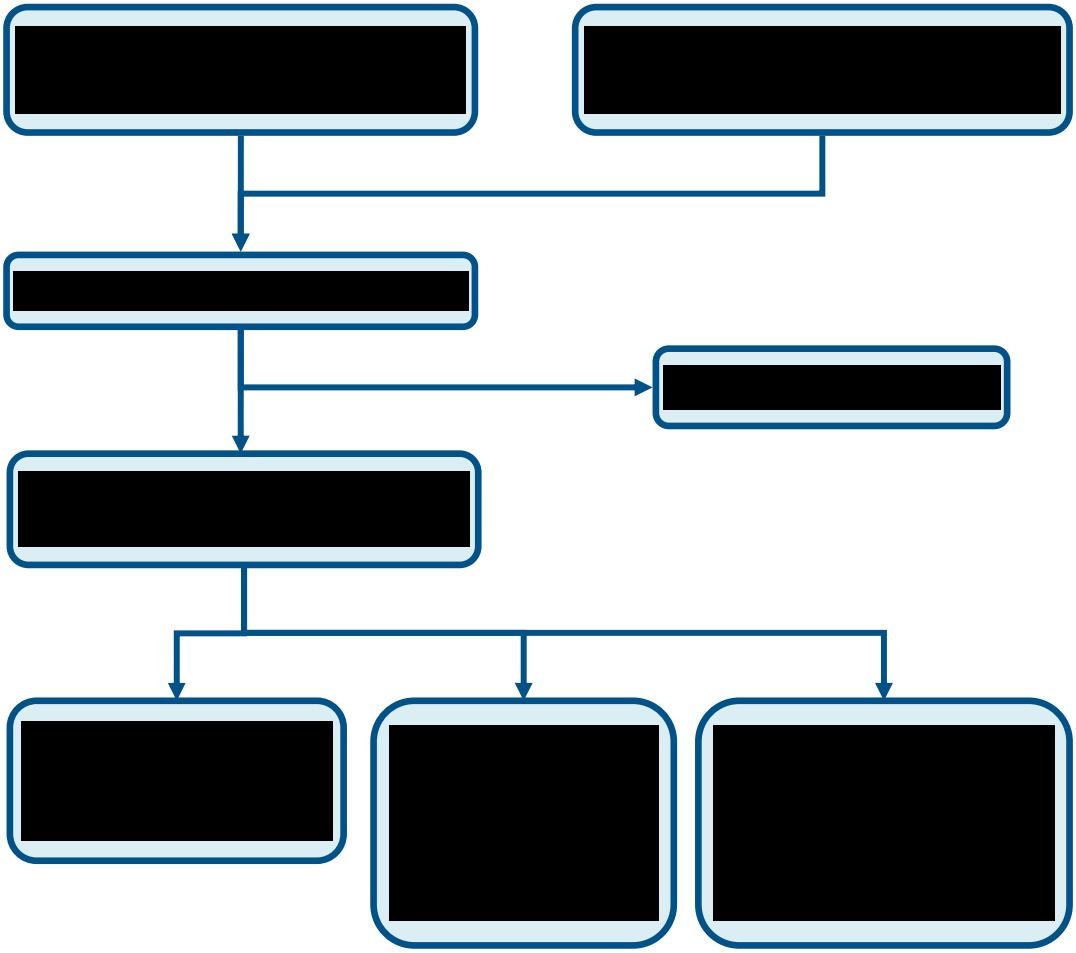
C.1 Non-pharmacological efficacy

Figure 1: Flow chart of clinical study selection for the review of non-pharmacological efficacy



C.2 Impact of adverse events associated with non-pharmacological treatments of ADHD

Figure 2: Flow chart of clinical article selection for the review of adverse events in non-pharmacological treatments of ADHD



Appendix D:Clinical evidence tables

D.1 Non-pharmacological efficacy

Study	Abikoff 2013[487]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=158)
Countries and setting	Conducted in USA; Setting: Intervention at inpatient clinic after school.
Line of therapy	1st line
Duration of study	Intervention + follow up: About 40-64 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: DSM-IV diagnosis of ADHD (all types) on the Diagnostic Interview Schedule for Children Parent Report Version 4 (DISC-IV)
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Define
Exclusion criteria	Define
Recruitment/selection of patients	Recruitment relied on referrals from schools, community resources (clinics, physicians, agencies), parent mailings, and newspaper ads.
Age, gender and ethnicity	Age - Mean (SD): 9.06 (0,84). Gender (M:F): Define. Ethnicity: African American N= 23; White N=110; Hispanic N=22; Other N=25
Further population details	1. Age: School age children (6-13 years) (8-11 years old). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (Parent/Teacher, mean (SD) OST=75.66 (9.2)/69.49 (10.6); PATHKO=75.29 (9.1)/ 68.26 (10.3); WL=73.97 (9.3)/ 66.77 (8.7)).
Extra comments	.
Indirectness of population	No indirectness
Interventions	(n=64) Intervention 1: Daily activity scheduling and organisational skills - Daily activity scheduling and organisation. Organizational Skills Training (OST) assumes that organization, time management and

	planning (OTMP) difficulties primarily reflect skills deficits in children's ability to organize materials, track assignments, manage time, and plan tasks. To improve these skills, children are taught to use new tools and routines to record assignments and due dates, organize school papers into binders and use checklists for materials needed, track time required for task completion, and break tasks into steps. Session time is spent working with the child, with parents joining during the last 10 minutes. Work with children is supported by brief training of parents and teachers to prompt, praise, and reward skill use. Children receive prizes for in-session application of sub-steps; parents and teachers monitor children's implementation of sub-steps for home rewards. OST is facilitated through a playful orientation that guides children to use skills to overcome annoying "glitches" (reflections of executive function gaps) and to maximize the effectiveness of their "Mastermind". . Duration 10-12 weeks. Concurrent medication/care: At entry, 56 (35.42%) of the children were being treated with ADHD medication. Medicated children not meeting ADHD screening criteria had a one-week washout to confirm ADHD status off medication. Medication use was not prohibited during the trial. Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Face to face (1 on 1) 3. Study design: Parallel trial (n=61) Intervention 2: School/work-based interventions - School-based interventions. Parents and Teachers Helping Kids Organize (PATHKO) motivates children by training teachers and parents to establish specific, individualized goals for children on written charts completed daily and to prompt, monitor, and praise/reward children for achieving these goals. Sessions primarily involve parents, with children coming in briefly at the end of every session. The three core components of PATHKO are: 1) Daily Report Cards (DRC) targeting end-point OTMP behaviors e.g., "assignments completed on time", "desk/cubby is neat and organized", where teachers monitor the behaviors at school and parents provide points at home, 2) Token Economy System, in which children receive points for achieving goals at home (e.g., "brings home all materials needed to do homework, backpack packed by bedtime") and on their DRC, and exchange the points for privileges and rewards on a daily and weekly basis, and 3) Homework Rules and Structures, in which parents establish and reward children's adherence to rules regarding completing homework. Underlying each of these components is an emphasis on Parent-Teacher Collaboration and procedures to facilitate sustainability. . Duration 10-12 weeks. Concurrent medication/care: At entry, 56 (35.42%) of the children were being treated with ADHD medication. Medicated children not meeting ADHD screening criteria had a one-week washout to confirm ADHD status off medication. Medication use was not prohibited during the trial. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Face to face (1 on 1) 3. Study design: Parallel trial

	(n=33) Intervention 3: No treatment. Waitlist. Duration 10-12 weeks. Concurrent medication/care: At entry, 56 (35.42%) of the children were being treated with ADHD medication. Medicated children not meeting ADHD screening criteria had a one-week washout to confirm ADHD status off medication. Medication use was not prohibited during the trial. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Academic or government funding (National Institute of Mental Health Grant R01MH074013)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: DAILY ACTIVITY SCHEDULING AND ORGANISATION versus SCHOOL-BASED INTERVENTIONS

Protocol outcome 1: Academic outcome at < 3 months
- Actual outcome for Children and young people: Academic Performance Rating Scale (APRS) at 10-12 weeks PT; Group 1: mean 62.16 (SD 10.52); n=64, Group 2: mean 63.96 (SD 11.9); n=61; Academic Performance Rating Scale (APRS) 19-95 Top=High is good outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education (Parents), Ethnicity/Race, Marital status, Employed, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: Academic Performance Rating Scale (APRS) at 40-64 weeks FU; Group 1: mean 61.25 (SD 12.32); n=64, Group 2: mean 62.87 (SD 12.19); n=61; Academic Performance Rating Scale (APRS) 19-95 Top=High is good outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education (Parents), Ethnicity/Race, Marital status, Employed, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Group 1 Number missing: 0; Group 2 Number missing: 0

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: DAILY ACTIVITY SCHEDULING AND ORGANISATION versus NO TREATMENT

Protocol outcome 1: Academic outcome at < 3 months
- Actual outcome for Children and young people: Academic Performance Rating Scale (APRS) at 10-12 weeks PT; Group 1: mean 62.16 (SD 10.52); n=64, Group 2: mean 54.53 (SD 9.74); n=33; Academic Performance Rating Scale (APRS) 19-95 Top=High is good outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,

Education (Parents), Ethnicity/Race, Marital status, Employed, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication. ; Group 1 Number missing: 0; Group 2 Number missing: 0 RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: SCHOOL-BASED INTERVENTIONS versus NO TREATMENT Protocol outcome 1: Academic outcome at < 3 months - Actual outcome for Children and young people: Academic Performance Rating Scale (APRS) at 10-12 weeks PT; Group 1: mean 63.96 (SD 11.9); n=61, Group 2: mean 54.53 (SD 9.74); n=33; Academic Performance Rating Scale (APRS) 19-95 Top=High is good outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education (Parents), Ethnicity/Race, Marital status, Employed, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication. ; Group 1 Number missing: 0; Group 2 Number missing: 0	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	**Abikoff 2015[5]**
Study type	RCT (randomised; Parallel)
Number of studies (number of participants)	1 (n=164)
Countries and setting	Conducted in USA
Line of therapy	1st line
Duration of study	Intervention + follow up: 8 weeks + a next year follow-up (range = 2.76–10.57 months)
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: Diagnostic Interview Schedule for Children- Parent Report Version 4,,modified Young Child Version (DISC-IV-YC
Stratum	Children and young people

Subgroup analysis within study	Not applicable
Inclusion criteria	Inclusion required that the primary caretaker be fluent in English and that the child have an IQ ≥ 70; elevated scores above age and gender norms on the DSM-IV Total, DSMIV Hyperactive/Impulsive, or DSM-IV Inattentive subscales on both the Revised Conners Teacher (CTRS-R) and Parent (CPRS-R) Rating Scales ; a Diagnostic and statistical Manual of Mental Disorders (4th ed.; DSM-IV) diagnosis of ADHD (any type) on the Diagnostic Interview Schedule for Children- Parent Report Version 4, modified Young Child Version (DISC-IV-YC), confirmed by clinical evaluation conducted by a psychologist with child and parent; standard score ≥ 7 on the Concepts and Following Directions subscale of the Clinical Evaluation of Language Fundamentals.
Exclusion criteria	Reasons for exclusion included current medication or behavioral treatment for ADHD; a diagnosis of pervasive developmental disorder, psychosis, or post-traumatic stress disorder; history of sexual or physical abuse; or any other psychiatric or medical condition judged to contraindicate participation. Children with common mental health diagnoses were not excluded.
Recruitment/selection of patients	Recruitment relied on referrals from preschools, daycares, nursery schools, community resources (clinics, physicians, and agencies), parent mailings, newspaper ads, and website postings.
Age, gender and ethnicity	Age - Range: 3-4.11 years old. Gender (M:F): 121/53. Ethnicity: 2% Caucasian, 16.4% African-American, 8.8% Asian and 5.6% other; 25.6% of the participants were Hispanic.
Further population details	1. Age: Preschool children (0-6 years) 2. Baseline symptom severity: Not applicable / Not stated / Unclear (ADHD symptoms on the CPRS total (Mean, SD): 75.42 911.43) versus 75.21 (9.49) versus 78.01 (9.17) (NFPP versus HNC versus WL)).
Extra comments	.
Indirectness of population	No indirectness
Interventions	(n=67) Intervention 1: Carer and family training programmes - Programme not including the person with ADHD. New forest parenting package. NFPP, a manualized intervention for pre-schoolers with ADHD, involves 8 weekly 1-to-1.5-hour sessions, delivered in the family home by trained clinicians . NFPP focuses on key issues related to ADHD children's functioning, and relies on the parent as the primary agent of change. While it shares a number of features with standard BPT (i.e., management of problematic behavior using behavioural techniques; promotion of authoritative parenting; increasing the quality and quantity of positive and reciprocal parent–child interaction; reduction of parental negative reactivity; and between-

	session 'homework tasks' to facilitate improvement in specific parenting techniques), it has a number of distinctive features. First, its home-based nature enables the therapist to model play and behavioral strategies for the parent in the setting where the behaviors are problematic. It also enables the therapist to address naturally occurring instances of problematic child behaviors (e.g., difficulty waiting, inattention, dysregulation, etc.) that call for the use of the parenting (and child) skills being taught. Sensitizing parents to the importance of these 'teachable moments' and of identifying and exposing their child to relevant real-world situations where skills can be used provides numerous opportunities for skills development and generalization. Second, NFPP directly aims to improve four elements of constructive parenting: (a) Scoping– learning how to observe their child's current level of competencies so as to promote realistic expectations and performance goals for their child regarding self-control, attention, and memory, (b) Extending – establishing new goals based on their child's performance and progress, (c) Scaffolding– using game-like activities to facilitate their child's skills development and goal achievement, and (d) Consolidation— promoting their child's skill use across settings and situations to facilitate generalization. Third, NFPP educates parents to alter their views of ADHD, avoid blaming their child for ADHD symptoms, and increase parental tolerance with the ultimate goal of improving the quality of the parent–child relationship. . Duration 8 weeks PT. Concurrent medication/care: No current medication or behavioral treatment for ADHD Further details: 1. Location of intervention: Home 2. Mode of delivery: Face to face (1 on 1) (The parents). 3. Study design: Parallel trial (n=63) Intervention 2: Carer and family training programmes - Programmes including the person with ADHD. Helping the noncompliant child. HNC is a manualized BPT intervention for treating young children with noncompliance and oppositional problems. The individualized, clinic-based, treatment is delivered by therapists, with the parent and child jointly, in each session. The clinical provision of HNC typically averages 8–10 intervention sessions. To ensure that NFPP and HNC were equated for length and amount of therapist contact, HNC was delivered in 8 weekly sessions, lasting approximately one hour. HNC was provided according to the details specified in the McMahon and Forehand (2003) treatment manual, except that a fixed number of sessions was conducted and meeting behavioral criteria for advancement from one parenting skill to the next was not required. HNC is based on social-learning theory and behavior modification principles and methods and incorporates characteristics of the BPT model developed by Hanf (1969). Treatment focuses on reducing noncompliance using a variety of methods to teach parents how to change their maladaptive interaction patterns with their child. Specific program components include: (a) modelling and parent role play, along with didactic instruction and discussion, to teach parents the skills of attending, rewarding, ignoring, clear instructions and time out, and (b) home practice, assignments and exercises, throughout the program. The program includes two phases. Phase I focuses on differential attention. Parents are taught how to attend to and describe their child's appropriate behavior to the child (rather than give commands, or teach), to provide rewards through positive physical attention (e.g., hugs) and specific verbal praise, and to ignore their child's minor, inappropriate attention- seeking behaviors by not

	providing eye contact, nonverbal cues, verbal contact, or physical contact. Phase II focuses on compliance training. Parents learn the importance of clear and simple instructions, using a sequential approach to get their child's attention to instructions and provide positive rewards for compliance and negative consequences for noncompliance (i.e., Time-Out). . Duration 8 weeks PT. Concurrent medication/care: No current medication or behavioral treatment for ADHD Further details: 1. Location of intervention: Home 2. Mode of delivery: Face to face (1 on 1) (parents and child). 3. Study design: Parallel trial (n=34) Intervention 3: No treatment. Waitlist. Duration 8 weeks. Concurrent medication/care: No current medication or behavioral treatment for ADHD Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Academic or government funding (National Institute of Mental Health Grant 5R01MH074556 to H.B.A)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PROGRAMME NOT INCLUDING THE PERSON WITH ADHD versus PROGRAMMES INCLUDING THE PERSON WITH ADHD

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Children and young people: ADHD ratings on the Conners, Parent

at 8 weeks PT; Group 1: mean 65.26 (SD 12.15); n=67, Group 2: mean 62.62 (SD 11.05); n=63; ADHD ratings on the Conners, Parent 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed
- Actual outcome for Children and young people: ADHD ratings on the Conners, Teacher

at 8 weeks PT; Group 1: mean 68.46 (SD 11.41); n=67, Group 2: mean 68.1 (SD 9.95); n=63; ADHD ratings on the Conners, Teacher 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline

details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed
- Actual outcome for Children and young people: ADHD-Rating Scale-IV, clinician

at 8 weeks PT; Group 1: mean 8.28 (SD 4.22); n=67, Group 2: mean 6.92 (SD 4.41); n=63; ADHD-Rating Scale-IV, clinician Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed

Protocol outcome 2: ADHD symptoms total at >6 months
- Actual outcome for Children and young people: ADHD ratings on the Conners, Teacher

at 4.76–12.57 months FU (range); Group 1: mean 64.27 (SD 12.27); n=67, Group 2: mean 62.06 (SD 11.39); n=63; ADHD ratings on the Conners, Teacher 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed

Protocol outcome 3: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: ADHD ratings on the Conners, Parent

at 8 weeks PT; Group 1: mean 63.6 (SD 11.6); n=67, Group 2: mean 60.47 (SD 11.57); n=63; ADHD ratings on the Conners, Parent 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed
- Actual outcome for Children and young people: ADHD ratings on the Conners, Teacher

at 8 weeks PT; Group 1: mean 65.12 (SD 12.26); n=67, Group 2: mean 64.93 (SD 11.5); n=63; ADHD ratings on the Conners, Teacher 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed
- Actual outcome for Children and young people: ADHD-Rating Scale-IV, clinician

at 8 weeks PT; Group 1: mean 3.39 (SD 2.38); n=67, Group 2: mean 3.02 (SD 2.67); n=63; ADHD-Rating Scale-IV, clinician Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed

Protocol outcome 4: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: ADHD ratings on the Conners, Parent

at 4.76–12.57 months FU (range); Group 1: mean 65.6 (SD 13.53); n=67, Group 2: mean 61.74 (SD 10.04); n=63; ADHD ratings on the Conners, Parent 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed

- Actual outcome for Children and young people: ADHD ratings on the Conners, Teacher

at 4.76–12.57 months FU (range); Group 1: mean 61.39 (SD 13.58); n=67, Group 2: mean 60.48 (SD 11.79); n=63; ADHD ratings on the Conners, Teacher 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed

Protocol outcome 5: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: ADHD ratings on the Conners, Parent

at 8 weeks PT; Group 1: mean 64.62 (SD 12); n=67, Group 2: mean 62.32 (SD 10.34); n=63; Conners, Parent 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed
- Actual outcome for Children and young people: ADHD ratings on the Conners, Teacher

at 8 weeks PT; Group 1: mean 65.12 (SD 12.26); n=67, Group 2: mean 64.93 (SD 11.5); n=63
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed
- Actual outcome for Children and young people: ADHD-Rating Scale-IV, clinician

at 8 weeks PT; Group 1: mean 4.89 (SD 2.43); n=67, Group 2: mean 3.9 (SD 2.61); n=63; ADHD-Rating Scale-IV, clinician Unclear Top=High is poor outcome

Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed

Protocol outcome 6: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: ADHD ratings on the Conners, Parent

at 4.76–12.57 months FU (range); Group 1: mean 68.08 (SD 10.69); n=67, Group 2: mean 63.39 (SD 10.24); n=63; ADHD ratings on the Conners, Parent 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed
- Actual outcome for Children and young people: ADHD ratings on the Conners, Teacher

at 4.76–12.57 months FU (range); Group 1: mean 64.25 (SD 11.64); n=67, Group 2: mean 62.01 (SD 12.06); n=63; ADHD ratings on the Conners, Teacher 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PROGRAMME NOT INCLUDING THE PERSON WITH ADHD versus NO TREATMENT

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Children and young people: ADHD ratings on the Conners, Parent

at 8 weeks PT; Group 1: mean 65.26 (SD 12.15); n=67, Group 2: mean 76.44 (SD 9.84); n=34; Conners Rating Scale-Revised 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed
- Actual outcome for Children and young people: ADHD ratings on the Conners, Teacher

at 8 weeks PT; Group 1: mean 68.46 (SD 11.41); n=67, Group 2: mean 70.65 (SD 11.22); n=34; Conners Rating Scale-Revised 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed
- Actual outcome for Children and young people: ADHD-Rating Scale-IV, clinician

at 8 weeks PT; Group 1: mean 8.28 (SD 4.22); n=67, Group 2: mean 12.85 (SD 2.92); n=34; ADHD total Clinician-Rated unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed

Protocol outcome 2: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: ADHD ratings on the Conners, Parent

at 8 weeks PT; Group 1: mean 63.6 (SD 11.6); n=67, Group 2: mean 75.31 (SD 10.38); n=34; ADHD ratings on the Conners, Parent 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low,

Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed
- Actual outcome for Children and young people: ADHD ratings on the Conners, Teacher

at 8 weeks PT; Group 1: mean 65.12 (SD 12.26); n=67, Group 2: mean 68.22 (SD 11.81); n=34; ADHD ratings on the Conners, Teacher 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed
- Actual outcome for Children and young people: ADHD-Rating Scale-IV, clinician

at 8 weeks PT; Group 1: mean 3.39 (SD 2.38); n=67, Group 2: mean 6.12 (SD 2.25); n=34; ADHD-Rating Scale-IV, clinician Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed

Protocol outcome 3: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: ADHD ratings on the Conners, Parent

at 8 weeks PT; Group 1: mean 64.62 (SD 12); n=67, Group 2: mean 74.45 (SD 10.67); n=34; ADHD ratings on the Conners, Parent 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed
- Actual outcome for Children and young people: ADHD ratings on the Conners, Teacher

at 8 weeks PT; Group 1: mean 68.31 (SD 11.17); n=67, Group 2: mean 70.26 (SD 11.98); n=34; ADHD ratings on the Conners, Teachers 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed
- Actual outcome for Children and young people: ADHD-Rating Scale-IV, clinician

at 8 weeks PT; Group 1: mean 4.89 (SD 2.43); n=67, Group 2: mean 6.73 (SD 1.68); n=34; ADHD-Rating Scale-IV, clinician Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PROGRAMMES INCLUDING THE PERSON WITH ADHD versus NO TREATMENT

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Children and young people: ADHD ratings on the Conners, Parent

at 8 weeks PT; Group 1: mean 62.62 (SD 11.05); n=63, Group 2: mean 62.62 (SD 11.05); n=34; ADHD ratings on the Conners, Parent 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed
- Actual outcome for Children and young people: ADHD-Rating Scale-IV, clinician

at 8 weeks PT; Group 1: mean 6.92 (SD 4.41); n=63, Group 2: mean 12.85 (SD 2.92); n=34; ADHD-Rating Scale-IV, clinician unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed

Protocol outcome 2: ADHD symptoms total at >6 months
- Actual outcome for Children and young people: ADHD ratings on the Conners, Teacher

at 8 weeks PT; Group 1: mean 68.1 (SD 9.95); n=63, Group 2: mean 70.65 (SD 11.22); n=34; ADHD ratings on the Conners, Teacher 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed

Protocol outcome 3: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: ADHD ratings on the Conners, Parent

at 8 weeks PT; Group 1: mean 60.47 (SD 11.57); n=63, Group 2: mean 75.31 (SD 10.38); n=34; ADHD ratings on the Conners, Parent 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed;

Group 2 Number missing: , Reason: Unclear, but al analysed
- Actual outcome for Children and young people: ADHD ratings on the Conners, Teacher

at 8 weeks PT; Group 1: mean 60.47 (SD 11.57); n=63, Group 2: mean 75.31 (SD 10.38); n=34; ADHD ratings on the Conners, Teacher 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed
- Actual outcome for Children and young people: ADHD-Rating Scale-IV, clinician

at 8 weeks PT; Group 1: mean 3.02 (SD 2.67); n=63, Group 2: mean 6.15 (SD 1.52); n=34; ADHD-Rating Scale-IV, clinician Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed

Protocol outcome 4: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: ADHD ratings on the Conners, Parent

at 8 weeks PT; Group 1: mean 62.32 (SD 10.34); n=63, Group 2: mean 74.45 (SD 10.67); n=34
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status

; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed
- Actual outcome for Children and young people: ADHD ratings on the Conners, Teacher

at 8 weeks PT; Group 1: mean 67.57 (SD 10.32); n=63, Group 2: mean 70.26 (SD 11.98); n=34 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status ; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed - Actual outcome for Children and young people: ADHD-Rating Scale-IV, clinician at 8 weeks PT; Group 1: mean 4.89 (SD 2.43); n=63, Group 2: mean 6.73 (SD 1.68); n=34; ADHD-Rating Scale-IV, clinician Unclear Top=High is poor outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age IQ, race, type of adhd, comorbid condition, Education Parents and Marital status ; Blinding details: Blinded outcome assessors included clinicians, observers and teachers; Group 1 Number missing: , Reason: Unclear, but al analysed; Group 2 Number missing: , Reason: Unclear, but al analysed	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	**Ahmed 2011[10]**
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=84)
Countries and setting	Conducted in Saudi Arabia; Setting:
Line of therapy	1st line
Duration of study	Intervention + follow up: 10 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis

Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	All patients were functionally independent, could understand well, follow orders and cooperative.
Exclusion criteria	Students were excluded if they had; (1) medical or systemic problems such as hypertension, hypotension, diabetes mellitus, (2) musculoskeletal deformities (scoliosis, hyphosis, pes cavas), (3) neurological problems (sensory or motor deficit), (4) orthopaedic problems (including past history of trauma before application of the study at least two months), (5) rheumatic fever, (6) obesity.
Recruitment/selection of patients	They were recruited from special needs schools in Riyadh.
Age, gender and ethnicity	Age - Range: 11 - 16 years old. Gender (M:F): 54 boys : 30 girls . Ethnicity: Not stated.
Further population details	1. Age: Young people (13-18 years) (Aged 11 - 16). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (Not stated.).
Indirectness of population	No indirectness
Interventions	(n=42) Intervention 1: Exercise/physical activity - Exercise. Moderate-intensity program was applied 3 sessions per week. 10 repetitions for each exercise increased with time, rest period two minutes between every 15 minutes. In first 4 weeks sessions lasted for about 40 minutes - 10 mins warm up & preparation, 20 mins aerobic exercise and 5 mins walking between exercises and 5 mins cool down. The following six weeks sessions lasted for 50 mins - 10 mins warm up, 30 mins aerobic exercise, 5 mins walking around school building and 5 mins cool down. . Duration 10 weeks. Concurrent medication/care: Parents instructed to start home program for the study group from the 6th week and continuous to the 10th week. The home program included walking half an hour outdoors on the weekend. Further details: 1. Location of intervention: In educational or work setting (At school and home.). 2. Mode of delivery: Face to face (group intervention) 3. Study design: Not applicable / Not stated / Unclear (RCT). (n=42) Intervention 2: No treatment. The control group did not receive any designed exercise program. . Duration 10 weeks. . Concurrent medication/care: N/A Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Not applicable / Not stated / Unclear (RCT).
Funding	Funding not stated

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: EXERCISE versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Behavior Rating Scale - Attention at 10 weeks PT; Group 1: mean 8.46 (SD 3.61); n=42, Group 2: mean 5.62 (SD 7.15); n=42; Comments: It is a modified version of Conners rating scale.

Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0, Reason: N/A ; Group 2 Number missing: 0, Reason: N/A Protocol outcome 2: Function/behaviour at <3 months - Actual outcome for Children and young people: Behavior Rating Scale - Emotional & Oppositional behavior at 10 weeks PT; Group 1: mean 2.71 (SD 3.14); n=42, Group 2: mean 3.45 (SD 2.68); n=42; Comments: It is a modified version of Conners rating scale. Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0, Reason: N/A ; Group 2 Number missing: 0, Reason: N/A Protocol outcome 3: Academic outcome at < 3 months - Actual outcome for Children and young people: Behavior Rating Scale - Academic & Classroom behavior at 10 weeks PT; Group 1: mean 30.24 (SD 7.27); n=42, Group 2: mean 23 (SD 5.83); n=42; Comments: It is a modified version of Conners rating scale. Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0, Reason: N/A ; Group 2 Number missing: 0, Reason: N/A	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study (subsidiary papers)	**Anon 1999[1] (Jensen 2007[250])**
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=290)
Countries and setting	Conducted in USA; Setting: Summer camp, school and clinic & community care
Line of therapy	1st line
Duration of study	--: 60 week treatment
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: Diagnostic Interview Schedule for Children (DISC)

Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	DSM-IV criteria for ADHD Combined Type, parent report, supplemented with up to 2 symptoms identified by children's teachers for cases falling just below the DISC diagnostic threshold.
Exclusion criteria	Child currently in hospital, Child currently in another study, Below BO on all WISC-3 scales and on SIB, Bipolar disorder, psychosis, or personality disorder Chronic serious tics or Tourette syndrome, OCO serious enough to require separate treatment, Neuroleptic medication in previous 6 months Major neurological or medical illness, History of intolerance to MTA medications, Ongoing or previously unreported abuse, Missed one fourth of school days in previous 2 months Same classroom as child already in MTA study, Parental stimulant abuse in previous 2 years Non-English-speaking primary caretaker Another child in same household in MTA ,study No telephone, Suicidal or homicidal, Child currently in hospital, Child currently in another study, Below BO on all WISC-111 scales and on SIB, Bipolar disorder, psychosis, or personality disorder Chronic serious tics or Tourette syndrome, OCO serious enough to require separate treatment, Neuroleptic medication in previous 6 months Major neurological or medical illness, History of intolerance to MTA medications, Ongoing or previously unreported abuse, Missed one fourth of school days in previous 2 months Same classroom as child already in MTA study, Parental stimulant abuse in previous 2 years Non-English-speaking primary caretaker Another child in same household in MTA, study No telephone and Suicidal or homicidal
Recruitment/selection of patients	Mental health settings, paediatricians, advertisements, and school notices.
Age, gender and ethnicity	Age - Mean (SD): 8.4 (0.8). Gender (M:F): 233/57. Ethnicity: White N= 172; African American N= 72; Hispanic N=22
Further population details	1. Age: School age children (6-13 years) (ages 7 and 9.9 years, in grades 1 through 4). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (All met the DSM-IV criteria for ADHD Combined Type).
Extra comments	.
Indirectness of population	No indirectness: All met the DSM-IV criteria for ADHD Combined Type

Interventions	(n=144) Intervention 1: Combination of the above - Describe. Behavioral Treatment aimed at the child, parents and school/teachers. Behavioral treatment included parent training , child- focused treatment , and a school-based intervention organized and integrated with the school year. The parent training, based on work by Barkley and Forehand MacMahon, involved 27 group (6 families per group) and 8 individual sessions per family. It began weekly on randomization , concurrent with biweekly teacher consultation ; bath were tapered over time. The same therapist- consultant conducted parent training and teacher consultation, with each therapist-consultant having a case- load of 12 families. The child-focused treatment was a summer treatment program (STP) developed by Pelham3 as a therapeutic summer camp. The 8-week, 5-days-per-week , 9-hours- per-day STP employed intensive behavioral interventions administered by counsellors/aides , supervised by the same teacher-consultants who performed parent training and teacher consultation. Behavioral interventions were delivered i n group-based recreational settings, and included a point system tied to specific rewards, time out, social reinforcement , modelling, group problem-solving , sports skills, and social skills training. Summer treatment program class- rooms provided individualized academic skills practice and reinforcement of appropriate classroom behavior. The school-based treatment had 2 components: 10 to 16 sessions of biweekly teacher consultation focused on class- room behavior managementstrategies8 and 12weeks (60 school days) of a pan-time , behaviourally trained, para professional aide working directly with the child (methods adapted from Swanson11). The aides had been STP counsellors, and the program continued in the fall classroom , which helped LO generalize STP gains LO classrooms. Throughout the school year, a daily report card linked home and school. The daily report cardHJ9 wasa1-page teacher-completed checklist of the child's successes on specific preselected behaviors, and was brought home daily by the child to be reinforced by the parent with home-based rewards (e.g., television time, snacks). . Duration 60 weeks. Concurrent medication/care: Behavioral treatment, where 38 crossovers to medication. Further details: 1. Location of intervention: Systematic review: mixed (school / summercamp / clinic). 2. Mode of delivery: Mixed involving face to face contact (parent, child and teacher were treated; face to face or group). 3. Study design: Parallel trial (38 of the 144 children started medication during the trial). (n=146) Intervention 2: No treatment. Community treatment (TAU). Duration 60 weeks. Concurrent medication/care: Community care participants received none of four MTA treatments, but were provided a report of their initial study assessments, along with a list of community mental health resources.. Most community care subjects (n = 97, 67.4%) received ADHD medications (principally one of the stimulants) from their own provider during the 14 months: methylphenidate (n = 84), pemoline (n = 7), amphetamine (n = 6), tricyclics (n = 6) clonidine/guanfacine (n = 4), and/or buproprion (n = 1) (10 subjects received more than 1 medication) . In

	addition, 16 of these 97 children were treated by their physician with another antidepressant (not counting tricyclics or bupropion). For those treated with methylphenidate, the mean total l daily close at study completion was 22.6 mg, averaging 2.3 doses per day (versus 3.0 doses per day for MTA-treated subjects). Information concerning community care psychotherapeutic treatments has not yet been coded and will not be presented in this article. Further details: 1. Location of intervention: Home (Community treatment). 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Academic or government funding (National Institute of Mental Health, Bethesda, M d .)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: DESCRIBE versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: Inattention subscale of parent-completed Swanson Nolan And Pelham (SNAP) rating

at 60 weeks PT; Group 1: mean 1.4 (SD 0.68); n=139, Group 2: mean 1.49 (SD 0.67); n=130
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Ethnicity, Impairment of parents, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Group 1 Number missing: 15, Reason: 3 study dropout, unclear reason for dropout and why other missing were not included in analysis ; Group 2 Number missing: 16, Reason: 6 study dropout, unclear reason for dropout and why other missing were not included in analysis
- Actual outcome for Children and young people: Inattention teacher-completed Swanson Nolan And Pelham (SNAP) rating

at 60 weeks PT; Group 1: mean 1.47 (SD 0.81); n=119, Group 2: mean 1.48 (SD 0.52); n=128
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Ethnicity, Impairment of parents, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Group 1 Number missing: 25, Reason: 3 study dropout, unclear reason for dropout and why other missing were not included in analysis ; Group 2 Number missing: 18, Reason: 6 study dropout, unclear reason for dropout and why other missing were not included in analysis

Protocol outcome 2: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: Hyperactivity - impulsivity parent-completed Swanson Nolan And Pelham (SNAP) rating

at 60 weeks PT; Group 1: mean 1.24 (SD 0.72); n=129, Group 2: mean 1.35 (SD 0.72); n=130; SNAP subscale with 0-3 severity score, mean score are reported Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Ethnicity, Impairment of parents, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Group 1 Number missing: 15, Reason: 3 study dropout, unclear reason for dropout and why other missing were not included in analysis ; Group 2 Number missing: 16, Reason: 6 study dropout, unclear reason for dropout and why other missing were not included in analysis
- Actual outcome for Children and young people: Hyperactivity - impulsivity teacher-completed Swanson Nolan And Pelham (SNAP) rating

at 60 weeks PT; Group 1: mean 1.1 (SD 0.77); n=119, Group 2: mean 1.25 (SD 0.84); n=128; SNAP subscale with 0-3 severity score, mean score are reported Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Ethnicity, Impairment of parents, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Group 1 Number missing: 25, Reason: 3 study dropout, unclear reason for dropout and why other missing were not included in analysis ; Group 2 Number missing: 18, Reason: 6 study dropout, unclear reason for dropout and why other missing were not included in analysis
- Actual outcome for Children and young people: Classroom observer

at 60 weeks PT; Group 1: mean 0.29 (SD 0.26); n=107, Group 2: mean 0.18 (SD 0.15); n=109
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Ethnicity, Impairment of parents, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Group 1 Number missing: 37, Reason: 3 study dropout, unclear reason for dropout and why other missing were not included in analysis ; Group 2 Number missing: 37, Reason: 6 study dropout, unclear reason for dropout and why other missing were not included in analysis

Protocol outcome 3: Function/behaviour at >6 months
- Actual outcome for Children and young people: Classroom observer (ODD Aggression)

at 60 weeks PT; Group 1: mean 0.01 (SD 0.018); n=107, Group 2: mean 0.006 (SD 0.014); n=109
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Ethnicity, Impairment of parents, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Group 1 Number missing: 37, Reason: 3 study dropout, unclear reason for dropout and why other missing were not included in analysis ; Group 2 Number missing: 37, Reason: 6 study dropout, unclear reason for dropout and why other missing were not included in analysis
- Actual outcome for Children and young people: Parent SNAP oppositional- defiant disorder subscale

at 60 weeks PT; Group 1: mean 1.05 (SD 0.74); n=129, Group 2: mean 1.11 (SD 0.67); n=130; Parent SNAP oppositional- defiant disorder subscale subscale with 0-3 severity score, mean score are reported Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Ethnicity, Impairment of parents, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Group 1 Number missing: 15, Reason: 3 study dropout, unclear reason for dropout and why other missing were not included in analysis ; Group 2 Number missing: 16, Reason: 6 study dropout, unclear reason for dropout and why other missing were not included in analysis
- Actual outcome for Children and young people: Teacher SNAP oppositional- defiant disorder subscale

at 60 weeks PT; Group 1: mean 0.97 (SD 0.8); n=119, Group 2: mean 1 (SD 0.84); n=128; Teacher SNAP oppositional- defiant disorder subscale subscale with 0-3 severity score, mean score are reported Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Ethnicity, Impairment of parents, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Group 1 Number missing: 25, Reason: 3 study dropout, unclear reason for dropout and why other missing were not included in analysis ; Group 2 Number missing: 18, Reason: 6 study dropout, unclear reason for dropout and why other missing were not included in analysis

Protocol outcome 4: Numeracy outcomes at > 6 months
- Actual outcome for Children and young people: Wechsler Individual Achievement Test (subscale math)

at 60 weeks PT; Group 1: mean 100.3 (SD 13.7); n=134, Group 2: mean 100.4 (SD 15.2); n=131; Wechsler Individual Achievement Test (subscale math) Unclear Top=High is good outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness, Comments: Measures depression and anxiety ; Baseline details: Sex, Age, Education, Ethnicity, Impairment of parents, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Group 1 Number missing: 10, Reason: 3 study dropout, unclear reason for dropout and why other missing were not included in analysis ; Group 2 Number missing: 15, Reason: 6 study dropout, unclear reason for dropout and why other missing were not included in analysis

Protocol outcome 5: Literacy outcomes at > 6 months
- Actual outcome for Children and young people: Wechsler Individual Achievement Test (subscale reading)

at 60 weeks PT; Group 1: mean 96.2 (SD 14.9); n=134, Group 2: mean 95.4 (SD 14.2); n=131; Weschler Individual Achievement Test reading subscale Unclear Top=High is good outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness, Comments: Measures depression and anxiety ; Baseline details: Sex, Age, Education, Ethnicity, Impairment of parents, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Group 1 Number missing: 10, Reason: 3 study dropout, unclear reason for dropout and why other missing were not included in analysis ; Group 2 Number missing: 15, Reason: 6 study dropout, unclear reason for dropout and why other missing were not included in analysis

Protocol outcome 6: Emotional dysregulation at >6 months
- Actual outcome for Children and young people: Social skills Rating System internalizing subscale parent
at 60 weeks PT; Group 1: mean 0.77 (SD 0.4); n=131, Group 2: mean 0.82 (SD 0.43); n=125; Social skills Rating System internalizing subscale parent Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness, Comments: Measures depression and anxiety ; Baseline details: Sex, Age, Education, Ethnicity, Impairment of parents, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Group 1 Number missing: 13, Reason: 3 study dropout, unclear reason for dropout and why other missing were not included in analysis ; Group 2 Number missing: 21, Reason: 6 study dropout, unclear reason for dropout and why other missing were not included in analysis
- Actual outcome for Children and young people: Social skills Rating System internalizing subscale teacher

at 60 weeks PT; Group 1: mean 0.58 (SD 0.4); n=105, Group 2: mean 0.69 (SD 0.44); n=102; Social skills Rating System internalizing subscale teacher Unclear Top=High is poor outcome Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness, Comments: Measures depression and anxiety ; Baseline details: Sex, Age, Education, Ethnicity, Impairment of parents, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication. ; Group 1 Number missing: 42, Reason: 3 study dropout, unclear reason for dropout and why other missing were not included in analysis ; Group 2 Number missing: 41, Reason: 6 study dropout, unclear reason for dropout and why other missing were not included in analysis	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms hyperactivity at <3 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Literacy outcomes at < 3 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at < 3 months

Study	**Au 2014[24]**
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=17)
Countries and setting	Conducted in Hong Kong (China); Setting:
Line of therapy	1st line
Duration of study	Intervention + follow up: 9 weeks (and a 3 month follow up for the intervention group only)
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: Structured clinical interview based on the Diagnostic and Statistical Manual of Mental Disorder-(DSM)-IV-TR
Stratum	Children and young people
Subgroup analysis within study	Not applicable:
Inclusion criteria	Define
Exclusion criteria	Define

Recruitment/selection of patients	United Christian Hospital Child Assessment Service and the Boys' and Girls' Clubs Association of Hong Kong
Age, gender and ethnicity	Age - Mean (SD): 7.68 (1.05). Gender (M:F): Define. Ethnicity: 100%Chinese Cantonese
Further population details	1. Age: School age children (6-13 years) (aged 5-10). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (only a diagnosis of ADHD).
Indirectness of population	No indirectness
Interventions	(n=8) Intervention 1: Carer and family training programmes - Programme not including the person with ADHD. The intervention was Level 4 Group Triple P, which was composed of nine sessions, with five 2.5-hr group sessions, three telephone catch-up sessions at home, as well as one booster session. In the beginning, each parent received a copy of Every Parent's Group Workbook. All of them had to attend the group sessions and finish homework in between the group sessions. The group sessions involved active skill training through mini-lectures, discussions, role-play, observation, and feedback, and also DVD demonstration of positive parenting skills. The purpose of doing homework was to consolidate their learning from the group sessions. Upon the completion of group sessions in week 5, starting from week 6, each parent received one 20–30-min telephone consultations until week 8. The telephone calls followed the format of Triple P group programme. At the end, a booster session was held to educate parents how to maintain the gains. An existing Chinese version of Level Group Triple P has been translated and well validated in Hong Kong (Leung et al., 2003); therefore, all the materials used in the present study were in Chinese. The overview of intervention session was displayed in Table 3. The practitioner adhered to Triple P facilitator's manual to implement the programme and also made use of "DOES" resource package to teach parents how to train their child's organizational skills. Made reference to Hoath and Sanders (2002), the programme had some minor modifications to target ADHD symptoms and behaviours. The first session delivered the overview of ADHD. Sessions 2–5 followed the standard Triple P in which parents were taught about 17 core child management strategies, with additional emphasis on how to use these strategies to deal with ADHD symptoms such as impulsivity, inattention, and emotional problems. Ten of the strategies aim to encourage children's skill and to promote positive development, and seven of them intend to assist parents in handling children's behaviour. In addition, a six-step planned activities routine are taught to enhance generalisation and maintenance of parenting skills. After Triple P session in weeks 2–5, the parents were also taught a 30-min independent segment of organisational skills of how to improve children's performance on homework tasks using "DOES" materials. The modifications aimed to enhance parents' abilities to help their children develop organizational skills and establish a routine at home to improve their performance of daily activities such as doing homework and interacting with others. These skills included planning, prioritising, time management, response inhibition, and emotional regulation and were taught through games, real-life situations, and discussions.

	. Duration 9 weeks . Concurrent medication/care: At start of the trial these children had not been on medication yet Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Face to face (group intervention) 3. Study design: Parallel trial (n=9) Intervention 2: No treatment. Waitlist. Duration 9 weeks. Concurrent medication/care: At start of the trial these children had not been on medication yet Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Funding not stated

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PROGRAMME NOT INCLUDING THE PERSON WITH ADHD versus NO TREATMENT

Protocol outcome 1: Function/behaviour at <3 months
- Actual outcome for Children and young people: Eyberg Child Behaviour Inventory (ECBI) – Parent, subscale number of disruptive behaviours.

at 9 weeks PT; Group 1: mean 11.29 (SD 8.26); n=8, Group 2: mean 17.78 (SD 7.1); n=7; Eyberg Child Behaviour Inventory (ECBI) – Parent, subscale number of disruptive behaviours 0-36 Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Marital status, IQ , , Children taking medication

; Group 1 Number missing: 0; Group 2 Number missing: 1, Reason: not reported

Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Bink 2016[48]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=90)
Countries and setting	Conducted in Netherlands; Setting: The study took place in three centers for child and adolescent psychiatry in the south of the Netherlands.
Line of therapy	1st line
Duration of study	Intervention + follow up: 25 week intervention and 1 year follow up.
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Define
Exclusion criteria	Define
Age, gender and ethnicity	Age - Mean (SD): 15.95 (3.33). Gender (M:F): Define. Ethnicity: Not reported.
Further population details	1. Age: Young people (13-18 years) (12 - 24). 2. Baseline symptom severity: Mixed population
Indirectness of population	No indirectness
Interventions	(n=59) Intervention 1: Neurofeedback. Neurofeedback training was carried out over a period of around 5 months (25 weeks), with 2 to 3 training sessions every week. Each participant was offered a total of 40 30-minute training sessions. The mean number of training sessions received was 38, with a minimum of 19 sessions for the adolescents in this group at 1 year follow up. . Duration 25 weeks. . Concurrent medication/care: Both groups received treatment as usual. There were no group differences in the use of stimulant medication or the type of behavioral therapy received. Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Face to face (1 on 1) 3. Study design: Parallel trial (n=31) Intervention 2: No treatment. Treatment as usual. Participants received treatment as prescribed by the main therapist in the three participating centers. TAU was monitored using an intervention questionnaire based on the Dutch national basic program ADHD for children and adolescents. Behavioral interventions included regular cognitive-behavioral therapy, systemic therapy and/or supportive counselling for the adolescent and/or his parent(s). Stimulants prescribed included immediate release methylphenidate, sustained release methylphenidate and dexamfetamine. Duration 25 weeks. Concurrent medication/care: Both groups received treatment as usual. There were no group differences in the use of stimulant medication

	or the type of behavioral therapy received. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Academic or government funding (This trial is funded by The Netherlands Organization for Health Research and Development.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: NEUROFEEDBACK versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: ADHD-rating inattention at 1 year FU (FU - pre) ; Mean; -1.64 (95%CI -2.44 to -0.83, Units: change score);
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 18, Reason: Discontinued intervention due to motivational and/or organizational reasons, transferred to other region for clinical admission, excluded, lost to follow-up due to motivational and/or organizational reasons ; Group 2 Number missing: 12, Reason: Discontinued intervention due to motivational and/or organizational reasons, lost to follow-up due to motivational and/or organizational reasons
- Actual outcome for Children and young people: ADHD-rating inattention at 1 year FU (FU - post); Mean; -0.08 (95%CI -0.72 to 0.61, Units: change score);
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 18, Reason: Discontinued intervention due to motivational and/or organizational reasons, transferred to other region for clinical admission, excluded, lost to follow-up due to motivational and/or organizational reasons ; Group 2 Number missing: 12, Reason: Discontinued intervention due to motivational and/or organizational reasons, lost to follow-up due to motivational and/or organizational reasons

Protocol outcome 2: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: ADHD-rating hyperactivity at 1 year FU (FU - pre) ; Mean; -0.97 (95%CI -1.77 to -0.16, Units: change score);
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 18, Reason: Discontinued intervention due to motivational and/or organizational reasons, transferred to other region for clinical admission, excluded, lost to follow-up due to motivational and/or organizational reasons ; Group 2 Number missing: 12, Reason: Discontinued intervention due to motivational and/or organizational reasons, lost to follow-up due to motivational and/or organizational reasons
- Actual outcome for Children and young people: ADHD-rating hyperactivity at 1 year FU (FU - post); Mean; -0.22 (95%CI -0.89 to 0.45);
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 18, Reason: Discontinued intervention due to motivational and/or organizational reasons, transferred to other region for clinical admission, excluded, lost to follow-up due to motivational and/or organizational reasons ; Group 2 Number missing: 12, Reason: Discontinued intervention due to motivational and/or organizational reasons, lost to follow-up due to motivational

and/or organizational reasons	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms hyperactivity at <3 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	**Bor 2002[55]**
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=87)
Countries and setting	Conducted in Austria; Setting: Local community health and neighbourhood centers
Line of therapy	2nd line
Duration of study	Intervention + follow up: 67-69 weeks
Method of assessment of guideline condition	Unclear method of assessment/diagnosis: To be eligible for this study, mothers had to report the presence of six or more symptoms of inattention or hyperactivity–impulsivity in a clinical diagnostic interview based on DSM-IV (APA, 1994) criteria for ADHD.
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	ADHD and (a) the target child was aged between 36 and 48 months; (b) mothers rated their child's behavior as being in the elevated range on the Eyberg Child Behavior Inventory (ECBI; Intensity score ¸ 127 or Problem score 11; (c) the child showed no evidence of developmental disorder (e.g., language disorder, autism) or significant health impairment; (d) the child was not currently having regular contact with another professional or agency or taking medication for behavioral problems; and (e) the parents were not currently receiving therapy for psychological problems, were not intellectually disabled, and reported they were able to read the newspaper without assistance. In addition, all families had at least one of the following family

	adversity factors: (a) maternal depression as measured by a score of 20 or more on the Beck Depression Inventory (BDI) ; (b) relationship conflict as measured by a score of 5 or more on the Parent Problem Checklist; (c) single parent household; or (d) low gross family income (less than AUD$345 per week)
Exclusion criteria	not reported
Recruitment/selection of patients	Community outreach campaign targeting disadvantaged families
Age, gender and ethnicity	Age - Mean (SD): 3.43 (0.305). Gender (M:F): Define. Ethnicity: Not reported
Further population details	1. Age: Preschool children (0-6 years) 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Indirectness of population	No indirectness
Interventions	(n=29) Intervention 1: Carer and family training programmes - Programmes including the person with ADHD. Standard Behavioral Family Intervention (SBFI). This program involved teaching parents 17 core child management strategies. Ten of the strategies are designed to promote children's competence and development (i.e., quality time; talking with children; physical affection; praise; attention; engaging activities; setting a good example; Ask, Say, Do; incidental teaching; and behavior charts), and seven strategies are designed to help parents manage misbehaviour (i.e., setting rules; directed discussion; planned ignoring; clear, direct instructions; logical consequences; quiet time; and time-out). In addition, parents were taught a six-step planned activities routine to enhance the generalization and maintenance of parenting skills (i.e., plan ahead; decide on rules; select engaging activities; decide on rewards and consequences; and hold a follow-up discussion with child). Consequently, parents were taught to apply parenting skills to a broad range of target behaviors in both home and community settings with the target child and all relevant siblings. By working through the exercises in their workbook, parents learn to set and monitor their own goals for behavior change and enhance their skills in observing their child's and their own behavior. Each family received Every Parent and a workbook, Every Parent's Family Workbook as well as active skills training and support from a trained practitioner. Active skills training methods included modelling, role plays, feedback, and the use of specific homework tasks. On average, parents allocated to this condition attended 10 sessions. Session 1 involved a review of assessment data and discussion of causes of child behavior problems. In Sessions 2 and 3, the 17 child management strategies were introduced. The next three sessions were completed in the parents' home. Parents were observed implementing the parenting skills with their child and received feedback from the practitioner on their strengths and weaknesses. Planned activities training was completed in Sessions 7–9 and issues of maintenance and closure were covered in Session 10. Completers of this intervention were those families that completed Session 9. Although the practitioner did not consult directly with children, parents were encouraged to bring their child to 6 of the 10 sessions to facilitate practice of the skills being introduced.

	. Duration 15 weeks. Concurrent medication/care: The children were not currently having regular contact with another professional or agency or taking medication for behavioral problems Further details: 1. Location of intervention: Clinic (Local community health and neighbourhood centers). 2. Mode of delivery: Face to face (1 on 1) 3. Study design: Parallel trial (n=26) Intervention 2: Carer and family training programmes - Programmes including the person with ADHD. Enhanced Behavioral Family Intervention. Parents in the EBFI condition received the intensive behavioral parent training component as described previously for the SBFI condition (i.e., 17 child management strategies and planned activities training) as well as partner support and coping skills. The adjunctive interventions were delivered through a combination of within-session exercises and homework assignments, and tailored to the needs of each family. Although all the content of each module was covered with each family, the amount of time spent on active skills training varied across families. The findings obtained from the initial assessment guided practitioners in determining which areas of each adjunctive module needed to be practiced within sessions. Completers of this intervention were those families that completed the content of each of the modules. Partner support introduced parents to a variety of skills to enhance their teamwork as parenting partners. It aimed to help partners improve their communication, increase consistency in their use of positive parenting strategies, and provide support for each other's parenting efforts. Parents were taught to make interested inquiries about each other's daily parenting experience; not to interfere with each other's discipline attempts; to provide constructive, non-judgmental feedback to each other on parent–child interactions; and to use problem-solving discussions to solve disagreements regarding parenting issues. Parents were also taught positive ways of listening and speaking to one another and strategies for building a caring relationship as a couple. For single parents, this module was termed Social Support. Single parents brought a significant other (e.g., mother or friend) with them to these consultations. The Social Support module covered the same content and strategies as for Partner Support. On average, the Partner/Social Support module was completed in 2 h over two appointments as part of the 14 h of intervention provided to these families. Coping skills aimed to assist parents experiencing personal adjustment difficulties (e.g., depression, anger, anxiety, and stress) that interfere with their parenting ability. Using a cognitive conceptualization, parents were taught to relax and encouraged to identify and challenge maladaptive cognitions about their child, themselves, child management routines, or other stressful situations. Parents were also encouraged to prepare a set of coping self-statements in preparation for potentially stressful situations (e.g., discussing child's behavior difficulty with a mother-in-law). On average this module constituted 2 h of the 14 h of intervention provided to each participating family.

	. Duration 17 weeks. Concurrent medication/care: The children were not currently having regular contact with another professional or agency or taking medication for behavioral problems Further details: 1. Location of intervention: Clinic (Local community health and neighbourhood centers). 2. Mode of delivery: Face to face (1 on 1) 3. Study design: Parallel trial (n=32) Intervention 3: No treatment. Waitlist. Duration 17 weeks. Concurrent medication/care: At baseline the children were not currently having regular contact with another professional or agency or taking medication for behavioral problems Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Academic or government funding (The study is supported by grants from Queensland Health and the National Health and Medical Research Council (941044, 971099).)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PROGRAMMES INCLUDING THE PERSON WITH ADHD versus PROGRAMMES INCLUDING THE PERSON WITH ADHD

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Eyberg Child Behavior Inventory (ECBI) (parent) Inattentive behaviour at 15-17 weeks PT; Group 1: mean 14.39 (SD 5.97); n=21, Group 2: mean 18.13 (SD 5.58); n=15; Eyberg Child Behavior Inventory (ECBI) (parent) Inattentive behaviour Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Ethnic, sex, age of child and parents, marital status, social economic status, amount of siblings, alcohol use of parents, criminal history, depression of mother; Group 1 Number missing: 8; Group 2 Number missing: 11

Protocol outcome 2: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: Eyberg Child Behavior Inventory (ECBI) (parent) Inattentive behaviour at 67-69 weeks FU; Group 1: mean 15.31 (SD 6.59); n=19, Group 2: mean 15 (SD 6.97); n=13; Eyberg Child Behavior Inventory (ECBI) (parent) Inattentive behaviour unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Ethnic, sex, age of child and parents, marital status, social economic status, amount of siblings, alcohol use of parents, criminal history, depression of mother; Group 1 Number missing: 10; Group 2 Number missing: 13

Protocol outcome 3: Function/behaviour at <3 months
- Actual outcome for Children and young people: Eyberg Child Behavior Inventory (ECBI) (parent) Oppositional defiant behaviour toward adults at 15-17 weeks PT; Group 1: mean 38.28 (SD 13.3); n=21, Group 2: mean 39.27 (SD 12.41); n=15
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Ethnic, sex, age of child and parents, marital status, social economic status, amount of siblings, alcohol use of parents, criminal history, depression of mother; Group 1 Number missing: 8; Group 2 Number missing: 11

Protocol outcome 4: Function/behaviour at >6 months
- Actual outcome for Children and young people: Eyberg Child Behavior Inventory (ECBI) (parent) Oppositional defiant behaviour toward adults at 67-69 weeks FU; Group 1: mean 38 (SD 12.37); n=19, Group 2: mean 39.91 (SD 11.37); n=13; Eyberg Child Behavior Inventory (ECBI) (parent) Oppositional defiant behaviour toward adults Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Ethnic, sex, age of child and parents, marital status, social economic status, amount of siblings, alcohol use of parents, criminal history, depression of mother; Group 1 Number missing: 10; Group 2 Number missing: 13

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PROGRAMMES INCLUDING THE PERSON WITH ADHD versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Eyberg Child Behavior Inventory (ECBI) (parent) Inattentive behaviour at 15 weeks PT; Group 1: mean 14.39 (SD 5.97); n=21, Group 2: mean 18.33 (SD 5.62); n=27
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Ethnic, sex, age of child and parents, marital status, social economic status, amount of siblings, alcohol use of parents, criminal history, depression of mother; Group 1 Number missing: 8; Group 2 Number missing: 5

Protocol outcome 2: Function/behaviour at <3 months
- Actual outcome for Children and young people: Eyberg Child Behavior Inventory (ECBI) (parent) Oppositional defiant behaviour toward adults at 15 weeks PT; Group 1: mean 38.28 (SD 13.3); n=21, Group 2: mean 47.52 (SD 10.81); n=27; Eyberg Child Behavior Inventory (ECBI) (parent) Oppositional defiant behaviour toward adults unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Ethnic, sex, age of child and parents, marital status, social economic status, amount of siblings, alcohol use of parents, criminal history, depression of mother; Blinding details: All coders were blind; Group 1 Number missing: 8; Group 2 Number missing: 5

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PROGRAMMES INCLUDING THE PERSON WITH ADHD versus NO TREATMENT Protocol outcome 1: ADHD symptoms inattention at <3 months - Actual outcome for Children and young people: Eyberg Child Behavior Inventory (ECBI) (parent) Inattentive behaviour at 17 weeks PT; Group 1: mean 18.13 (SD 5.58); n=15, Group 2: mean 18.33 (SD 5.62); n=27; Eyberg Child Behavior Inventory (ECBI) (parent) Inattentive behaviour Unclear Top=High is poor outcome Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Ethnic, sex, age of child and parents, marital status, social economic status, amount of siblings, alcohol use of parents, criminal history, depression of mother; Group 1 Number missing: 11; Group 2 Number missing: 5 Protocol outcome 2: Function/behaviour at <3 months - Actual outcome for Children and young people: Eyberg Child Behavior Inventory (ECBI) (parent) Oppositional defiant behaviour toward adults at 17 weeks PT; Group 1: mean 39.27 (SD 12.41); n=15, Group 2: mean 47.52 (SD 10.81); n=27; Eyberg Child Behavior Inventory (ECBI) (parent) Oppositional defiant behaviour toward adults unclear Top=High is poor outcome Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Ethnic, sex, age of child and parents, marital status, social economic status, amount of siblings, alcohol use of parents, criminal history, depression of mother; Group 1 Number missing: 11; Group 2 Number missing: 5

Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study (subsidiary papers)	**Chacko 2009[90] (Chacko 2012[89])**
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=120)
Countries and setting	Conducted in USA; Setting: Secondary care
Line of therapy	1st line

Duration of study	Intervention + follow up: 22 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: As recommended for evidence based assessment of ADHD, ADHD diagnosis was determined through completion of parent and teacher rating scales of Diagnostic and Statistical Manual of Mental Disorders (DSM) symptoms, completion of semi structured interviews with the parent.
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Mothers were required to be the primary caregiver and residing without a significant other (e.g., child's father, boyfriend, fiancé´); however, mothers were included in this study if they resided with other individuals (e.g., parents, siblings, roommates). Mothers were not excluded from participation for the presence of any psychiatric conditions. Children were required to be between 5 to 12 years old at the start of treatment and were required to meet diagnostic criteria for ADHD (any type).
Exclusion criteria	Families were excluded if the child had an IQ of less than 80, if the child was diagnosed with a pervasive developmental disorder, or if there was evidence of psychosis.
Recruitment/selection of patients	single mother families were recruited for this study through radio advertisements, mailings, and school referrals.
Age, gender and ethnicity	Age - Mean (SD): 7.85 (2.155497). Gender (M:F): 85/35. Ethnicity: 53% Caucasian, 21% African American, 13% Latino, 13% biracial
Further population details	1. Age: School age children (6-13 years) (children (ages 5–12 years)). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (DBD–I= 1.87 (.56), 1.95 (.63), 2.06 (.48); DBD–H/I= 1.86 (.58), 1.89 (.67), 1.94 (.49). (WL versus BPT versus STEPP; DBD=Disruptive Behavior Disorders rating scale; I=Inattentive; H=I=Hyperactive)).
Indirectness of population	No indirectness

Interventions	(n=40) Intervention 1: Carer and family training programmes - Programme not including the person with ADHD. Traditional behavioral parent training program (BPT). BPT is a manualized, 9-week BPT program held for 21 2 hr each week that was developed for this study based on the work of empirically supported BPT. Single mothers engaged in a collaborative, large-group format to discuss and learn about effective parenting strategies (e.g., positive attending, planned ignoring, incentive systems). Given the range in children's age, therapists tailored treatment content to be appropriate to each parent's child's developmental level. For instance, discussions of positive attending for parents of younger children would be discussed within the context of play, whereas for parents of older children positive attending would be discussed within the context of watching TV, reading magazines, or having discussion between the parent and the child. Furthermore, sessions included videotapes of parenting errors whereby single mothers identified these errors and then formulated alternative parenting strategies. Furthermore, therapists facilitated group discussions by asking questions to encourage single mothers to make adaptive attributions about the effects of their parenting on their children's behavior. Therapists modelled the parenting techniques with role-plays by single mothers. Single mothers were assigned weekly homework assignments based on the content of the session. Duration 9 weeks. Concurrent medication/care: For children who were receiving medication, parents were asked to maintain the type and dose of medication for the duration of the study and report any changes in medication status to the research study team. During the program, children participated in a concurrent traditional, group-based social skills program. Children were divided into two groups based on the developmental level of the child. Typically, children between the ages of 5 to 8 formed one group, and children between the ages of 9 to 12 formed another group. Children were supported in the acquisition of key social skills used in peer contexts (e.g., cooperation, validation) through didactic training, modelling, role-playing and ongoing support of the skills through age-appropriate small-group games. Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Face to face (group intervention) (Single mothers engaged in a collaborative, large-group format to discuss and learn about effective parenting strategies). 3. Study design: Parallel trial (n=40) Intervention 2: Carer and family training programmes - Programme not including the person with ADHD. STEPP program. Like traditional BPT, the STEPP program was a manualized, 9-week program held for 21 2 hr each week, which included a collaborative large group format, identical evidence-based BPT content, identical order of presentation of BPT content, identical videotaped vignettes, therapist-facilitated questions, group discussions, modelling, and role-plays by parents. The STEPP program, however, also includes several enhancements to the format, delivery, and content of traditional BPT based on the extant literature (Chacko et al., 2008). First, the STEPP program incorporates

	an enhanced intake procedure that improves parents' motivation to engage in treatment, addressing possible practical barriers to treatment participation, and addressing maternal cognitions regarding expectations for treatment and attributions regarding their child's behavior. For instance, open-ended questions were asked of single mothers regarding their expectations about their as well as their child's involvement in treatment (e.g., What role do you think you will have in treatment? In what way do you think your child will be involved in treatment?). Single mothers were also asked open-ended questions regarding their expectations about the rate and potency of treatment-related improvements for their child (e.g., How fast do you expect to observe improvements in your child's behavior?) and about their attributions regarding locus of control of their child's behavior (e.g., What do you think causes your child to misbehave?) and the effect of their parenting (e.g., In what ways have you seen you parenting make a difference?). Misconceptions=inappropriate cognitions regarding these issues were discussed and clarified with the single mother during the intake. Last, practical barriers (e.g., child care, transportation) to ongoing involvement were addressed and solutions to these barriers were developed during the intake. Another modification of the STEPP program was to incorporate a subgroup, coping-modelling, problem-solving format within the traditional large-group format to improve social support between parents and to increase participation among parents. Also, the STEPP program incorporates a systematic, problem-solving treatment to address parent-initiated problems (e.g., time management, conflicts with relatives) that may either interfere with their parenting or affect parents' psychosocial functioning. In addition, the STEPP program incorporates parent– child interactions within the children's social skills group to enhance parenting skill acquisition and a child motivation enhancement within the children's social skills group to provide children incentives for attaining within session and home-based behavioral goals. . Duration 9 weeks. Concurrent medication/care: For children who were receiving medication, parents were asked to maintain the type and dose of medication for the duration of the study and report any changes in medication status to the research study team. During the program, children participated in a concurrent traditional, group-based social skills program. Children were divided into two groups based on the developmental level of the child. Typically, children between the ages of 5 to 8 formed one group, and children between the ages of 9 to 12 formed another group. Children were supported in the acquisition of key social skills used in peer contexts (e.g., cooperation, validation) through didactic training, modelling, role-playing and ongoing support of the skills through age-appropriate small-group games. Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Face to face (group intervention) (Same format as BPT). 3. Study design: Parallel trial

	(n=40) Intervention 3: No treatment. Waitlist. Duration 9 weeks. Concurrent medication/care: For children who were receiving medication, parents were asked to maintain the type and dose of medication for the duration of the study and report any changes in medication status to the research study team. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Academic or government funding (Support for this study was provided to the first author through a National Institutes of Mental Health, Pre-doctoral National Research Service Award (NRSA; 1 F31 MH071090-01A1))

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PROGRAMME NOT INCLUDING THE PERSON WITH ADHD versus PROGRAMME NOT INCLUDING THE PERSON WITH ADHD

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale
at 9 weeks; Group 1: mean 1.67 (SD 0.74); n=40, Group 2: mean 1.78 (SD 0.63); n=40; Disruptive Behavior Disorders (DBD) rating scale Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 2: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale
at 22 weeks FU; Group 1: mean 1.79 (SD 0.62); n=40, Group 2: mean 1.88 (SD 0.51); n=40; Disruptive Behavior Disorders (DBD) rating scale Mean score of a 4 point Likert subscale (0- Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 3: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale
at 9 weeks; Group 1: mean 1.59 (SD 0.7); n=40, Group 2: mean 1.69 (SD 0.57); n=40; Disruptive Behavior Disorders (DBD) rating scale Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 4: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale
at 22 weeks FU; Group 1: mean 1.75 (SD 0.54); n=40, Group 2: mean 1.77 (SD 0.53); n=40; Disruptive Behavior Disorders (DBD) rating scale Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 5: Function/behaviour at <3 months
- Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale (ODD symptoms)
at 9 weeks; Group 1: mean 1.48 (SD 0.77); n=40, Group 2: mean 1.01 (SD 0.43); n=40; Disruptive Behavior Disorders (DBD) rating scale (ODD symptoms) Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age

(child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 6: Function/behaviour at >6 months
- Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale (ODD symptoms)
at 22 weeks FU; Group 1: mean 1.76 (SD 0.65); n=40, Group 2: mean 1.39 (SD 0.62); n=40; Disruptive Behavior Disorders (DBD) rating scale (ODD symptoms) Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PROGRAMME NOT INCLUDING THE PERSON WITH ADHD versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale
at 9 weeks; Group 1: mean 1.67 (SD 0.74); n=40, Group 2: mean 1.7 (SD 0.65); n=40; Disruptive Behavior Disorders (DBD) rating scale Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

- Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale
at 9 weeks; Group 1: mean 1.78 (SD 0.63); n=40, Group 2: mean 1.72 (SD 0.65); n=40; Disruptive Behavior Disorders (DBD) rating scale Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 2: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale
at 22 weeks FU; Group 1: mean 1.79 (SD 0.62); n=40, Group 2: mean 1.82 (SD 0.57); n=40; Disruptive Behavior Disorders (DBD) rating scale Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale
at 22 weeks FU; Group 1: mean 1.88 (SD 0.51); n=40, Group 2: mean 1.82 (SD 0.57); n=40; Disruptive Behavior Disorders (DBD) rating scale Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 3: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale
at 9 weeks; Group 1: mean 1.59 (SD 0.7); n=40, Group 2: mean 1.72 (SD 0.56); n=40; Disruptive Behavior Disorders (DBD) rating scale Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale
at 9 weeks; Group 1: mean 1.69 (SD 0.57); n=40, Group 2: mean 1.72 (SD 0.56); n=40; Disruptive Behavior Disorders (DBD) rating scale Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 4: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale
at 22 weeks FU; Group 1: mean 1.75 (SD 0.54); n=40, Group 2: mean 1.85 (SD 0.48); n=40; Disruptive Behavior Disorders (DBD) rating scale Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale
at 22 weeks FU; Group 1: mean 1.77 (SD 0.53); n=40, Group 2: mean 1.85 (SD 0.48); n=40; Disruptive Behavior Disorders (DBD) rating scale Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 5: Function/behaviour at <3 months
- Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale (ODD symptoms)
at 9 weeks; Group 1: mean 1.48 (SD 0.77); n=40, Group 2: mean 1.56 (SD 0.72); n=40; Disruptive Behavior Disorders (DBD) rating scale (ODD symptoms) Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale (ODD symptoms)
at 9 weeks; Group 1: mean 1.01 (SD 0.43); n=40, Group 2: mean 1.56 (SD 0.72); n=40; Disruptive Behavior Disorders (DBD) rating scale (ODD symptoms) Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0 Protocol outcome 6: Function/behaviour at >6 months - Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale (ODD symptoms) at 22 weeks FU; Group 1: mean 1.76 (SD 0.65); n=40, Group 2: mean 1.73 (SD 0.72); n=40; Disruptive Behavior Disorders (DBD) rating scale (ODD symptoms) Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother. ; Blinding details: RCT's into psychological interventions cannot be blinded. ; Group 1 Number missing: 0; Group 2 Number missing: 0 - Actual outcome for Children and young people: Disruptive Behavior Disorders (DBD) rating scale (ODD symptoms) at 22 weeks FU; Group 1: mean 1.39 (SD 0.62); n=40, Group 2: mean 1.73 (SD 0.72); n=40; Disruptive Behavior Disorders (DBD) rating scale (ODD symptoms) Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and mother), Education, Ethnicity, Comorbid behavioral disorders, Children taking medication, Education Mother. ; Blinding details: RCT's into psychological interventions cannot be blinded. ; Group 1 Number missing: 0; Group 2 Number missing: 0	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Christiansen 2014[99]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=58)
Countries and setting	Conducted in Germany; Setting:
Line of therapy	1st line
Duration of study	Intervention time: 36 sessions, 12 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Aged 7 - 11, full command of the German language, current DSM-IV diagnosis of ADHD (either combines, predominantly inattentive or predominantly hyperactive/impulsive subtype), IQ >80. Children with comorbid disorders are not excluded from the study, and behavioural treatment of comorbid conditions is included in the treatment plan. The children under stimulant medication are also not excluded from the study, but dose and possible changes will be recorded.
Exclusion criteria	Children with symptoms of inattention, hyperactivity or impulsivity due to other medical reasons such as hyperthyreosis, autism, epilepsy, brain disorders and any genetic or medical disorder associated with externalizing behaviour.
Recruitment/selection of patients	Patients can refer themselves or are referred by their paediatricians, psychiatrists, or general practitioners to The Psychotherapeutic Outpatient Clinic of the Department of Psychology, Clinical Psychology, at the University of Marburg.
Age, gender and ethnicity	Age - Mean (SD): 8.42 (1.34). Gender (M:F): 83% boys, 17% girls. Ethnicity: N/A
Further population details	1. Age: School age children (6-13 years) 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Indirectness of population	No indirectness
Interventions	(n=14) Intervention 1: Neurofeedback. The Thera Prax (NeuroConn) NF system. Participants received a total of 30 sessions of slow cortical potential (SCP) training. Each therapy session consists of three runs. One run consists of 40 trials (8mins) resulting in a total of 24 min NF training per session. A trial lasts for 8seconds. Feedback is calculated from the vertex (Cz) and is referenced against both mastoids and vertical as well as horizontal eye movements are corrected online with electrodes placed above and below the left eye, and electrodes on the right and left side of the face. . Duration 36 sessions, 12 weeks. Concurrent medication/care: To keep both therapy groups balanced, quantity of homework is kept identical. Psycho-education in all groups and social support in one. Practicing is documented in a log which is controlled by a

	therapist at the beginning of a session and the children earn an extra token for doing their homework. Further details: 1. Location of intervention: 2. Mode of delivery: 3. Study design: (n=15) Intervention 2: Coaching, mentoring, psychoeducation, counselling - Psychoeducation. Based on the self-instruction training as described in Meichenbaum and Goodman (1971). Goal of the training is to enhance child development in the domains behaviour regulation, planning, organisation and self-reflection. In the first therapy block the basic training (12 sessions) is completed. Each session (except the first one) begins with the recapitulation of the last session and an introduction into the topic of the session (10mins). This is followed by the modelling behaviour the topic of the session requires (10mins) and the child trains this for 20mins. The last 10mins are reserved for joint play to motivate the child and to build a good therapeutic relationship. . Duration 36 sessions, 12 weeks. Concurrent medication/care: To keep both therapy groups balanced, quantity of homework is kept identical. Psycho-education in all groups and social support in one. Practicing is documented in a log which is controlled by a therapist at the beginning of a session and the children earn an extra token for doing their homework. Differing from NF, children do not practice relaxation. Further details: 1. Location of intervention: 2. Mode of delivery: 3. Study design:
Funding	Funding not stated
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: NEUROFEEDBACK versus SELF-MANAGEMENT Protocol outcome 1: ADHD symptoms inattention at <3 months - Actual outcome for Children and young people: ADHD index parent responses using the Conners-3 parent and teacher scale at 17 weeks, post intervention; Group 1: mean 7.71 (SD 6.28); n=14, Group 2: mean 7 (SD 4.45); n=15 Risk of bias: All domain - Very high, Selection - Very high, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Baseline scores differ but final scores don't differ in relation to baseline scores; T1 SM group- 13.13, NF group - 10.64 T3 SM group - 7.00, NF group - 7.71; Group 1 Number missing: 0, Reason: N/A; Group 2 Number missing: 0, Reason: N/A - Actual outcome for Children and young people: ADHD index teacher responses using the Conners-3 parent and teacher scale at 17 weeks, post intervention ; Group 1: mean 7.43 (SD 5.04); n=14, Group 2: mean 6.69 (SD 5.37); n=15 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0, Reason: N/A; Group 2 Number missing: 0, Reason: N/A	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due

	to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	**Cowley 2016[114]**
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=54)
Countries and setting	Conducted in Finland; Setting: Intake and outtake measurements were conducted at University of Helsinki. Treatment was administered at partner clinic mental capital care, Helsinki.
Line of therapy	1st line
Duration of study	Intervention + follow up: 8-20 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Adults
Subgroup analysis within study	Not applicable
Inclusion criteria	Inclusion criteria were scores on Adult ADHD self-report scale (ASRS) and Brown ADHD scale indicating presence of ADHD, as well as: pre-existing diagnosis of ADHD/ADD, nonexistence of neurological diagnosis, age 18-60 years, IQ score > 80 measured by a qualified psychologist using WAIS IV.
Exclusion criteria	Exclusion criteria included extreme outlier scores in the scales of generalized anxiety disorder, Beck depression inventory, alcohol use disorders identification test, the mood disorder questionnaire, test of prodromal symptoms of psychosis and the dissociative experiences scale for dissociative symptoms.
Recruitment/selection of patients	Participants volunteered in response to advertisements were recruited.
Age, gender and ethnicity	Age - Mean (SD): 36.11 (10.33). Gender (M:F): 29 female, 25 male. Ethnicity: Not stated.
Further population details	1. Age: Adults (25-65 years) 2. Baseline symptom severity: Mixed population
Indirectness of population	No indirectness
Interventions	(n=25) Intervention 1: Neurofeedback. Based on the well-known operant conditioning NFB training regimes "theta-beta" (TB) and "sensorimotor rhythm" (SMR); with the novel addition of a self-regulatory component. After randomization between treatment and WLC groups, participants in the NFB group were assigned to either TB or SMR training based on their IAPF-adjusted theta/beta ratio. Treatment was administered using the following hardware and software set up. The EEG amplifier was the Enobio ambulatory device with streaming Bluetooth connection to standard windows 8 desktop computers. NFB interventions were

	standardized by scheduling of the training sessions: sessions per week, timing of the break from training and total duration of training were all constrained to equalize the intervention. Duration 8-20 weeks. Concurrent medication/care: In the first phase the care providers were monitored by both the lead researcher and responsible psychiatrist on separated occasions, with interviews to ascertain their self-assessment of performance. Both care providers and patients were given self-assessment questionnaires to describe their working relationships. Further details: 1. Location of intervention: 2. Mode of delivery: 3. Study design: (n=21) Intervention 2: No treatment. The WLC group should receive treatment after the follow up assessment at 24 months post treatment, without experimental oversight. . Duration 8-20 weeks. Concurrent medication/care: In the first phase the care providers were monitored by both the lead researcher and responsible psychiatrist on separated occasions, with interviews to ascertain their self-assessment of performance. Both care providers and patients were given self-assessment questionnaires to describe their working relationships. Further details: 1. Location of intervention: 2. Mode of delivery: 3. Study design:
Funding	Academic or government funding (Partly funded by Finnish science agency TEKES, project #440078)
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: NEUROFEEDBACK versus NO TREATMENT Protocol outcome 1: ADHD symptoms inattention at <3 months - Actual outcome for Adults: ADHD self-report scale - inattention at 8-20 weeks PT; Group 1: mean -1.2 (SD 2.17); n=23, Group 2: mean -0.14 (SD 1.06); n=21 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 2, Reason: 2 dropped out; Group 2 Number missing: 0, Reason: N/A Protocol outcome 2: ADHD symptoms hyperactivity at <3 months - Actual outcome for Adults: ADHD self-report scale - hyperactivity/impulsivity at 8-20 weeks PT; Group 1: mean -1.08 (SD 2.31); n=23, Group 2: mean 0.38 (SD 1.65); n=21 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 2, Reason: 2 dropped out; Group 2 Number missing: 0, Reason: N/A	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very

	much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	**Daley 2013[116]**
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=43)
Countries and setting	Conducted in United Kingdom; Setting: All measures of child symptoms and functioning, parental mental health, and parent-child interaction were collected at T1 and T2 by a researcher at the family home.
Line of therapy	1st line
Duration of study	Intervention + follow up: 6 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	A score of 17 or over on the PACS and undergoing clinical assessment for ADHD and child aged between 6 and 11 years of age.
Exclusion criteria	Children aged older than 11 years of age, receipt of medication for ADHD, and parental poor English language comprehension.
Recruitment/selection of patients	Children who had been referred to child and adolescent mental health services in North Wales for ADHD and were undergoing ADHD assessments but not yet medicated were invited to participate in the study.
Age, gender and ethnicity	Age - Mean (SD): 7.3 (1.6). Gender (M:F): 35 boys: 8 girls. Ethnicity: N/A
Further population details	1. Age: School age children (6-13 years) (Aged 4 - 11 years). 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Indirectness of population	No indirectness
Interventions	(n=24) Intervention 1: Carer and family training programmes - Programmes including the person with ADHD. New forest parent training Programme is a six week written self-help psychological intervention (NFPP-SH). Parents of children allocated to NFPP-SH were invited to attend a 2 hr small group induction to the self-help material. At the end of the induction each parent was provided with as many copies of the self-help manual

	as they wished. The self-help manual contained a six-step programme full of tried and tested ideas to help support young children with ADHD. Parents received a weekly reminder telephone call during the 7 weeks that they were following the self-help programme. Duration 7 weeks. Concurrent medication/care: The assessment schedule was identical for both conditions. Further details: 1. Location of intervention: Home (Mainly at home with a group session at the beginning of the intervention.). 2. Mode of delivery: Self-help 3. Study design: Not applicable / Not stated / Unclear (RCT). (n=19) Intervention 2: No treatment. Parents were contacted after randomisation and informed they were allocated to the delayed intervention group and were provided with a date to attend an induction group approximately 10 weeks later. . Duration 7 weeks. Concurrent medication/care: The assessment schedule was identical for both conditions. Further details: 1. Location of intervention: Home (Mainly at home with a group session at the beginning of the intervention.). 2. Mode of delivery: Self-help 3. Study design: Not applicable / Not stated / Unclear (RCT).
Funding	Funding not stated

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: NFPP-SH versus WAITING LIST CONTROL GROUP

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Children and young people: ADHD symptoms measured using PACS at Post intervention (7 week intervention); Group 1: mean 16.7 (SD 5.32); n=24, Group 2: mean 22.1 (SD 5.96); n=19
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 3, Reason: N/A; Group 2 Number missing: 4, Reason: N/A

Protocol outcome 2: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: DuPaul measurement for inattention symptoms at Post intervention (7 week intervention); Group 1: mean 17.08 (SD 4.83); n=24, Group 2: mean 21.26 (SD 5.26); n=19; Comments: Children with six or more items endorsed as often or very often on the hyperactive/impulsive scale or six or more items endorsed on the inattentive scale met criteria for clinically significant problems for those ADHD scales.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 3, Reason: N/A; Group 2 Number missing: 4, Reason: N/A

Protocol outcome 3: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: DuPaul measurement for hyperactive/impulsive symptoms at Post intervention (7 week intervention); Group 1: mean 17.03 (SD 4.84); n=24, Group 2: mean 23.26 (SD 5.98); n=19; Comments: Children with six or more items endorsed as often or very often on the hyperactive/impulsive scale or six or more items endorsed on the inattentive scale met criteria for clinically significant problems for those ADHD scales.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 3, Reason: N/A; Group 2 Number missing: 4, Reason: N/A

Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	**Egeland 2013[136]**
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=75)
Countries and setting	Conducted in Norway; Setting: Training sessions tool place at the participants school during regular school hours and all testing took place at the Departments for Child and Adolescent Psychiatry in Vestfold or Telemark Hospital Trusts, Norway.
Line of therapy	1st line
Duration of study	Intervention + follow up: 5-7 week intervention with follow up at 8 months
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	All had a confirmed diagnosis of F-90 ICD-10 Hyperkinetic Disorder, equivalent to the DSM-IV diagnosis of ADHD combined type. All were in treatment for ADHD within the Departments for Child and Adolescent Psychiatry in Vestfold or Telemark Hospitals, Norway.
Exclusion criteria	IQ below 70, or a comorbid diagnosis of Pervasive Developmental Disorders, Tourette's Disorder, evidence of psychosis or Bipolar Disorder and Conduct Disorder.
Age, gender and ethnicity	Age - Mean (SD): 10.4 years (0.7). Gender (M:F): 49 boys: 18 girls. Ethnicity: Not stated.
Further population details	1. Age: School age children (6-13 years) 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Extra comments	. 41 of the final participants were medicated with MPH in the same dosage throughout the study, whereas five used atomoxetine. one patient used risperidone. Due to a negative attitude against medication among

	parents or as a result of medication being discontinued, 21 participants did not use medication at the time of inclusion.
Indirectness of population	No indirectness
Interventions	(n=38) Intervention 1: Neurocognitive training - Memory training. Consisted of Cogmed's Robomemo programme performed on a daily basis at school for 5-7 weeks. The programme lasts for 30-45 minutes and consists of 13 adaptive exercises selected from an algorithm that continually increased or decreased the difficulty level of each exercise according to the child's performance. The participant received daily verbal and visual feedback about increases in performance and personal records and was rewarded after training by being allowed to play the RoboRacing-computer game. . Duration 5 -7 weeks on a daily basis lasting 30-45 minutes. . Concurrent medication/care: Both groups received treatment as usual. Further details: 1. Location of intervention: In educational or work setting (At participants school during regular school hours.). 2. Mode of delivery: Mixed involving face to face contact 3. Study design: Parallel trial (n=37) Intervention 2: No treatment. Treatment as usual. . Duration 5 - 7 weeks.. Concurrent medication/care: Both groups received treatment as usual. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Academic or government funding (Funded with grants from the Centre for child and adolescent mental health, Eastern & Southern Norway and from the Norwegian Resource Centre for ADHD, Tourette and Narcolepsy.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: WORKING MEMORY TRAINING versus TREATMENT AS USUAL

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Children and young people: ADHD-Rating Scale IV: Total Score (ARS-IV) - Parent Ratings at Post intervention after 5-7 weeks. ; Group 1: mean 25.2 (SD 11.5); n=33, Group 2: mean 27.6 (SD 12.3); n=34; Comments: ARS-IV Parent ratings. The scale yields separate measures for symptoms of inattention and hyperactivity/impulsivity as well as a total score.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: WMT - 32.7 (9.), Control - 30.5 (11.6); Group 1 Number missing: 5, Reason: 1 participant failed to complete training due to low attendance at school, 1
participant refused to meet for second post testing and three excluded from
analysis because of changes in medication.

; Group 2 Number missing: 3, Reason:
1 participant met for pre testing without taking prescribed medication and 2 were

excluded from analysis due to changes in medication.

- Actual outcome for Children and young people: ADHD-Rating Scale IV: Total Score (ARS-IV) - Teacher Ratings at Post intervention after 5-7 weeks; Group 1: mean 19.9 (SD 11.6); n=33, Group 2: mean 21.9 (SD 12.1); n=34; Comments: ARS-IV teacher ratings. The scale yields separate measures for symptoms of inattention and hyperactivity/impulsivity as well as total score.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: WMT - 22.1 (11.6), Control - 21.3 (10.7); Group 1 Number missing: 5, Reason: 1 participant failed to complete training due to low attendance at school, 1 participant refused to meet for second post testing and three excluded from analysis because of changes in medication.; Group 2 Number missing: 3, Reason: 1 participant met for pre testing without taking prescribed medication and 2 were excluded from analysis due to changes in medication.

Protocol outcome 2: ADHD symptoms total at >6 months
- Actual outcome for Children and young people: ADHD-Rating Scale IV: Total Score (ARS-IV) - Teacher Ratings at Follow-up after 8 months; Group 1: mean 20.1 (SD 9.8); n=33, Group 2: mean 22.6 (SD 12.3); n=34; Comments: ARS-IV Teacher ratings. The scale yields separate measures for symptoms of inattention and hyperactivity/impulsivity as well as total score.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: WMT - 22.1 (11.6), Control - 21.3 (10.7); Group 1 Number missing: 5, Reason: 1 participant failed to complete training due to low attendance at school, 1 participant refused to meet for second post testing and three excluded from analysis because of changes in medication.; Group 2 Number missing: 3, Reason: 1 participant met for pre testing without taking prescribed medication and 2 were excluded from analysis due to changes in medication.

Protocol outcome 3: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: ADHD-Rating Scale IV: Attention (ARS-IV) - Parent Ratings at Post intervention after 5-7 weeks. ; Group 1: mean 15 (SD 5.6); n=33, Group 2: mean 16.2 (SD 6.2); n=34; Comments: ARS-IV Parent ratings. The scale yields separate measures for symptoms of inattention and hyperactivity/impulsivity as well as total score.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: WMT - 18.6 (4.3), Control - 17.0 (5.6); Group 1 Number missing: 5, Reason: 1 participant failed to complete training due to low attendance at school, 1
participant refused to meet for second post testing and three excluded from
analysis because of changes in medication.

; Group 2 Number missing: 3, Reason:
1 participant met for pre testing without taking prescribed medication and 2 were
excluded from analysis due to changes in medication.

- Actual outcome for Children and young people: ADHD-Rating Scale IV: Attention (ARS-IV) - Teacher Ratings at Post intervention after 5-7 weeks; Group 1: mean 12.4 (SD 6.6); n=33, Group 2: mean 13.8 (SD 6.8); n=34; Comments: ARS-IV Teacher ratings. The scale yields separate measures for symptoms of inattention and hyperactivity/impulsivity as well as total score.
Risk of bias: All domain - ; Indirectness of outcome: No indirectness

Protocol outcome 4: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: ADHD-Rating Scale IV: Total Score (ARS-IV) - Parent Ratings at Follow -up after 8 months; Group 1: mean 27 (SD 11.5); n=33, Group 2: mean 28.1 (SD 11); n=34; Comments: ARS-IV Parent ratings. The scale yields separate measures for symptoms of inattention and hyperactivity/impulsivity as well as total score.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: WMT - 32.7 (9.), Control - 30.5 (11.6); Group 1 Number missing: 5, Reason: 1 participant failed to complete training due to low attendance at school, 1
participant refused to meet for second post testing and three excluded from
analysis because of changes in medication.

; Group 2 Number missing: 3, Reason:
1 participant met for pre testing without taking prescribed medication and 2 were
excluded from analysis due to changes in medication.

- Actual outcome for Children and young people: ADHD-Rating Scale IV: Attention (ARS-IV) - Parent Ratings at Follow -up after 8 months; Group 1: mean 15.3 (SD 5.3); n=33, Group 2: mean 16.5 (SD 5.6); n=34; Comments: ARS-IV Parent ratings. The scale yields separate measures for symptoms of inattention and hyperactivity/impulsivity as well as total score.
Risk of bias: All domain - ; Indirectness of outcome: No indirectness
- Actual outcome for Children and young people: ADHD-Rating Scale IV: Attention (ARS-IV) - Teacher Ratings at Follow-up after 8 months; Group 1: mean 13.2 (SD 6); n=33, Group 2: mean 14.5 (SD 6.7); n=34; Comments: ARS-IV Teacher ratings. The scale yields separate measures for symptoms of inattention and hyperactivity/impulsivity as well as total score.
Risk of bias: All domain - ; Indirectness of outcome: No indirectness

Protocol outcome 5: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: ADHD-Rating Scale IV: Hyperactivity-Impulsivity (ARS-IV) - Parent Ratings at Post intervention after 5-7 weeks. ; Group 1: mean 10.5 (SD 7.2); n=33, Group 2: mean 11.5 (SD 7); n=34; Comments: ARS-IV Parent ratings. The scale yields separate measures for symptoms of inattention and hyperactivity/impulsivity as well as total score.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low,

Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: WMT - 14.0 (6.1), Control - 13.4 (7.1); Group 1 Number missing: 5, Reason: 1 participant failed to complete training due to low attendance at school, 1
participant refused to meet for second post testing and three excluded from
analysis because of changes in medication.

; Group 2 Number missing: 3, Reason:
1 participant met for pre testing without taking prescribed medication and 2 were
excluded from analysis due to changes in medication.

- Actual outcome for Children and young people: ADHD-Rating Scale IV: Hyperactivity-Impulsivity (ARS-IV) - Teacher Ratings at Post intervention after 5-7 weeks; Group 1: mean 7.5 (SD 5.4); n=33, Group 2: mean 8.1 (SD 6.6); n=34; Comments: ARS-IV Teacher ratings. The scale yields separate measures for symptoms of inattention and hyperactivity/impulsivity as well as total score.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: WMT - 8.3 (6.2), Control - 8.0 (6.4); Group 1 Number missing: 5, Reason: 1 participant failed to complete training due to low attendance at school, 1
participant refused to meet for second post testing and three excluded from
analysis because of changes in medication.

; Group 2 Number missing: 3, Reason:
1 participant met for pre testing without taking prescribed medication and 2 were
excluded from analysis due to changes in medication.

Protocol outcome 6: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: ADHD-Rating Scale IV: Hyperactivity-Impulsivity (ARS-IV) - Parent Ratings at Follow -up after 8 months; Group 1: mean 11.6 (SD 6.7); n=33, Group 2: mean 11.8 (SD 6.2); n=34; Comments: ARS-IV Parent ratings. The scale yields separate measures for symptoms of inattention and hyperactivity/impulsivity as well as total score.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: WMT - 14.0 (6.1), Control - 13.4 (7.1); Group 1 Number missing: 5, Reason: 1 participant failed to complete training due to low attendance at school, 1
participant refused to meet for second post testing and three excluded from
analysis because of changes in medication.

; Group 2 Number missing: 3, Reason:
1 participant met for pre testing without taking prescribed medication and 2 were
excluded from analysis due to changes in medication.

- Actual outcome for Children and young people: ADHD-Rating Scale IV: Hyperactivity-Impulsivity (ARS-IV) - Teacher Ratings at Follow-up after 8 months; Group 1: mean 6.9 (SD 4.8); n=33, Group 2: mean 8.2 (SD 6.7); n=34; Comments: ARS-IV Teacher ratings. The scale yields separate measures for symptoms of inattention and hyperactivity/impulsivity as well as total score.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: WMT - 8.3 (6.2), Control - 8.0 (6.4); Group 1 Number missing: 5, Reason: 1 participant failed to complete training due to low attendance at school, 1
participant refused to meet for second post testing and three excluded from
analysis because of changes in medication.

; Group 2 Number missing: 3, Reason:
1 participant met for pre testing without taking prescribed medication and 2 were
excluded from analysis due to changes in medication.

Protocol outcome 7: Function/behaviour at <3 months
- Actual outcome for Children and young people: BRIEF General Exec. Composite - Parent Ratings at Post intervention after 5-7 weeks. ; Group 1: mean 66 (SD 11); n=33, Group 2: mean 66 (SD 10); n=34; Comments: It is an overall measure based on all 8 scales of the Behaviour Rating Inventory of Executive Function (BRIEF).
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: WMT - 70 (9), Control - 67 (10); Group 1 Number missing: 5, Reason: 1 participant failed to complete training due to low attendance at school, 1
participant refused to meet for second post testing and three excluded from
analysis because of changes in medication.

; Group 2 Number missing: 3, Reason:
1 participant met for pre testing without taking prescribed medication and 2 were

excluded from analysis due to changes in medication.

- Actual outcome for Children and young people: BRIEF General Exec. Composite - Teacher Ratings at Post intervention after 5-7 weeks. ; Group 1: mean 68 (SD 14); n=33, Group 2: mean 69 (SD 13); n=34; Comments: It is an overall measure based on all 8 scales of the Behaviour Rating Inventory of Executive Function (BRIEF).

Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: WMT - 69 (12), Control - 69 (11); Group 1 Number missing: 5, Reason: 1 participant failed to complete training due to low attendance at school, 1
participant refused to meet for second post testing and three excluded from
analysis because of changes in medication.

; Group 2 Number missing: 3, Reason:
1 participant met for pre testing without taking prescribed medication and 2 were
excluded from analysis due to changes in medication.

Protocol outcome 8: Function/behaviour at >6 months
- Actual outcome for Children and young people: BRIEF General Exec. Composite - Parent Ratings at Follow-up after 8 months; Group 1: mean 67 (SD 11); n=33, Group 2: mean 65 (SD 12); n=34; Comments: It is an overall measure based on all 8 scales of the Behaviour Rating Inventory of Executive Function (BRIEF).

Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: WMT - 70 (9), Control - 67 (10); Group 1 Number missing: 5, Reason: 1 participant failed to complete training due to low attendance at school, 1
participant refused to meet for second post testing and three excluded from
analysis because of changes in medication.

; Group 2 Number missing: 3, Reason:

1 participant met for pre testing without taking prescribed medication and 2 were excluded from analysis due to changes in medication.

- Actual outcome for Children and young people: BRIEF General Exec. Composite - Teacher Ratings at Follow-up after 8 months; Group 1: mean 67 (SD 10); n=33, Group 2: mean 69 (SD 13); n=34; Comments: It is an overall measure based on all 8 scales of the Behaviour Rating Inventory of Executive Function (BRIEF).

Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: WMT - 69 (12), Control - 69 (11); Group 1 Number missing: 5, Reason: 1 participant failed to complete training due to low attendance at school, 1 participant refused to meet for second post testing and three excluded from analysis because of changes in medication.

; Group 2 Number missing: 3, Reason: 1 participant met for pre testing without taking prescribed medication and 2 were excluded from analysis due to changes in medication.

Protocol outcome 9: Numeracy outcomes at < 3 months
- Actual outcome for Children and young people: Mathematics score at Post intervention after 5-7 weeks. ; Group 1: mean 8.4 (SD 2.6); n=33, Group 2: mean 7.8 (SD 1.9); n=34; Comments: Two subtests were applied: The mental computation subtest and the un-timed problem-solving subtest.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: WMT - 7.6 (2.2), Control - 7.6 (2.1); Group 1 Number missing: 5, Reason: 1 participant failed to complete training due to low attendance at school, 1 participant refused to meet for second post testing and three excluded from analysis because of changes in medication.

; Group 2 Number missing: 3, Reason: 1 participant met for pre testing without taking prescribed medication and 2 were excluded from analysis due to changes in medication.

Protocol outcome 10: Numeracy outcomes at > 6 months
- Actual outcome for Children and young people: Mathematics score at Follow-up after 8 months; Group 1: mean 8.2 (SD 2.3); n=33, Group 2: mean 7.7 (SD 2.4); n=34; Comments: Two subtests were applied: The mental computation subtest and the un-timed problem-solving subtest.

Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: WMT - 7.6 (2.2), Control - 7.6 (2.1); Group 1 Number missing: 5, Reason: 1 participant failed to complete training due to low attendance at school, 1
participant refused to meet for second post testing and three excluded from
analysis because of changes in medication.

; Group 2 Number missing: 3, Reason:
1 participant met for pre testing without taking prescribed medication and 2 were
excluded from analysis due to changes in medication.

Protocol outcome 11: Literacy outcomes at < 3 months
- Actual outcome for Children and young people: LOGOS Reading fluency, % correct at Post intervention after 5-7 weeks. ; Group 1: mean 96 (SD 5); n=33, Group 2: mean 95 (SD 5); n=34; Comments: Reading ability was assessed with the computerized test battery LOGOS.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: WMT - 92 (6), Control - 94 (7); Group 1 Number missing: 5, Reason: 1 participant failed to complete training due to low attendance at school, 1
participant refused to meet for second post testing and three excluded from
analysis because of changes in medication.

; Group 2 Number missing: 3, Reason:
1 participant met for pre testing without taking prescribed medication and 2 were
excluded from analysis due to changes in medication.

Protocol outcome 12: Literacy outcomes at > 6 months - Actual outcome for Children and young people: LOGOS Reading fluency, % correct at Follow-up after 8 months; Group 1: mean 98 (SD 3); n=33, Group 2: mean 96 (SD 4); n=34; Comments: Reading ability was assessed with the computerized test battery LOGOS. Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: WMT - 92 (6), Control - 94 (7); Group 1 Number missing: 5, Reason: 1 participant failed to complete training due to low attendance at school, 1 participant refused to meet for second post testing and three excluded from analysis because of changes in medication. ; Group 2 Number missing: 3, Reason: 1 participant met for pre testing without taking prescribed medication and 2 were excluded from analysis due to changes in medication.	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	**Evans 2011[147]**
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=49)
Countries and setting	Conducted in USA; Setting: Middle school
Line of therapy	1st line
Duration of study	Intervention time: 39 weeks

Method of assessment of guideline condition	Adequate method of assessment/diagnosis: K-SADS
Stratum	Children and young people
Subgroup analysis within study	Not applicable:
Inclusion criteria	(a) attended one of the two participating middle schools; (b) met diagnostic criteria for at least one subtype of ADHD based on the Kiddie Schedule for Affective Disorders and Schizophrenia, parent and teacher ratings on the Behavioral Assessment System for Children, and ADHD Rating Scale-IV were consistent with the diagnosis; (c) demonstrated academic or social impairment based on parent or teacher report on the Impairment Rating; (d) demonstrated an IQ of 80 or above as measured by the Wechsler Intelligence Scale for Children–Fourth Edition); and (e) did not meet diagnostic criteria for pervasive developmental disorder or any of the following: bipolar disorder, psychosis, substance dependence other than tobacco, or obsessive-compulsive disorder.
Exclusion criteria	not reported
Recruitment/selection of patients	Middle school
Age, gender and ethnicity	Age - Median (range): 11 (10-13). Gender (M:F): 22/9. Ethnicity: Caucasian (70%), followed by African American (14%), Latino (12%), and Asian (4%).
Further population details	1. Age: School age children (6-13 years) (10-13 years). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (DBD-IA (Parent) T 20.4 (4.0) C 19.1 (4.9); DBD-HI (Parent) T 14.5 4.4 C 12.8 5.4. DBD-IA (Teacher) T 14.7 7.7 C 13.1 7.7; DBD-HI (Teacher) T 9.0 7.0 C 6.7 6.7 (DBH= Disruptive Behavior Disorders Rating Scale, IA=inattention subscale; HI=hyperactivity/impulsivity subscale; T=treatment; C=control)).
Extra comments	.
Indirectness of population	No indirectness
Interventions	(n=31) Intervention 1: School/work-based interventions - School-based interventions. In the beginning of the school year a Family Check-Up of three 90-minute sessions. In January an after-school program started for 5 months, twice per week for 2 hours and 15 minutes per meeting (excluding holidays and school breaks), and operating until the end of the school year. The intervention consisted of two parts: Family Check-Up: The three family meetings included an assessment that focused on family coping, family interactions, and how the family solves problems together. Challenging Horizons Program: The schedule of activities in the afterschool program included an education group, an interpersonal skills group (Activities in the interpersonal skills group included social problem

	solving, individual goal setting, and frequent staff feedback (i.e., ratings) on actual performances in structured and unstructured social activities), recreation (played competitive and cooperative games for the purpose of practicing social skills in real-life scenarios.), and individual meeting times (a modification of a similar system used in the Summer Treatment Program (Sibley et al., in press). In the present study, a "levels" system of rewards and privileges was added to help shape behaviors that are typically expected in middle school classrooms. Additional details about the specific interventions provided in the CHP are available elsewhere (Evans et al., 2009; Sadler & Evans, 2011).v) between student participants and "primary counselors." In the present study, primary counselors were undergraduate students who were responsible for establishing a relationship with each participant and then implementing specific group and individual behavioral interventions designed to target student disorganization and study skills. In addition, counselors communicated with their students' teachers on a biweekly basis. The purpose of this communication was to share what was being done in CHP and gather information about participants' progress and problems in the classroom. The information gathered from teachers was used to inform the interventions provided in CHP (e.g., missing assignments, behavior problems). Duration 39 weeks. Concurrent medication/care: Interviews conducted with parents at the end of each school year indicated that 12 of the 18 participants (67%) received medications at some point during the study (nine were taking medication at the beginning of the study). In almost all instances (n=11; 92%), control participants who took medications during the study received medication to treat ADHD and, in some cases, an additional psychiatric medication (n=3; 27%), but in one case (8%), the participant received only an antidepressant. Further details: 1. Location of intervention: In educational or work setting (The intervention was given by undergraduate students at school). 2. Mode of delivery: Mixed involving face to face contact 3. Study design: Parallel trial (n=14) Intervention 2: No treatment. Family Check-up: In the beginning of the school year a Family Check-Up of three 90-minute sessions.. Duration 39 weeks. Concurrent medication/care: Interviews conducted with parents at the end of each school year indicated that 12 of the 18 participants (67%) received medications at some point during the study (nine were taking medication at the beginning of the study). In almost all instances (n=11; 92%), control participants who took medications during the study received medication to treat ADHD and, in some cases, an additional psychiatric medication (n=3; 27%), but in one case (8%), the participant received only an antidepressant. Further details: 1. Location of intervention: In educational or work setting 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Academic or government funding (Supported by the NIMH Grant R34MH073968)
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: SCHOOL-BASED INTERVENTIONS versus NO TREATMENT	

Protocol outcome 1: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire (DBD) (Pelham, Gnagy, Greenslade, & Milich, 1992) Parent
at 39 weeks PT; Group 1: mean 16.4 (SD 5.6); n=31, Group 2: mean 16.9 (SD 6.5); n=14; The Disruptive Behavior Disorders Questionnaire (DBD) (Pelham, Gnagy, Greenslade, & Milich, 1992) Parent 0-27 Top=High is poor outcome; Comments: Use of subscales of the DBD, 9 about hyperactivity/impulsivity and 9 inattention.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - I would have selected unclear for selection bias because they only wrote that the sample was randomised. ; Indirectness of outcome: No indirectness ; Baseline details: Age, sex, Family income, medication use, Lvl of educations parents, IQ of child and social impairment. The severity of the impairment and symptoms was greater for participants taking medication.

; Blinding details: Blinding is impossible for child, parents, teachers and providers. They could have had blind assessors, but did not. ; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire (DBD) (Pelham, Gnagy, Greenslade, & Milich, 1992) Teacher
at 39 weeks PT; Group 1: mean 13.9 (SD 6.9); n=31, Group 2: mean 13.6 (SD 6.2); n=14; The Disruptive Behavior Disorders Questionnaire (DBD) (Pelham, Gnagy, Greenslade, & Milich, 1992) Teacher 0-27 Top=High is poor outcome; Comments: Use of subscales of the DBD, 9 about hyperactivity/impulsivity and 9 inattention.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - I would have selected unclear for selection bias because they only wrote that the sample was randomised. ; Indirectness of outcome: No indirectness ; Baseline details: Age, sex, Family income, Lvl of educations parents, IQ of child and social impairment.; Blinding details: Blinding is impossible for child, parents, teachers and providers. They could have had blind assessors, but did not. ; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 2: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire (DBD) (Pelham, Gnagy, Greenslade, & Milich, 1992) Parent
at 39 weeks PT; Group 1: mean 9.9 (SD 4); n=31, Group 2: mean 12.5 (SD 6.2); n=14; The Disruptive Behavior Disorders Questionnaire (DBD) (Pelham, Gnagy, Greenslade, & Milich, 1992) Parent 0-27 Top=High is poor outcome; Comments: Use of subscales of the DBD, 9 about hyperactivity/impulsivity and 9 inattention.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - I would have selected unclear for selection bias because they only wrote that the sample was randomised. ; Indirectness of outcome: No indirectness ; Baseline details: Age, sex, Family income, Lvl of educations parents, IQ of child and social impairment.; Blinding details: Blinding is impossible for child, parents, teachers and providers. They could have had blind assessors, but did not. ; Group 1 Number missing: 0; Group 2 Number missing: 0

- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire (DBD) (Pelham, Gnagy, Greenslade, & Milich, 1992) Teacher at 39 weeks PT; Group 1: mean 8.4 (SD 6.5); n=31, Group 2: mean 7.5 (SD 6.4); n=14; The Disruptive Behavior Disorders Questionnaire (DBD) (Pelham, Gnagy, Greenslade, & Milich, 1992) Parent 0-27 Top=High is poor outcome; Comments: Use of subscales of the DBD, 9 about hyperactivity/impulsivity and 9 inattention. Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - I would have selected unclear for selection bias because they only wrote that the sample was randomised. ; Indirectness of outcome: No indirectness ; Baseline details: Age, sex, Family income, Lvl of educations parents, IQ of child and social impairment.; Blinding details: Blinding is impossible for child, parents, teachers and providers. They could have had blind assessors, but did not. ; Group 1 Number missing: 0; Group 2 Number missing: 0	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms hyperactivity at <3 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	**Evans 2014[146]**
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=36)
Countries and setting	Conducted in USA; Setting: High school
Line of therapy	1st line
Duration of study	Intervention time: school year (about 9 months)
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: a semistructured interview with the primary caregiver and the adolescent, and behavioral scale
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	(a) consented to participation; (b) attended one of the participating schools; (c)anticipated 80% or more attendance for study activities; (d) met the criteria for ADHD (any subtype)n (e) showed a full-scale IQ over 80

	(f) showed evidence of functional impairment as reported by the primary caregiver and (g) reported no history of substance dependence, psychosis, obsessive-compulsive, or bipolar disorders.
Exclusion criteria	Not reported
Recruitment/selection of patients	flyers at school
Age, gender and ethnicity	Age - Mean (SD): 15.4 (1). Gender (M:F): 30/6. Ethnicity: Not reported
Further population details	1. Age: Young people (13-18 years) (between 13 and 17 years old). 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Extra comments	.
Indirectness of population	No indirectness
Interventions	(n=24) Intervention 1: School/work-based interventions - School-based interventions. The adolescents met in dyadic coaching sessions during one high school year (in-school version of Challenging Horizons Program). In addition, parents attended weekly parent meetings and adolescents attended group sessions targeting social functioning in the evenings for 10 weeks in the fall semester.. Duration 39 weeks. Concurrent medication/care: Not reported, only that control-group participants were using medications at a lower rate than treatment. participants (41.7% as compared with 54.2%) Further details: 1. Location of intervention: In educational or work setting 2. Mode of delivery: Mixed involving face to face contact (face-to face individual for adolescents and group for parents). 3. Study design: Parallel trial (n=12) Intervention 2: No treatment. Parents of participants randomly assigned to the control group were provided with a list of services available in the community and encouraged to pursue care.. Duration 39 weeks. Concurrent medication/care: The control-group participants were using medications at a lower rate than treatment. participants (41.7% as compared with 54.2%) Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Academic or government funding (grant from the National Institute of Mental Health to the first author (R34MH074713))

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: SCHOOL-BASED INTERVENTIONS versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: Disruptive Behavior Disorders Rating Scale- Inattention (Parents) at 39 weeks PT; Group 1: mean 17.3

(SD 5.4); n=24, Group 2: mean 17.8 (SD 5.3); n=12; Disruptive Behavior Disorders Rating Scale- Inattention (Parents) 4 point Likert subscale (0-3), range of subscale unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education Parents, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 2: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: Disruptive Behavior Disorders Rating Scale- Hyperactivity/impulsivity (Parents) at 39 weeks PT; Group 1: mean 10.6 (SD 5.4); n=24, Group 2: mean 11.4 (SD 5.5); n=12; Disruptive Behavior Disorders Rating Scale- Hyperactivity/impulsivity (Parents) 4 point Likert subscale (0-3), range of subscale unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education Parents, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 3: Academic outcome at > 6 months
- Actual outcome for Children and young people: Classroom Performance Survey Scale - Academic Performance (Teacher) at 39 weeks PT; Group 1: mean 20.5 (SD 6.8); n=24, Group 2: mean 25.5 (SD 7.4); n=12; Classroom Performance Survey Scale - Academic Performance (Teacher) 5 point liker scale, range of subscale unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education Parents, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms hyperactivity at <3 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	**Evans 2016[145]**
Study type	RCT (randomised; Parallel)
Number of studies (number of participants)	(n=)
Countries and setting	
Line of therapy	1st line
Duration of study	--:
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: Parent Children's Interview for Psychiatric Syndromes combined with teacher ratings on the Disruptive Behavior Disorders Rating Scale
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	(a)attended one of the participating schools; (b) met full DSM-IV-TR diagnostic criteria for either ADHD-Predominantly Inattentive Type or ADHD-Combined Type ADHD; (c) demonstrated impairment; (d) demonstrated an IQ of 80 or above; and (e) did not meet diagnostic criteria for a pervasive developmental disorder or any of the following: bipolar disorder, psychosis, or obsessive-compulsive disorder.
Exclusion criteria	Not reported
Recruitment/selection of patients	Recruitment was conducted through three primary methods during the spring of the year preceding participation : Study announcement letters were mailed to the parents of all students attending the middle school. School staff directly in- formed parents of some students about the opportunity to participate, and fliers were posted in each school
Age, gender and ethnicity	Age - Range: 11-14. Gender (M:F): 232/94. Ethnicity:

Further population details	1. Age: Young people (13-18 years) (US grade 6 to 8, middle school). 2. Baseline symptom severity: Systematic review: mixed (N=159 Attention-deficit/hyperactivity disorder, combined subtype (all other cases were predominately inattentive)).
Extra comments	(a)attended one of the participating schools; (b) met full DSM-IV-TR diagnostic criteria for either ADHD-Predominantly Inattentive Type or ADHD-Combined Type ADHD; (c) demonstrated impairment; (d) demonstrated an IQ of 80 or above; and (e) did not meet diagnostic criteria for a pervasive developmental disorder or any of the following: bipolar disorder, psychosis, or obsessive-compulsive disorder.
Indirectness of population	No indirectness
Interventions	(n=112) Intervention 1: School/work-based interventions - School-based interventions. Challenging Horizons Prograrn-after school version (CHP-AS). The CHP-AS occurred 2 days per week for 2 hr 15 min per day beginning in September and continuing through the following May. Between six and 10 students were assigned to attend the program at each school. Each after school program day was composed of five daily activities, including a meeting between the participant and a designated staff member (primary counselor time), a group intervention targeting social impairment (ISG), recreation/game time (recreation time),an education/study skills group (education group), and an individual education time for homework completion (individual education time). During the program, a level system was used, with levels determined by daily behavior in the program and reports from teachers about work completion. Participants were randomly assigned to a PC, with no more than two students assigned to one PC.PCs focused on developing a therapeutic relationship, managing progress on the level system, coordinating interventions, and regularly communicating with the students' teachers. At the beginning of the academic year, PCs helped participants organize their binders, bookbags, and lockers according a list of organization criteria in the CHP manual. During the academic year, PCs checked their belongings to monitor continuous adherence to the checklists. Binders and book bags were checked every day of the program and lockers checked every other week. Students corrected the organization of their materials after every check by the PC. PCs also checked students' planners/ agendas to track the accuracy of homework/assignment recording. Assignments were verified by teacher signatures, an electronic grading system, or other means. Education group in the CHP-AS focused on study skills, note-taking, summarizing, and writing skills. Each skill was introduced with direct instruction, which involved demonstration of mastery during the program, and was followed by an application component, which involved application of the skill at home or in class. The ISG is designed to help each student improve their social functioning with peers and adults. Students identify personal social goals and work with their PCs to discuss the degree to which the student's behavior is consistent with his or her goals. Early in the treatment, the focus is on behaviour exhibited during the CHP-AS, but this progressed to targeting social behavior in settings outside of the program. In addition to the activities during ISG, recreation time also served as an opportunity to practice aligning behaviour with social goals as well as to enhance sports skills and knowledge of rules. In addition, three parent meetings were held over the course of the academic year, and the CHP-AS interventions were ex-plained to parents during those meetings.. Duration 39 weeks. Concurrent medication/care: Not reported, 49 of 112 were using

	medications at baseline Further details: 1. Location of intervention: In educational or work setting 2. Mode of delivery: Mixed involving face to face contact 3. Study design: Parallel trial (n=110) Intervention 2: School/work-based interventions - School-based interventions. Students who were randomized to the challenging horizon program-mentoring version (CHP-M) condition received intervention provided by a teacher or other staff member in their school (referred to as a "mentor"). Mentors agreed to meet weekly with their student and biweekly with research staff (i.e., the consultant) over the course of the academic year. Across sites, 99 school staff members served as mentors. Eighty-eight of the mentors worked with one student each, 10 worked with two students each, and one worked with three students. Also, because of unavoidable staffing changes (e.g., teacher going on maternity leave), seven students switched to a second mentor at some point during the academic year. The mentors met with students at varying times during the school day, but most often meetings occurred in the morning before classes, during homeroom, at lunch, or during study halls. The mentors focused on establishing a strong supportive relationship while implementing some of the CHP interventions. As a result, the students in CHP-M received a small portion of the CHP-AS interventions using a service model developed to optimize efficiency and feasibility. The consultants were doctoral students in a clinical or school psychology program or postdoc fellows who received training and supervision from the lead investigators. Consultants followed procedures outlined in the CHP-M manual for reviewing graphs of the student data tracked by the mentors and considering the need for intervention modifications. After these meetings, the mentors were encouraged to schedule a feedback meeting with the students to review progress and discuss any revisions. . Duration 39 weeks. Concurrent medication/care: Not reported, 57 of 110 were using medications at baseline Further details: 1. Location of intervention: In educational or work setting 2. Mode of delivery: Face to face (1 on 1) 3. Study design: Parallel trial (n=104) Intervention 3: No treatment. Participants randomized to the community care (CC)condition received a list of available resources in their community at the start of the school year. Resource lists were developed in collaboration with school staff to include locally available child and family psycho- social and pharmacological intervention options. When families requested. with consent from a legal guardian, a summary report from the intake evaluation was sent to the identified service providers. The researchers did not provide any direct intervention to the individuals in this condition. Duration 39 weeks. Concurrent medication/care: Not reported, 47 of 104 were using medications at baseline Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial

Funding	--

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: SCHOOL-BASED INTERVENTIONS versus SCHOOL-BASED INTERVENTIONS

Protocol outcome 1: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, inattention subscale, Parent at 39 weeks PT; Group 1: mean 12.87 (SD 6.07); n=112, Group 2: mean 13.33 (SD 13.09); n=110; The Disruptive Behavior Disorders Questionnaire, inattention subscale, Parent 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, inattention subscale, Parent at 65 weeks FU; Group 1: mean 10.82 (SD 6.56); n=112, Group 2: mean 13.09 (SD 7.03); n=110; The Disruptive Behavior Disorders Questionnaire, inattention subscale, Parent 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, inattention subscale, Teacher at 39 weeks PT; Group 1: mean 9.79 (SD 7.54); n=112, Group 2: mean 11.07 (SD 6.81); n=110; The Disruptive Behavior Disorders Questionnaire, inattention subscale, Parent 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, inattention subscale, Teacher at 65 weeks FU; Group 1: mean 9.6 (SD 7.44); n=112, Group 2: mean 10.72 (SD 6.84); n=110; The Disruptive Behavior Disorders Questionnaire, inattention subscale, Parent 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 2: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Parent at 39 weeks PT; Group 1: mean 9.04 (SD 6.12); n=112, Group 2: mean 8.95 (SD 5.79); n=110; The Disruptive Behavior Disorders Questionnaire, inattention subscale, Parent 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Parent at 65 weeks FU; Group 1: mean 7 (SD 5.43); n=112, Group 2: mean 7.59 (SD 6.23); n=110; The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Parent 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Teacher at 39 weeks PT; Group 1: mean 4.87 (SD 5.6); n=112, Group 2: mean 5.71 (SD 6.08); n=110; The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Teacher 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Teacher at 65 weeks FU; Group 1: mean 4.99 (SD 6.29); n=112, Group 2: mean 5.02 (SD 5.87); n=110; The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Teacher 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 3: Function/behaviour at >6 months
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, ODD subscale, Parent at 39 weeks PT; Group 1: mean 8.6 (SD 5.59); n=112, Group 2: mean 8 (SD 5.48); n=110
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, ODD subscale, Parent at 65 weeks FU; Group 1: mean 6.79 (SD 5.32); n=112, Group 2: mean 7.14 (SD 5.69); n=110; The Disruptive Behavior Disorders Questionnaire, ODD subscale, Parent unclear Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, ODD subscale, Teacher at 39 weeks PT; Group 1: mean 4.04 (SD 6.05); n=112, Group 2: mean 4.33 (SD 5.15); n=110; The Disruptive Behavior Disorders Questionnaire, ODD subscale, Teacher unclear Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, ODD subscale, Teacher at 65 weeks FU; Group 1: mean 4.05 (SD 5.68); n=112, Group 2: mean 3.88 (SD 4.91); n=110; The Disruptive Behavior Disorders Questionnaire, ODD subscale, Teacher unclear Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 4: Academic outcome at > 6 months
- Actual outcome for Children and young people: Classroom Performance Survey Scale - Academic Performance (Teacher) at 39 weeks PT; Group 1: mean 22.71 (SD 9.28); n=112, Group 2: mean 24.3 (SD 8.92); n=110; Classroom Performance Survey Scale - Academic Performance (Teacher) unclear Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: Classroom Performance Survey Scale - Academic Performance (Teacher) at 65 weeks FU; Group 1: mean 23.83 (SD 9.27); n=112, Group 2: mean 25.6 (SD 9); n=110; Classroom Performance Survey Scale - Academic Performance (Teacher) unclear Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: SCHOOL-BASED INTERVENTIONS versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, inattention subscale, Parent at 39 weeks PT; Group 1: mean 12.87 (SD 6.07); n=112, Group 2: mean 15.16 (SD 6.16); n=104; The Disruptive Behavior Disorders Questionnaire, inattention subscale, Parent 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, inattention subscale, Parent at 65 weeks FU; Group 1: mean 10.82 (SD 6.56); n=112, Group 2: mean 13.98 (SD 6.55); n=104; The Disruptive Behavior Disorders Questionnaire, inattention subscale, Parent 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, inattention subscale, Teacher at 39 weeks PT; Group 1: mean 9.79 (SD 7.54); n=112, Group 2: mean 11.05 (SD 7.2); n=104; The Disruptive Behavior Disorders Questionnaire, inattention subscale, Teacher 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, inattention subscale, Teacher at 65 weeks FU; Group 1: mean 9.6 (SD 7.44); n=112, Group 2: mean 10.36 (SD 7.65); n=104; The Disruptive Behavior Disorders Questionnaire, inattention subscale, Parent 0-27 Top=--
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 2: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Parent at 39 weeks PT; Group 1: mean 9.04 (SD 6.12); n=112, Group 2: mean 9.33 (SD 6.06); n=104; The Disruptive Behavior Disorders Questionnaire, hyperactivity subscale, Parent 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Parent at 65 weeks FU; Group 1: mean 7 (SD 5.43); n=112, Group 2: mean 8.2 (SD 5.99); n=110; The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Parent 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Teacher at 39 weeks PT; Group 1: mean 4.87 (SD 5.6); n=112, Group 2: mean 6.1 (SD 5.92); n=104; The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Teacher 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Teacher at 65 weeks FU; Group 1: mean 4.99 (SD 6.29); n=112, Group 2: mean 5.74 (SD 6.78); n=104; The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Teacher 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 3: Function/behaviour at >6 months
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, ODD subscale, Parent at 39 weeks PT; Group 1: mean 8.6 (SD 5.59); n=112, Group 2: mean 8.55 (SD 5.32); n=104; The Disruptive Behavior Disorders Questionnaire, ODD subscale, Parent Unclear Top=High is poor outcome
Risk of bias: All domain - ; Indirectness of outcome: No indirectness
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, ODD subscale, Parent at 65 weeks FU; Group 1: mean 6.79 (SD 5.32); n=112, Group 2: mean 8.07 (SD 5.24); n=104; The Disruptive Behavior Disorders Questionnaire, ODD subscale, Parent unclear Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, ODD subscale, Teacher at 39 weeks PT; Group 1: mean 4.04 (SD 6.05); n=112, Group 2: mean 4.34 (SD 5.18); n=104; The Disruptive Behavior Disorders Questionnaire, ODD subscale, Teacher unclear Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race,

Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, ODD subscale, Teacher at 65 weeks FU; Group 1: mean 4.05 (SD 5.68); n=112, Group 2: mean 3.75 (SD 5.67); n=104
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 4: Academic outcome at > 6 months
- Actual outcome for Children and young people: Classroom Performance Survey Scale - Academic Performance (Teacher) at 39 weeks PT; Group 1: mean 22.71 (SD 9.28); n=112, Group 2: mean 24.48 (SD 8.36); n=104; Classroom Performance Survey Scale - Academic Performance (Teacher) unclear Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: Classroom Performance Survey Scale - Academic Performance (Teacher) at 65 weeks FU; Group 1: mean 23.83 (SD 9.27); n=112, Group 2: mean 24.66 (SD 9.26); n=104; Classroom Performance Survey Scale - Academic Performance (Teacher) unclear Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: SCHOOL-BASED INTERVENTIONS versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, inattention subscale, Parent at 39 weeks PT; Group 1: mean 13.33 (SD 6.27); n=110, Group 2: mean 15.16 (SD 6.16); n=104; The Disruptive Behavior Disorders Questionnaire, inattention subscale, Parent 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, inattention subscale, Parent at 65 weeks FU; Group 1: mean 13.09 (SD 7.03); n=110, Group 2: mean 13.98 (SD 6.55); n=104; The Disruptive Behavior Disorders Questionnaire, inattention subscale, Parent 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, inattention subscale, Teacher at 39 weeks PT; Group 1: mean 11.07 (SD 6.81); n=110, Group 2: mean 11.05 (SD 7.2); n=104; The Disruptive Behavior Disorders Questionnaire, inattention subscale, Teacher 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low,

Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, inattention subscale, Teacher at 65 weeks FU; Group 1: mean 10.72 (SD 6.84); n=110, Group 2: mean 10.36 (SD 7.65); n=104; The Disruptive Behavior Disorders Questionnaire, inattention subscale, Parent 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 2: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Parent at 39 weeks PT; Group 1: mean 8.95 (SD 5.79); n=110, Group 2: mean 9.33 (SD 6.06); n=104; The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Parent 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Parent at 65 weeks FU; Group 1: mean 7.59 (SD 6.23); n=110, Group 2: mean 8.2 (SD 5.99); n=104; The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Parent 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low,

Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Teacher at 39 weeks PT; Group 1: mean 5.71 (SD 6.08); n=110, Group 2: mean 6.1 (SD 5.92); n=104; The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Teacher 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Teacher at 65 weeks FU; Group 1: mean 5.02 (SD 5.87); n=110, Group 2: mean 5.74 (SD 6.78); n=104; The Disruptive Behavior Disorders Questionnaire, hyperactive subscale, Teacher 0-27 Top=Unclear
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 3: Function/behaviour at >6 months
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, ODD subscale, Parent at 39 weeks PT; Group 1: mean 8 (SD 5.48); n=110, Group 2: mean 8.55 (SD 5.32); n=104; The Disruptive Behavior Disorders Questionnaire, ODD subscale, Parent unclear Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low,

Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, ODD subscale, Parent at 65 weeks FU; Group 1: mean 7.14 (SD 5.69); n=110, Group 2: mean 8.07 (SD 5.24); n=104; The Disruptive Behavior Disorders Questionnaire, ODD subscale, Parent unclear Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, ODD subscale, Teacher at 39 weeks PT; Group 1: mean 4.33 (SD 5.15); n=112, Group 2: mean 4.34 (SD 5.18); n=110; The Disruptive Behavior Disorders Questionnaire, ODD subscale, Teacher unclear Top=High is poor outcome; Comments: It is school based versus CC
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: The Disruptive Behavior Disorders Questionnaire, ODD subscale, Teacher at 65 weeks FU; Group 1: mean 3.88 (SD 4.91); n=110, Group 2: mean 3.75 (SD 5.67); n=104; The Disruptive Behavior Disorders Questionnaire, ODD subscale, Teacher unclear Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 4: Academic outcome at > 6 months
- Actual outcome for Children and young people: Classroom Performance Survey Scale - Academic Performance (Teacher) at 39 weeks PT; Group 1: mean 24.3 (SD 8.92); n=110, Group 2: mean 24.48 (SD 8.36); n=104; Classroom Performance Survey Scale - Academic Performance (Teacher) unclear Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: Classroom Performance Survey Scale - Academic Performance (Teacher) at 65 weeks FU; Group 1: mean 25.6 (SD 9); n=110, Group 2: mean 24.66 (SD 9.26); n=104; Classroom Performance Survey Scale - Academic Performance (Teacher) unclear Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - High, Incomplete outcome data - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,, Ethnicity, Education Mom, Race, Marital status, Income, ADHD-type, Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms hyperactivity at <3 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months;

	Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	**Fabiano 2010[153]**
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=63)
Countries and setting	Conducted in USA; Setting: School
Line of therapy	1st line
Duration of study	Intervention time: 35 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: Children were diagnosed using evidence-based assessment procedures for ADHD. These included parent and teacher Disruptive Behavior Disorder (DBD) ADHD symptom rating scales and impairment rating scales, plus the semistructured DBD diagnostic interview completed with parent.
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Children with ADHD between 6 and 12 year old attending first through sixth grade.
Exclusion criteria	Not reported
Recruitment/selection of patients	Participation in the study through mailings, radio advertisements, and school, doctor, and professional referrals.
Age, gender and ethnicity	Age - Mean (SD): 8.17 (1.69). Gender (M:F): 54/9. Ethnicity: Caucasian 79%, African American 13%, Asian 0%, Native American 0%, Mixed race 8%, Other 0%.

Further population details	1. Age: School age children (6-13 years) (Children with ADHD between 6 and 12 year old). 2. Baseline symptom severity: (ADHD diagnosis Inattentive 11%, Hyperactive/impulsive 2%, Combined 87%; Comorbid ODD/CD 88%).
Extra comments	.
Indirectness of population	No indirectness
Interventions	(n=33) Intervention 1: School/work-based interventions - School-based interventions. Daily report card (DRC). Consultants conducted an initial meeting with each teacher of children in the DRC group during October of the school year. During this meeting, consultants and teachers used the individualized education plan (IEP) and any other related information to construct a DRC. Between the first and second meeting, the teacher was asked to implement the intervention. At the second consultant visit, target behaviors were refined, and using the data collected by the teacher, criteria for each target behavior was modified (e.g., a child who averaged 10 verbally intrusive behaviors per class would have a target behavior changed to “Has eight or fewer verbally intrusive behaviors”). The third consultant visit was conducted to fine-tune and troubleshoot the DRC and inform the teacher of the home rewards established by the parents. The DRC included a direct accounting for IEP goals as well as other behavior problems common to a child with ADHD, and it is necessarily idiosyncratic— unique to each child. A standard list of common DRC goals has been created and was used to facilitate this target behavior selection. The consultant could also add targets beyond those explicitly listed in the IEP that were appropriate for the current classroom situation, and this was typical, especially for social/behavioral targets . The DRC was evaluated and completed by the teacher daily, and feedback was provided to the child throughout the day on progress made toward DRC goals. The teacher was asked to implement the other procedures outlined in the IEP (i.e., academic interventions) as planned. At the end of each day, the teacher sent the DRC home with the child so that the parent received feedback on a daily basis regarding the child’s behavior at school. Parents attended three individual parent training meetings with the consultant conducted in parallel with the teacher meetings (generally held in the school library or cafeteria) to introduce them to the DRC. During these meetings, they established home-based rewards contingent on the child’s DRC performance Parents were encouraged to develop a menu of rewards and to place the rewards in a hierarchy (i.e., the longest duration of computer time was provided for obtaining 90%–100% of DRC goals, whereas a shorter duration was available for obtaining 70%–80% of DRC goals). In addition to the home-based contingency management determined from school feedback, which made the child accountable at home for school based behavior, the DRC served as a mechanism of daily communication between the parent and teacher. The consultant and parent also collaboratively constructed a plan for nightly homework and “returning completed homework” was targeted on all DRCs After the three initial meetings with the child’s teacher, consultants met monthly with the teacher to provide feedback on the child’s behavior during the month using a graphical representation of DRC performance. This information was used for data-driven decision making, and DRC targets were adjusted throughout the

	school year. . Duration 35. Concurrent medication/care: Prescribed medication for ADHD 46% (60% in the other group). Children received specialised education in both groups. Further details: 1. Location of intervention: In educational or work setting (School). 2. Mode of delivery: Mixed involving face to face contact (Teachers and parents were trained.). 3. Study design: Parallel trial (n=30) Intervention 2: No treatment. Business as usual (BAU). Consultants conducted an initial meeting with each teacher of children in the BAU group. During this meeting, consultants and teachers used the IEP and any other related information to construct an individualized target behavior evaluation (ITBE). Follow-up meetings were conducted in the same manner as described for the DRC group. Teachers in the BAU group were instructed to work with the child the same way they would with any other child who had an individualized education plan (IEP). Teachers and parents were contacted monthly in the BAU condition and asked general questions about the child's functioning. The ITBE was completed each day by the teacher, and it was adjusted (i.e., behavioral criteria modified; targets modified) based on parent or teacher report in these phone calls or a review of monthly ITBEs. Teachers were mailed quarterly graphs of ITBE results. Thus, in the BAU condition, the ITBE was constructed in the same manner as the DRC, and it was completed every day. However, it was used as an idiosyncratic rating scale, not an intervention. The BAU condition was used solely to monitor functioning—it did not provide communication between the parent and teacher; it was not used to provide students feedback on behavior; it did not result in any contingency management for the child's behavior; and it was not formally used to make data-driven decisions related to monitoring/ intervening with the child. . Duration 35 weeks. Concurrent medication/care: Prescribed medication for ADHD 60% (46% in the other group). Children received specialised education in both groups. Further details: 1. Location of intervention: In educational or work setting (School). 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Academic or government funding (Department of Education, Institute of Education Sciences Grant R324J06024.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: SCHOOL-BASED INTERVENTIONS versus NO TREATMENT

Protocol outcome 1: ADHD symptoms total at >6 months

- Actual outcome for Children and young people: Disruptive Behavior Disorders rating scale, ADHD subscale
at 35 weeks PT; Group 1: mean 1.05 (SD 0.65); n=33, Group 2: mean 1.23 (SD 0.65); n=27; Disruptive Behavior Disorders rating scale, ADHD subscale Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education Parents, Type of special education, Ethnicity, Race, Marital status, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Group 1 Number missing: 0; Group 2 Number missing: 3, Reason: participants dropped out after learning group assignment

Protocol outcome 2: Function/behaviour at <3 months
- Actual outcome for Children and young people: Disruptive Behavior Disorders rating scale, ODD/CD subscale
at 35 weeks PT; Group 1: mean 0.48 (SD 0.53); n=33, Group 2: mean 0.81 (SD 0.79); n=27; Disruptive Behavior Disorders rating scale, ODD/CD subscale Mean score of a 4 point Likert subscale (0-3) Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education Parents, Type of special education, Ethnicity, Race, Marital status, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Group 1 Number missing: 0; Group 2 Number missing: 3, Reason: participants dropped out after learning group assignment

Protocol outcome 3: Numeracy outcomes at > 6 months
- Actual outcome for Children and young people: Woodcock-Johnson, math subscale

at 35 weeks PT; Group 1: mean 97.31 (SD 14.97); n=33, Group 2: mean 95.63 (SD 16.66); n=27; Woodcock-Johnson, math subscale Unclear Top=Unclear
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education Parents, Type of special education, Ethnicity, Race, Marital status, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Group 1 Number missing: 0; Group 2 Number missing: 3, Reason: participants dropped out after learning group assignment

Protocol outcome 4: Literacy outcomes at > 6 months
- Actual outcome for Children and young people: Woodcock-Johnson, reading subscale

at 35 weeks PT; Group 1: mean 95.91 (SD 13.17); n=33, Group 2: mean 94.37 (SD 18.86); n=27; Woodcock-Johnson, reading subscale Unclear Top=Unclear
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education Parents, Type of special education, Ethnicity, Race, Marital status, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Group 1 Number missing: 0; Group 2 Number missing: 3, Reason: participants dropped out after learning group assignment

Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Literacy outcomes at < 3 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	**Fabiano 2012[151]**
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=55)
Countries and setting	Conducted in USA
Line of therapy	1st line
Duration of study	Intervention + follow up: 16 weeks
Method of assessment of guideline condition	Partially adequate method of assessment/diagnosis: Children were diagnosed with ADHD through mother, father, and teacher Disruptive Behavior Disorder (DBD) rating scales and a semistructured DBD interview with the child's parents (Pelham, Gnagy, Greenslade, & Milich, 1992).

Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Male caregivers and their 6- to 12-year-old children with ADHD.
Exclusion criteria	Participants were excluded from the study if the child had an estimated IQ below 80, psychosis, or pervasive developmental disorder. The child and parent also had to be able to speak and understand English.
Recruitment/selection of patients	Recruited through radio advertisements, mailings, and school/paediatrician referrals.
Age, gender and ethnicity	Age - Mean (SD): 8.52 (1.29). Gender (M:F): 48/7. Ethnicity: Child race/ethnicity: Int: 88% Caucasian 13% AA 0% Biracial; 0% Hispanic=Latino, WL: 85% Caucasian 11% AA 4% Biracial; 11% Hispanic=Latino Father race/ethnicity: INT: 89% Caucasian, 11% AA; 4% Hispanic=Latino WL: 82% Caucasian 11% AA 8% Biracial; 4% Hispanic=Latino
Further population details	1. Age: School age children (6-13 years) (6- to 12-year-old child). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (-).
Indirectness of population	No indirectness
Interventions	(n=27) Intervention 1: Carer and family training programmes - Programmes including the person with ADHD. 2 hours per week. During the first hour, fathers learned how to implement effective parenting strategies in a group setting through homework review, viewing videotapes of parenting errors, discussing and identifying the errors, and generating solutions (Cunningham, 1996; Cunningham et al., 1995; Cunningham, Bremner, & Secord, 1998; Cunningham, Davis, Bremner, Dunn, & Rzasa, 1993). Further, the group facilitator (a clinical psychologist) modelled the use of the parenting strategy consistent with the COPE manual (see Cunningham et al., 1998). Parent training topics included (a) constructing a home-based daily report card and reward system, (b) attending to positive behavior, (c) ignoring minor inappropriate behavior, (d) issuing effective commands, (e) using ‘‘When–Then’’ contingencies and transitional warnings, (f) using time out, (g) problem solving, and (h) planning for maintenance. Concurrently, children practiced soccer skill drills with undergraduate counselors using procedures for teaching sport skill competencies combined with a contingency management approach for appropriate behavior (e.g., Pelham et al., 2005). Then, during the 2nd hour, the parent and child groups joined together for a soccer game. The soccer game provided a context for the fathers to interact with their children and practice the parenting strategies taught in the classroom (e.g., praise, using effective commands) and for clinicians to provide feedback.. Duration 8 weeks. Concurrent medication/care: Percent of children taking medication for ADHD: 54% Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Mixed involving face to face contact 3. Study design: Parallel trial

	(n=28) Intervention 2: No treatment. Waitlist group. Fathers assigned to the waitlist group were evaluated 8 weeks later and again for a 1-month follow-up. Following the 1-month follow-up evaluation, families assigned to the waitlist condition enrolled in the COACHES program. . Duration 12 weeks. Concurrent medication/care: Percent of children taking medication for ADHD: 54% Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Academic or government funding (National Institute of Mental Health (MH 078051))

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PROGRAMMES INCLUDING THE PERSON WITH ADHD versus NO TREATMENT

Protocol outcome 1: Function/behaviour at <3 months
- Actual outcome for Children and young people: Eyberg Child Behavior Inventory (ECBI) Father rated, Intensity rating subscale (objective) at 8 weeks PT; Group 1: mean 56.96 (SD 6.93); n=27, Group 2: mean 60.65 (SD 9.33); n=28
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child/father), Ethnicity and Race (child/father), Marital status, Income, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded. Parent(s) rated outcome of the child.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: Eyberg Child Behavior Inventory (ECBI) Mother rated, Intensity rating subscale (objective) at 8 weeks PT; Group 1: mean 56.75 (SD 8.42); n=27, Group 2: mean 61.8 (SD 8.92); n=28; Eyberg Child Behavior Inventory (ECBI) (Eyberg & Pincus, 1999) 36-252 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child/father), Ethnicity and Race (child/father), Marital status, Income, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: RCT's into psychological interventions cannot be blinded. Parent(s) rated outcome of the child.

; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: Eyberg Child Behavior Inventory (ECBI) Father rated, Intensity rating subscale (objective) at 1 month FU; Group 1: mean 62.09 (SD 11.35); n=23, Group 2: mean 63.35 (SD 11.61); n=23; Eyberg Child Behavior Inventory (ECBI) 36-252 Top=High is poor

outcome Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child/father), Ethnicity and Race (child/father), Marital status, Income, IQ , Comorbid behavioral disorders, Children taking medication. ; Blinding details: RCT's into psychological interventions cannot be blinded. Parent(s) rated outcome of the child. ; Group 1 Number missing: 4, Reason: Did not complete assessment; Group 2 Number missing: 5, Reason: Did not complete assessment - Actual outcome for Children and young people: Eyberg Child Behavior Inventory (ECBI) Mother rated, Intensity rating subscale (objective) at 1 month FU; Group 1: mean 57.5 (SD 9.56); n=23, Group 2: mean 63 (SD 9.53); n=23; Eyberg Child Behavior Inventory (ECBI) 36-252 Top=High is poor outcome Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness; Baseline details: Sex, Age (child/father), Ethnicity and Race (child/father), Marital status, Income, IQ , Comorbid behavioral disorders, Children taking medication. ; Blinding details: RCT's into psychological interventions cannot be blinded. Parent(s) rated outcome of the child. ; Group 1 Number missing: 4, Reason: Did not complete assessment; Group 2 Number missing: 5, Reason: Did not complete assessment	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	**Fehlings 1991[156]**
Study type	RCT (randomised; Parallel)
Number of studies (number of participants)	1 (n=26)
Countries and setting	Conducted in Canada; Setting: Clinic

Line of therapy	1st line
Duration of study	Intervention + follow up: 39 weeks (17 weeks PT 22 weeks FU)
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: Diagnostic Interview for Children and Adolescents (DICA) structured interview
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	(l) boys between the ages of 7 and 13 years, (2) diagnosis of attention deficit hyperactivity disorder (ADHD) (DSM 3-R)' 8 ascertained by history and Diagnostic Interview for Children and Adolescents (DICA) structured interview , 19 (3) a rating by parents of 15 or greater on the Conners 10 Item scale,20 and 150 or greater on the Self-Control Rating Scale,2 1 and (4) a score of 85 or greater on the Wechsler Intelligence Scale for Children-Revised (WISC-R) verbal subtests.
Exclusion criteria	Children were excluded if they (1) were on stimulant medication (i .e., methylphenidate), or (2) met the criteria for conduct disorder or other major psychiatric disorders on the DLCA structured interview.
Recruitment/selection of patients	Referred from paediatricians or school boards to the Child Development Clinic, Hospital for Sick Children.
Age, gender and ethnicity	Age - Mean (SD): 9.35 (1.58). Gender (M:F): 26/0. Ethnicity: Not reported
Further population details	1. Age: School age children (6-13 years) (7-13 years). 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Extra comments	.
Indirectness of population	No indirectness
Interventions	(n=13) Intervention 1: Cognitive behavioural therapies - CBT. Children randomized to CBT received direct instruction in cognitive behavioral strategies that were reinforced using a token contingency reward system. Problem solving was broken down to a five-step process that included (1) defining the problem, (2) setting a goal , (3) generating workable problem-solving strategies, (4) choosing a solution , and (5) evaluating the outcome with self-reinforcement. The child was taught these steps using modelling , role playing, self--instructional training, cue cards, homework assignments, and behavioral techniques (contingent social reinforcement, token system , and response cost). Initially problems and tasks were academically based.

	These included perceptual, classifying, memory, divergent thinking, and reasoning tasks . They were then changed to interpersonal activities , with a focus on home behavior. Examples of common problems identified by the children were fighting with siblings, not finishing homework, and difficulty getting ready in the morning . Children in the control group received the same amount of exposure to the therapist and tasks, and the same number of rewards as children assigned to CBT, however they were not instructed in cognitive behavioral strategies . In the family sessions for the CBT group, parents received education about ADHD and instruction in CBT and how they could encourage their child to use it. This included a specific focus on positively reinforcing the child's efforts to use CBT to solve problems arising in the home . Specific home problems were identified and targeted . Families in the control group received education about ADHD, and the same time and exposure to the behavioral therapist as the CBT group, however instruction in CBT was replaced with supportive listening . A treatment manual outlining each treatment was written. . Duration 17 weeks. Concurrent medication/care: Children were not using stimulant medication at the start of the trial Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Face to face (1 on 1) 3. Study design: Parallel trial (n=13) Intervention 2: No treatment. Supportive therapy. Treatment was provided by one behavioral therapist and consisted of 12 60-minute individual sessions with the child and the behavioral therapist at the clinic, twice weekly, and 8 2-hour sessions once every 2 weeks with the family in their homes.. Duration 17 weeks. Concurrent medication/care: Children were not using stimulant medication at the start of the trial. Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Face to face (1 on 1) 3. Study design: Parallel trial
Funding	Academic or government funding (Toronto Hospital for Sick Children Foundation)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: CBT versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Revised Behavior Problem Checklist-Attention Problem Subscale (BPC-AP Subscale) Parent

at 17 weeks PT; Group 1: mean 13.9 (SD 6.7); n=13, Group 2: mean 17.7 (SD 8.3); n=12; Revised Behavior Problem Checklist-Attention Problem Subscale (BPC-AP Subscale) Parent unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Age, IQ , ADHD symptoms, cognitive functioning, ; Blinding details: Blinded teacher ratings ; Group 1 Number missing: 0, Reason:

; Group 2 Number missing: 1, Reason: One child initially identified and enrolled in the supportive therapy group was subsequently diagnosed to have a primary language disorder rather than ADHD and was excluded from all analyses.

- Actual outcome for Children and young people: Revised Behavior Problem Checklist-Attention Problem Subscale (BPC-AP Subscale) Teacher

at 17 weeks PT; Group 1: mean 13.5 (SD 4.7); n=13, Group 2: mean 17.7 (SD 4.9); n=12; Revised Behavior Problem Checklist-Attention Problem Subscale (BPC-AP Subscale) Teacher Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Age, IQ , ADHD symptoms, cognitive functioning, ; Blinding details: Blinded teacher ratings ; Group 1 Number missing: 0, Reason:

; Group 2 Number missing: 1, Reason: One child initially identified and enrolled in the supportive therapy group was subsequently diagnosed to have a primary language disorder rather than ADHD and was excluded from all analyses.

- Actual outcome for Children and young people: Revised Behavior Problem Checklist-Attention Problem Subscale (BPC-AP Subscale) Parent

at 39 weeks FU; Group 2: mean 14.5 (SD 8.6); n=12; Revised Behavior Problem Checklist-Attention Problem Subscale (BPC-AP Subscale) Parent Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Age, IQ , ADHD symptoms, cognitive functioning, ; Blinding details: Blinded teacher ratings ; Group 1 Number missing: 0, Reason:

; Group 2 Number missing: 1, Reason: One child initially identified and enrolled in the supportive therapy group was subsequently diagnosed to have a primary language disorder rather than ADHD and was excluded from all analyses.

- Actual outcome for Children and young people: Revised Behavior Problem Checklist-Attention Problem Subscale (BPC-AP Subscale) Teacher

at 39 weeks FU; Group 1: mean 12.9 (SD 9.4); n=13, Group 2: mean 14.1 (SD 9.4); n=12; Revised Behavior Problem Checklist-Attention Problem Subscale (BPC-AP Subscale) Teacher Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Age, IQ , ADHD symptoms, cognitive functioning, ; Blinding details: Blinded teacher ratings ; Group 1 Number missing: 0, Reason:

	; Group 2 Number missing: 1, Reason: One child initially identified and enrolled in the supportive therapy group was subsequently diagnosed to have a primary language disorder rather than ADHD and was excluded from all analyses. Protocol outcome 2: ADHD symptoms hyperactivity at <3 months - Actual outcome for Children and young people: Modified Werry Weiss Activity Scale (Parent) at 17 weeks PT; Group 1: mean 26.2 (SD 8.7); n=13, Group 2: mean 37.2 (SD 19.3); n=12; Modified Werry Weiss Activity Scale (Parent) Unclear Top=High is poor outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Age, IQ , ADHD symptoms, cognitive functioning, ; Blinding details: Blinded teacher ratings ; Group 1 Number missing: 0, Reason: ; Group 2 Number missing: 1, Reason: One child initially identified and enrolled in the supportive therapy group was subsequently diagnosed to have a primary language disorder rather than ADHD and was excluded from all analyses. - Actual outcome for Children and young people: Modified Werry Weiss Activity Scale (Parent) at 39 weeks PT; Group 1: mean 24.9 (SD 7.9); n=13, Group 2: mean 32.6 (SD 20.6); n=12; Modified Werry Weiss Activity Scale (Parent) Unclear Top=High is poor outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Age, IQ , ADHD symptoms, cognitive functioning, ; Blinding details: Blinded teacher ratings ; Group 1 Number missing: 0, Reason: ; Group 2 Number missing: 1, Reason: One child initially identified and enrolled in the supportive therapy group was subsequently diagnosed to have a primary language disorder rather than ADHD and was excluded from all analyses.
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3

	months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Ferrin 2016[159]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=69)
Countries and setting	Conducted in United Kingdom
Line of therapy	1st line
Duration of study	Intervention + follow up: 6 weeks + 6 months FU
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: 10.71 (3.12)
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Inclusion criteria were a) diagnosis of ADHD, any subtype, according to DSM-IV, with diagnosis confirmed by clinical interview with a child psychologist, b) age of child between 3 and 19 years, either sex, c) informed consent of the parents and the children, d) parents' age greater than or equal to 18 years, e) responsibility and legal capacity of parents, and f) stabilizing medication for 1 month prior to baseline assessment.
Exclusion criteria	Exclusion criteria included a) severe learning disabilities (IQ<70), b) autistic spectrum disorder as primary diagnosis, c) children with any clinically significant or unstable medical or psychiatric condition, and d) children whose families had received any similar school-based individual and/or group treatments at any point in time. Families who had received a similar intervention were also excluded to avoid carryover effects of previous interventions.
Recruitment/selection of patients	Children and adolescents (age range 5 - 18) consecutively attending a Child and Adolescent Mental Health Service in the South London and Maudsley catchment area (London, UK) were enrolled over a 2 year period (2010-2012).
Age, gender and ethnicity	Age - Mean (SD): . Gender (M:F): 60 males, 9 female. Ethnicity: Majority White British, remainder White & Black Caribbean, Other mixed, Caribbean, African, White & Black African, Black British, Indian.
Further population details	1. Age: School age children (6-13 years) (5 - 18 years). 2. Baseline symptom severity: Mixed population
Extra comments	. Children presenting with other co-morbidities or children receiving medication for ADHD were not excluded from the study, but were not allowed to switch drugs or alter the dosage during the 6 week duration of the program. Participants were not permitted to attend any other educational parent training/psycho education groups until having completed the study. Parents and children/adolescents in both intervention and control groups were allowed to receive treatment as usual at their own clinics.
Indirectness of population	No indirectness
Interventions	(n=35) Intervention 1: Coaching, mentoring, psychoeducation, counselling - Psychoeducation. Psycho Education - Comprised 5 successive groups of 7 to 10 families, who received six sessions of 2 hr at weekly

	intervals. Families were primarily educated on the disorder, they were only very briefly introduced to a range of behavioral strategies for managing ADHD symptoms and reducing defiant behavior during the last three sessions. Two experienced child/adolescent psychiatrists and one psychologist conducted all the sessions. . Duration 6 weeks. Concurrent medication/care: Parents and children/adolescents in both intervention and control groups were allowed to receive treatment as usual at their own clinics. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Face to face (group intervention) 3. Study design: Parallel trial (RCT). (n=34) Intervention 2: No treatment. Treatment as usual - families continued routine medical care as usual with their clinicians; they were offered the opportunity to join the psychoeducation group once their collaboration with the study had ended. Control participants received monthly follow-up appointments with their community team for controlling the symptoms and for monitoring the medication. Did not receive any specific psychological or educational intervention. Were given 2 page information leaflets about ADHD and its treatment and encouraged to consult with the clinician or make use of internet sources. Participants were contacted by study staff only to complete the follow-up assessments. . Duration 6 weeks. Concurrent medication/care: Parents and children/adolescents in both intervention and control groups were allowed to receive treatment as usual at their own clinics. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial (RCT).
Funding	Academic or government funding (This study has been funded by the South London and Maudsley NHS Charitable funds. Maite Ferrin also received economic support from the Insituto de Salud Carlos III, Consejeria de Saud, Junta de Andalucia, Gobierno de Navarra and Fundacion Alicia Koplowitz.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PSYCHOEDUCATION versus TREATMENT AS USUAL

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Conners parent rating scale - inattention at 6 weeks PT; Group 1: mean 13.83 (SD 3.63); n=35, Group 2: mean 12.38 (SD 4.99); n=34
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 3, Reason: Dropped out of trial. ; Group 2 Number missing: 4, Reason: Dropped out of trial.

Protocol outcome 2: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: Conners parent rating scale - inattention at 6 month FU; MD; 3.52 (95%CI 0.86 to 6.18);
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 3, Reason: Dropped out of trial. ; Group 2 Number missing: 4, Reason: Dropped out of trial.

Protocol outcome 3: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: Conners parent rating scale - hyperactivity/impulsivity at 6 weeks PT; Group 1: mean 12.86 (SD 3.54); n=35, Group 2: mean 11.21 (SD 5.21); n=34
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 3, Reason: Dropped out of trial. ; Group 2 Number missing: 4, Reason: Dropped out of trial.

Protocol outcome 4: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: Conners parent rating scale - hyperactivity/impulsivity at 6 months FU; MD; 3.06 (95%CI 0.78 to 6.05);
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 3, Reason: Dropped out of trial. ; Group 2 Number missing: 4, Reason: Dropped out of trial.

Protocol outcome 5: Function/behaviour at <3 months
- Actual outcome for Children and young people: Conners parent rating scale - opposition at 6 weeks PT; Group 1: mean 12.09 (SD 4.01); n=35, Group 2: mean 11.76 (SD 4.5); n=34
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 3, Reason: Dropped out of trial. ; Group 2 Number missing: 4, Reason: Dropped out of trial.
- Actual outcome for Children and young people: SDQ parent rated at 6 weeks PT; Group 1: mean 22.5 (SD 5.93); n=35, Group 2: mean 21.46 (SD 7.24); n=34
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 3, Reason: Dropped out of trial. ; Group 2 Number missing: 4, Reason: Dropped out of trial.
- Actual outcome for Children and young people: SDQ teacher rated at 6 weeks PT; Group 1: mean 17.74 (SD 4.79); n=35, Group 2: mean 14.44 (SD 4.54); n=34
Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 3, Reason: Dropped out of trial. ; Group 2 Number missing: 4, Reason: Dropped out of trial.

Protocol outcome 6: Function/behaviour at >6 months
- Actual outcome for Children and young people: Conners parent rating scale - opposition at 6 months FU; MD; 1.09 (95%CI -2.02 to 4.21);
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 3, Reason: Dropped out of trial. ; Group 2 Number missing: 4, Reason: Dropped out of trial.
- Actual outcome for Children and young people: SDQ parent rated at 6 months FU; Group 1: mean 21.21 (SD 6.9); n=35, Group 2: mean 22.43 (SD 6.55); n=34

Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 3, Reason: Dropped out of trial. ; Group 2 Number missing: 4, Reason: Dropped out of trial. - Actual outcome for Children and young people: SDQ teacher rated at 6 months FU; Group 1: mean 17.83 (SD 8.2); n=35, Group 2: mean 18.15 (SD 6.03); n=34 Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 3, Reason: Dropped out of trial. ; Group 2 Number missing: 4, Reason: Dropped out of trial.	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Fleming 2015[164]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=33)
Countries and setting	Conducted in USA; Setting: Outpatient
Line of therapy	1st line
Duration of study	Intervention + follow up: 21 weeks (8 weeks PT and 13 weeks FU)
Method of assessment of guideline condition	Partially adequate method of assessment/diagnosis: Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-V; American Psychiatric Association, 2013) criteria for ADHD in adulthood, including symptom onset by age 12 and functional impairment in multiple domains.
Stratum	Adults
Subgroup analysis within study	Not applicable
Inclusion criteria	Define
Exclusion criteria	Define
Recruitment/selection of patients	Undergraduate student seeking treatment were recruited from three universities (one public, two private)
Age, gender and ethnicity	Age - Mean (SD): 21.35 (1.43). Gender (M:F): Define. Ethnicity: White n=19; Latino n=5; Asian n=2; Black n=1; Multi-racial/Other n=6
Further population details	1. Age: Young adults (18-25 years) (students). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (DBT versus control (mean (SD)), Barkley Adult ADHD Rating Scale–4th edition: Inattentive 26.59 (3.71) versus 26.25 (2.75); Hyperactive 11.24 (2.51) versus 11.50 (3.74); Impulsive 8.41 (2.53) versus 9.12 (2.45)).
Indirectness of population	No indirectness
Interventions	(n=19) Intervention 1: Dialectical behaviour therapy (DBT) - DBT. The experimental intervention was

	delivered according to the DBT group skills training format. Given the behavioral targets most relevant to ADHD in adults, and the unique developmental and environmental context of ADHD in, the DBT skills taught in this intervention were adjusted from standard DBT. The intervention included a 15-min individual pre-group meeting focused on motivation enhancement, eight weekly 90-min group sessions focused on skills acquisition and strengthening, and seven weekly 10- to 15-min individual coaching phone calls focused on skills generalization. A 90-min booster group session was held during the first week of the follow-up quarter to promote maintenance of skills use. . Duration 8 weeks. Concurrent medication/care: Two participants receiving DBT and one receiving SH had substantial ADHD medication changes during the study (>25% change in dose or change in medication type). All analyses were conducted with and without medication changes, and with and without participants who did not meet full DSM-V criteria. The pattern of results did not differ; thus, results from the full intent-to-treat sample are reported. Further details: 1. Location of intervention: Clinic (Outpatient). 2. Mode of delivery: Mixed involving face to face contact (group intervention with individual face to face and phone calls). 3. Study design: Parallel trial (n=16) Intervention 2: No treatment. Participants in the skills handouts (SH) comparison treatment condition received 34 pages of SH, drawn from a manual for treatment of adults with ADHD and designed to reflect publicly available self-help materials for ADHD. Topics included the following: (a) psychoeducation about ADHD and executive functioning, (b) organization, (c) planning, (d) time management, (e) structuring environment, and (f) stress management. . Duration 8 weeks. Concurrent medication/care: Two participants receiving DBT and one receiving SH had substantial ADHD medication changes during the study (>25% change in dose or change in medication type). All analyses were conducted with and without medication changes, and with and without participants who did not meet full DSM-V criteria. The pattern of results did not differ; thus, results from the full intent-to-treat sample are reported. Further details: 1. Location of intervention: Home 2. Mode of delivery: Self-help 3. Study design: Parallel trial
Funding	Academic or government funding (This study was supported by the University of Washington—Robert C. Bolles Doctoral Research Fellowship.)
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: DBT versus NO TREATMENT	

Protocol outcome 1: Quality of life at <3 months
- Actual outcome for Adults: Quality of life—ADHD Quality of LifeQuestionnaire (AAQoL)
at 8 weeks PT; Group 1: mean 67.09 (SD 11.24); n=17, Group 2: mean 52.8 (SD 12.6); n=16; Quality of life—ADHD Quality of Life Questionnaire (AAQoL) Unclear Top=High is good outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - 2 participants in the intervention group could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics. True N after randomization was 19.
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Race, Marital status, ADHD-type, IQ, taking medication.

; Blinding details: All but GPA were self-report; Group 1 Number missing: , Reason: 2 participants could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics
; Group 2 Number missing:

Protocol outcome 2: Quality of life at >6 months
- Actual outcome for Adults: Quality of life—ADHD Quality of LifeQuestionnaire (AAQoL)
at 21 weeks FU; Group 1: mean 61.71 (SD 15.26); n=17, Group 2: mean 55.5 (SD 15.19); n=16; Quality of life—ADHD Quality of LifeQuestionnaire (AAQoL) Unclear Top=High is good outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - 2 participants in the intervention group could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics. True N after randomization was 19.
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Race, Marital status, ADHD-type, IQ, taking medication.

; Blinding details: All but GPA were self report; Group 1 Number missing: , Reason: 2 participants could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics
; Group 2 Number missing:

Protocol outcome 3: ADHD symptoms inattention at <3 months
- Actual outcome for Adults: ADHD symptoms—Barkley Adult ADHD Rating Scale–IV (BAARS-IV). Inattention (self-report)

at 8 weeks PT; Group 1: mean 18.94 (SD 4.94); n=17, Group 2: mean 20.94 (SD 5.08); n=16; ADHD symptoms—Barkley Adult ADHD Rating Scale–IV (BAARS-IV). Inattention (self-report) Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low,

Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - 2 participants in the intervention group could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics. True N after randomization was 19.
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Race, Marital status, ADHD-type, IQ, taking medication.

; Blinding details: All but GPA were self report; Group 1 Number missing: , Reason: 2 participants could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics
; Group 2 Number missing:

Protocol outcome 4: ADHD symptoms inattention at >6 months
- Actual outcome for Adults: ADHD symptoms—Barkley Adult ADHD Rating Scale–IV (BAARS-IV). Inattention (self-report)

at 21 weeks FU; Group 1: mean 18.06 (SD 4.92); n=17, Group 2: mean 21.06 (SD 4.12); n=16; ADHD symptoms—Barkley Adult ADHD Rating Scale–IV (BAARS-IV). Inattention (self-report) Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - 2 participants in the intervention group could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics. True N after randomization was 19.
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Race, Marital status, ADHD-type, IQ, taking medication.

; Blinding details: All but GPA were self report; Group 1 Number missing: , Reason: 2 participants could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics
; Group 2 Number missing:

Protocol outcome 5: CGI-I (much improved or very much improved) at <3 months
- Actual outcome for Adults: ADHD symptoms—Barkley Adult ADHD Rating Scale–IV (BAARS-IV). Inattention Response (self-report)

at 8 weeks PT; Group 1: 11/17, Group 2: 6/16; Comments: Measured with the Barkley Adult ADHD Rating Scale–IV (BAARS-IV). Inattention

Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - 2 participants in the intervention group could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics.

True N after randomization was 19.
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Race, Marital status, ADHD-type, IQ, taking medication.

; Blinding details: All but GPA were self report; Group 1 Number missing: , Reason: 2 participants could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics
; Group 2 Number missing:

Protocol outcome 6: CGI-I (much improved or very much improved) at >6 months
- Actual outcome for Adults: ADHD symptoms—Barkley Adult ADHD Rating Scale–IV (BAARS-IV). Inattention Response (self-report)

at 21 weeks FU; Group 1: 11/17, Group 2: 4/16; Comments: Measured with the Barkley Adult ADHD Rating Scale–IV (BAARS-IV). Inattention
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - 2 participants in the intervention group could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics.
True N after randomization was 19.
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Race, Marital status, ADHD-type, IQ, taking medication.

; Blinding details: All but GPA were self-report; Group 1 Number missing: , Reason: 2 participants could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics
; Group 2 Number missing:

Protocol outcome 7: Academic outcome at < 3 months
- Actual outcome for Adults: Grade point averages (GPA) from the academic quarter
at 8 weeks PT; Group 1: mean 3.02 (SD 0.47); n=17, Group 2: mean 3.1 (SD 0.58); n=16; Grade point averages (GPA) from the academic quarter 0-4 Top=High is good outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - 2 participants in the intervention group could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics.
True N after randomization was 19.
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Race, Marital status, ADHD-type, IQ, taking medication.

; Blinding details: All but GPA were self-report; Group 1 Number missing: , Reason: 2 participants could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics
; Group 2 Number missing:

Protocol outcome 8: Academic outcome at > 6 months
- Actual outcome for Adults: Grade point averages (GPA) from the academic quarter
at 21 weeks FU; Group 1: mean 2.97 (SD 0.63); n=17, Group 2: mean 3.19 (SD 0.44); n=16
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - 2 participants in the intervention group could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics. True N after randomization was 19.
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Race, Marital status, ADHD-type, IQ, taking medication.

; Blinding details: All but GPA were self-report; Group 1 Number missing: , Reason: 2 participants could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics
; Group 2 Number missing:

Protocol outcome 9: Emotional dysregulation at < 3 months
- Actual outcome for Adults: Beck Depression Inventory-2nd edition (BDI-2)
at 8 weeks PT;
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - 2 participants in the intervention group could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics. True N after randomization was 19.
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Race, Marital status, ADHD-type, IQ, taking medication.

; Blinding details: All but GPA were self report; Group 1 Number missing: , Reason: 2 participants could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics
; Group 2 Number missing:

Protocol outcome 10: Emotional dysregulation at >6 months
- Actual outcome for Adults: Beck Depression Inventory-2nd edition (BDI-2)
at 21 weeks FU; Group 1: mean 10.76 (SD 9.12); n=17, Group 2: mean 10.75 (SD 9.14); n=16; Beck Depression Inventory-2nd edition (BDI-2) 0-63 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - 2 participants in the intervention group could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics. True N after randomization was 19.
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, Race, Marital status, ADHD-type, IQ, taking medication.

; Blinding details: All but GPA were self report; Group 1 Number missing: , Reason: 2 participants could not participate due to scheduling constraints, they were directly excluded after randomization and not included in any of the analysis, not even baseline characteristics ; Group 2 Number missing:	
Protocol outcomes not reported by the study	ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months

Study	Gelade 2016[180]
Study type	RCT (randomised; Parallel)
Number of studies (number of participants)	1 (n=112)
Countries and setting	Conducted in Netherlands; Setting: Outpatient
Line of therapy	1st line
Duration of study	Intervention time: 10-12 weeks
Method of assessment of guideline condition	Partially adequate method of assessment/diagnosis: Teacher rating on Disruptive Behavior Disorders Rating Scale (DBDRS)
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Dutch speaking children, 7-13 years of age, with a primary clinical diagnosis of ADHD.
Exclusion criteria	Neurologic disorders and intelligence quotient (IQ) below 80
Recruitment/selection of patients	Outpatient
Age, gender and ethnicity	Age - Mean (SD): 9.63 (1.76). Gender (M:F): 85/27. Ethnicity: Not reported
Further population details	1. Age: School age children (6-13 years) (7-13). 2. Baseline symptom severity: Mixed population
Indirectness of population	--
Interventions	(n=39) Intervention 1: Neurofeedback. Neurofeedback and physical activity interventions consisted of 3 individual training sessions a week, with each session lasting 45 minutes including 20 min. of effective training, over a period of 10-12 weeks. Neurofeedback. Theta/beta training was applied with the aim to inhibit theta (4-8 Hz) and reinforce beta (13-

	20 Hz) activity at Cz. The mean number of training sessions of participants who completed the assessments at post intervention (n = 38) was 29 (mean = 28.53; SD = 2.63; range, 19-30 sessions) . Theta/beta index was represented to the participant by simple graphics on a screen. Successful reduction of the theta/ beta index as averaged over l trial relative to session baseline was rewarded with the appearance of a sun and yielded credits. To promote generalization of the learned strategies into daily life, transfer trials were used. Transfer trials were presented without immediate visual feedback and were included from session 11 (25%) and session 21 (50%) onward. To further transfer learned behaviors, participants were instructed to retrieve their neurofeedback experiences by watching printed graphics of the training during school and homework. Compliance was verified by questioning the participants as to whether they used the transfer cards over the intervention period. Transfer cards were used by 84% of the participants . . Duration 10-12 weeks. Concurrent medication/care: Unclear Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Face to face (1 on 1) 3. Study design: Parallel trial (RCT). (n=37) Intervention 2: Exercise/physical activity - Exercise. Neurofeedback and physical activity interventions consisted of 3 individual training sessions a week, with each session lasting 45 minutes including 20 min. of effective training, over a period of 10-12 weeks. Maximum heart rate (HRmax) was determined before the start of the first training session a standard HRmax test. Each training session started with 5 minutes of warming up, followed by five 2-minute moderate intensity exercises at a level of 70%-80% of HRrnax. After a and minute break, five 2-minute vigorous intensity exercises 80%- 100% of HRmax were performed . Each training finished with a 5-minute cool down. Time and heart monitored and registered using a Polar FT4 watch (Polar Electro Oy, Kempele, Finland). The mean number of sessions of participants who completed the assessments at post intervention (n = 34) was 28 (mean = 27.74; SD = 3.56; range, 12-30) . Duration 10-12 weeks. Concurrent medication/care: Unclear Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial (RCT).
Funding	Academic or government funding (This trial is funded by the Netherlands Organization for Health Research and Development (ZonMw): 157 003012.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: NEUROFEEDBACK versus EXERCISE

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: SWAN - inattention - parent rated at 10-12 weeks PT: Group 1: mean 1.11 (SD 0.67); n=39, Group 2:

	mean 1.11 (SD 0.72); n=37 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0 - Actual outcome for Children and young people: SWAN - inattention - teacher rated at 10-12 weeks PT; Group 1: mean 1.3 (SD 0.76); n=39, Group 2: mean 1.33 (SD 0.72); n=35 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 2, Reason: Teacher ratings were missing for 2 participants. Protocol outcome 2: ADHD symptoms hyperactivity at <3 months - Actual outcome for Children and young people: SWAN - hyperactivity - parent rated at 10-12 weeks PT; Group 1: mean 1.02 (SD 0.81); n=39, Group 2: mean 1.07 (SD 0.8); n=37 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0 - Actual outcome for Children and young people: SWAN - hyperactivity - teacher rated at 10-12 weeks PT; Group 1: mean 1.16 (SD 1.11); n=39, Group 2: mean 1.1 (SD 0.94); n=35 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 2, Reason: Teacher ratings were missing for 2 participants. Protocol outcome 3: Function/behaviour at <3 months - Actual outcome for Children and young people: SDQ - parent rated at 10-12 weeks PT; Group 1: mean 14.92 (SD 5.98); n=39, Group 2: mean 15.81 (SD 4.62); n=37 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0 - Actual outcome for Children and young people: SDQ - teacher rated at 10-12 weeks PT; Group 1: mean 15.38 (SD 5.14); n=39, Group 2: mean 15.97 (SD 4.9); n=35 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 2, Reason: Teacher ratings were missing for 2 participants.
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months;

Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months	

Study (subsidiary papers)	Gevensleben 2009[184] (Gevensleben 2010[182], Gevensleben 2009[183], Gevensleben 2010[185], Wangler 2011[479])
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=102)
Countries and setting	Conducted in Germany; Setting: outpatient departments
Line of therapy	1st line
Duration of study	Intervention + follow up: 29 weeks (3,3 weeks (mean group) treatment and 26 weeks follow-up)
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: Diagnoses were based on a semi-structured clinical interview (CASCAP-D) and confirmed using the Diagnostic Checklist for Hyperkinetic Disorders/ADHD by a child and adolescent psychiatrist or a clinical psychologist.
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	All patients fulfilled DSM-IV criteria for ADHD. All children were drug-free and without concurring psychotherapy for at least 6 weeks before starting the training. Most of the children (N = 87, see Table 1) were drug-naïve
Exclusion criteria	Children with comorbid disorders other than conduct disorder, emotional disorders, tic disorder and dyslexia were excluded from the study. All children lacked gross neurological or other organic disorders.
Recruitment/selection of patients	Outpatient departments
Age, gender and ethnicity	Age - Mean (SD): 9.6 (1.2) years. Gender (M:F): 77/17 (dropouts not included). Ethnicity: Not reported
Further population details	1. Age: School age children (6-13 years) (aged 8 to 12 years). 2. Baseline symptom severity: Majority mild symptoms of ADHD (Patients of the outpatient departments of the participating clinics with no urgent need for medication were informed about the study.).
Extra comments	.
Indirectness of population	No indirectness
Interventions	(n=64) Intervention 1: Neurofeedback. The neurofeedback system SAM (Self-regulation and Attention Management), which was developed by our study group, was used for neurofeedback training. It contains several feedback animations to keep the training diversified and appropriate for children. During training, children sat in front of a monitor and controlled a kind of computer game by modulating their brain electrical

activity. In the course of the SCP training the task was to find appropriate strategies to direct a ball upwards (negativity trials) or downwards (positivity trials). In the theta/beta-protocol a bar on the left of the screen (representing theta activity) had to be reduced while simultaneously a bar on the right (representing beta activity) had to be increased. In each SCP training session approximately 120 trials were performed. Negativity (50%) and positivity trials (50%) were presented in random order. A trial lasted for 8 seconds (baseline period: 2 s, feedback period: 6 s). Intertrial interval was set to 5 ± 1 s. Trials of the theta/beta training lasted for 5 minutes at the start of training and were extended to 10 minutes as the training proceeded. Feedback was calculated from Cz (reference: mastoids, bandwidth: 1–30 Hz for theta/beta training and .01–30 Hz for SCP training, respectively, sampling rate: 250 Hz). Baseline values were determined at the beginning of each session (3 minutes). An adjustment within a session was not scheduled. Vertical eye movements, which were recorded with electrodes above and below the left eye, were corrected online using slightly different regression- based algorithms for theta/beta training and SCP. For segments containing artefacts exceeding ±100 lV in the EEG channel and ±200 lV in the EOG channel, no feedback was calculated. Transfer trials, i.e., trials without contingent feedback, were also conducted (about 40% at the beginning of a training block and about 60% at the end of a training block). The children of the NF group were required to practice their focused state (which was practised in the sessions) at home, in different situations (one situation per day, e.g., 'try to be very focused while reading', 'try to stay focused on the ball while playing football this afternoon').

. Duration 3,3 weeks. Concurrent medication/care: All children were drug-free and without concurring psychotherapy for at least 6 weeks before starting the training. Most of the children were drug-naive. Unclear if there was any other treatment given during the intervention period (probably not)

Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Mixed involving face to face contact 3. Study design: Parallel trial

(n=38) Intervention 2: Neurocognitive training - Attention training. The attention skills training was based on 'Skillies', an award-winning German learning software, which primarily exercises visual and auditory perception, vigilance, sustained attention, and reactivity. In 'Skillies', the children had to sail to several islands. On each island, a defined task – each requiring different attention-based skills – has to be solved; e.g., on an island named 'Coloured Reef', fish of different colours swim from one side of the screen to the other and back. All fish must be the same colour. The colour can be modified by clicking on a fish. With every change of direction the fish change their colour (fixed order). Thus, the main aim of this task is to improve vigilance and reactivity. The training was complemented by some self-directed interventions from cognitive therapy to assure comparability to NF, i.e., the children were to compile (meta-)cognitive strategies such as focusing attention, careful processing of tasks and impulse control. Corresponding to the NF group,

	children of the AST group should practise one of the strategies needed to solve a task of the computer-game ('watch like a hawk'), in daily-life situations (as described in the NF section). . Duration 3,3 weeks. Concurrent medication/care: All children were drug-free and without concurring psychotherapy for at least 6 weeks before starting the training. Most of the children were drug-naive. Unclear if there was any other treatment given during the intervention period (probably not) Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Mixed involving face to face contact 3. Study design: Parallel trial
Funding	Academic or government funding (This study was supported by the German Research Foundation (with a joint grant to H.H., G.H.M, and A.R.; HE 4536/2, MO 726/2, RO 698/4).)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: NEUROFEEDBACK versus ATTENTION TRAINING

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Children and young people: German ADHD rating scale (FBB-HKS) Parent total
at 3,3 weeks (mean) PT ; Group 1: mean -0.39 (SD 0.37); n=59, Group 2: mean -0.14 (SD 0.44); n=35; German ADHD rating scale (FBB-HKS) Parent total 20 item with 0-3 severity score, mean score are reported Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: "Mainly due to the non-blind design, it is possible that additional factors not considered in our study may have affected the results; e.g., we did not assess the children's attitude towards and satisfaction with the training directly."

; Group 1 Number missing: 5, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

; Group 2 Number missing: 3, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

- Actual outcome for Children and young people: German ADHD rating scale (FBB-HKS) Teachers total
at 3,3 weeks (mean) PT ; Group 1: mean -0.29 (SD 0.33); n=59, Group 2: mean -0.3 (SD 0.47); n=35; German ADHD rating scale (FBB-HKS) Teachers

total 20 item with 0-3 severity score, mean score are reported Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: “Mainly due to the non-blind design, it is possible that additional factors not considered in our study may have affected the results; e.g., we did not assess the children’s attitude towards and satisfaction with the training directly.”

; Group 1 Number missing: 5, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

; Group 2 Number missing: 3, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

Protocol outcome 2: ADHD symptoms total at >6 months
- Actual outcome for Children and young people: German ADHD rating scale (FBB-HKS) Parent total
at 29,3 weeks (mean) FU; Group 1: mean 1.08 (SD 0.51); n=38, Group 2: mean 1.24 (SD 0.66); n=23; German ADHD rating scale (FBB-HKS) Parent total 20 item with 0-3 severity score, mean score are reported Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - Very high, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - At FU not all data was reported (Teacher scale because of dropout and SDQ emotional subscale with no reason mentioned); Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: “Mainly due to the non-blind design, it is possible that additional factors not considered in our study may have affected the results; e.g., we did not assess the children’s attitude towards and satisfaction with the training directly.”

; Group 1 Number missing: 26, Reason: Per protocol analysis and exclusion of participants who started other treatments.

; Group 2 Number missing: 15, Reason: Per protocol analysis and exclusion of participants who started other treatments.

Protocol outcome 3: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: German ADHD rating scale (FBB-HKS) Parent inattention subscale
at 3,3 weeks (mean) PT ; Group 1: mean -0.48 (SD 0.47); n=59, Group 2: mean -0.19 (SD 0.55); n=38; German ADHD rating scale (FBB-HKS) Parent inattention subscale subscale with 0-3 severity score, mean score are reported Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: “Mainly due to the non-blind design, it is possible that additional factors not considered in our study may have affected the results; e.g., we did not assess the children’s attitude towards and satisfaction with the training directly.”

; Group 1 Number missing: 5, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

; Group 2 Number missing: 3, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

- Actual outcome for Children and young people: German ADHD rating scale (FBB-HKS) Teachers inattention subscale
at 3,3 weeks (mean) PT ; Group 1: mean -0.35 (SD 0.51); n=59, Group 2: mean -0.06 (SD 0.64); n=35; German ADHD rating scale (FBB-HKS) Teachers inattention subscale with 0-3 severity score, mean score are reported Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: “Mainly due to the non-blind design, it is possible that additional factors not considered in our study may have affected the results; e.g., we did not assess the children’s attitude towards and satisfaction with the training directly.”

; Group 1 Number missing: 5, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

; Group 2 Number missing: 3, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

Protocol outcome 4: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: German ADHD rating scale (FBB-HKS) Parent inattention subscale at 29,3 weeks (mean) FU; Group 1: mean 1.49 (SD 0.55); n=38, Group 2: mean 1.56 (SD 0.6); n=23
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - Very high, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - At FU not all data was reported (Teacher scale because of dropout and SDQ emotional subscale with no reason mentioned); Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: “Mainly due to the non-blind design, it is possible that additional factors not considered in our study may have affected the results; e.g., we did not assess the children’s attitude towards and satisfaction with the training directly.”

; Group 1 Number missing: 26, Reason: Per protocol analysis and exclusion of participants who started other treatments.

; Group 2 Number missing: 15, Reason: Per protocol analysis and exclusion of participants who started other treatments.

Protocol outcome 5: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: German ADHD rating scale (FBB-HKS) Parent hyperactivity/impulsivity subscale at 3,3 weeks (mean) PT ; Group 1: mean -0.31 (SD 0.44); n=59, Group 2: mean -0.12 (SD 0.42); n=35; German ADHD rating scale (FBB-HKS) Parent hyperactivity/impulsivity subscale with 0-3 severity score, mean score are reported Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: “Mainly due to the non-blind design, it is possible that additional factors not considered in our study may have affected the results; e.g., we did not assess the children’s attitude towards and satisfaction with the training directly.”

; Group 1 Number missing: 5, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

; Group 2 Number missing: 3, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

- Actual outcome for Children and young people: German ADHD rating scale (FBB-HKS) Teachers hyperactivity/impulsivity subscale at 3,3 weeks (mean) PT ; Group 1: mean -0.21 (SD 0.42); n=59, Group 2: mean -0.01 (SD 0.59); n=35; German ADHD rating scale (FBB-HKS) Teachers hyperactivity/impulsivity subscale with 0-3 severity score, mean score are reported Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: “Mainly due to the non-blind design, it is possible that additional factors not considered in our study may have affected the results; e.g., we did not assess the children’s attitude towards and satisfaction with the training directly.”

; Group 1 Number missing: 5, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

; Group 2 Number missing: 3, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

Protocol outcome 6: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: German ADHD rating scale (FBB-HKS) Parent hyperactivity/impulsivity subscale at 29,3 weeks (mean) FU; Group 1: mean 0.76 (SD 0.68); n=38, Group 2: mean 1 (SD 0.78); n=23; German ADHD rating scale (FBB-HKS) Parent hyperactivity/impulsivity subscale Unclear Top=High is poor outcome
Risk of bias: All domain - ; Indirectness of outcome: No indirectness

Protocol outcome 7: Function/behaviour at <3 months
- Actual outcome for Children and young people: German Rating Scale for Oppositional Defiant/Conduct Disorders (FBB-SSV) Parent Oppositional behaviour

at 3,3 weeks (mean) PT ; Group 1: mean -0.25 (SD 0.44); n=59, Group 2: mean -0.07 (SD 0.53); n=35
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age,

ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: “Mainly due to the non-blind design, it is possible that additional factors not considered in our study may have affected the results; e.g., we did not assess the children’s attitude towards and satisfaction with the training directly.”

; Group 1 Number missing: 5, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

; Group 2 Number missing: 3, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

- Actual outcome for Children and young people: German Rating Scale for Oppositional Defiant/Conduct Disorders (FBB-SSV) Teachers Oppositional behaviour

at 3,3 weeks (mean) PT ; Group 1: mean -0.13 (SD 0.37); n=59, Group 2: mean 0.1 (SD 0.45); n=35; German Rating Scale for Oppositional Defiant/Conduct Disorders (FBB-SSV) Teachers Oppositional behaviour Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: “Mainly due to the non-blind design, it is possible that additional factors not considered in our study may have affected the results; e.g., we did not assess the children’s attitude towards and satisfaction with the training directly.”

; Group 1 Number missing: 5, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

; Group 2 Number missing: 3, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

- Actual outcome for Children and young people: Strength and Difficulties Questionnaire (SDQ; German version) Parent Conduct problems

at 3,3 weeks (mean) PT ; Group 1: mean -0.39 (SD 1.65); n=59, Group 2: mean -0.09 (SD 1.79); n=35; Strength and Difficulties Questionnaire (SDQ; German version) Parent Conduct problems Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: “Mainly due to the non-blind design, it is possible that additional factors not considered in our study may have affected the results; e.g., we did not assess the children’s attitude towards and satisfaction with the training directly.”

; Group 1 Number missing: 5, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

; Group 2 Number missing: 3, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

- Actual outcome for Children and young people: Strength and Difficulties Questionnaire (SDQ; German version) Teachers Conduct problems

at 3,3 weeks (mean) PT ; Group 1: mean -0.36 (SD 1.52); n=59, Group 2: mean -0.24 (SD 1.92); n=35; Strength and Difficulties Questionnaire (SDQ; German version) Teachers Conduct problems Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: “Mainly due to the non-blind design, it is possible that additional factors not considered in our study may have affected the results; e.g., we did not assess the children’s attitude towards and satisfaction with the training directly.”

; Group 1 Number missing: 5, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

; Group 2 Number missing: 3, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

Protocol outcome 8: Function/behaviour at >6 months
- Actual outcome for Children and young people: German Rating Scale for Oppositional Defiant/Conduct Disorders (FBB-SSV) Parent Oppositional behaviour

at 29,3 weeks (mean) FU; Group 1: mean 0.86 (SD 0.74); n=38, Group 2: mean 0.97 (SD 0.71); n=23; German Rating Scale for Oppositional Defiant/Conduct Disorders (FBB-SSV) Parent, Oppositional behaviour Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - Very high, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - At FU not all data was reported (Teacher scale because of dropout and SDQ emotional subscale with no reason mentioned); Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: “Mainly due to the non-blind design, it is possible that additional factors not considered in our study may have affected the results; e.g., we did not assess the children’s attitude towards and satisfaction with the training directly.”

; Group 1 Number missing: 26, Reason: Per protocol analysis and exclusion of participants who started other treatments.

; Group 2 Number missing: 15, Reason: Per protocol analysis and exclusion of participants who started other treatments.

Protocol outcome 9: Emotional dysregulation at < 3 months
- Actual outcome for Children and young people: Strength and Difficulties Questionnaire (SDQ; German version) Parents Emotional problems

at 3,3 weeks (mean) PT ; Group 1: mean -0.37 (SD 1.89); n=59, Group 2: mean 0.03 (SD 3.9); n=35; Strength and Difficulties Questionnaire (SDQ; German version) Parents Emotional problems Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low,

Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: “Mainly due to the non-blind design, it is possible that additional factors not considered in our study may have affected the results; e.g., we did not assess the children’s attitude towards and satisfaction with the training directly.”

; Group 1 Number missing: 5, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

; Group 2 Number missing: 3, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

- Actual outcome for Children and young people: Strength and Difficulties Questionnaire (SDQ; German version) Teachers Emotional problems

at 3,3 weeks (mean) PT ; Group 1: mean -0.39 (SD 2.17); n=59, Group 2: mean -0.82 (SD 2.1); n=35; Strength and Difficulties Questionnaire (SDQ; German version) Teachers Emotional problems Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, ADHD-type, IQ , Comorbid behavioral disorders, Children taking medication.

; Blinding details: “Mainly due to the non-blind design, it is possible that additional factors not considered in our study may have affected the results; e.g., we did not assess the children’s attitude towards and satisfaction with the training directly.”

; Group 1 Number missing: 5, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

; Group 2 Number missing: 3, Reason: Due to immediate need for medical treatment, organisational problems of the parents, loss of motivation or protocol violation.

Quality of life at <3 months; Quality of life at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months	
Protocol outcomes not reported by the study	

Study	Gray 2012[191]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=60)
Countries and setting	Conducted in Canada; Setting: School
Line of therapy	1st line
Duration of study	--: 8 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: ADHD previously diagnosed in the community
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	(a) full time attendance at the residential school; (b) diagnosis of a specific LD and ADHD made in the community before entry to the school; (c) age between 12 and 17 years at inclusion; (d) IQ > 80 (based on WISC-IV scores); and (e) English as the primary spoken language
Exclusion criteria	Students with comorbid diagnoses of conduct disorder, severe aggression, depression, or anxiety requiring specific and immediate treatments were considered ineligible.
Recruitment/selection of patients	School
Age, gender and ethnicity	Age - Mean (SD): 14.3 (1.2). Gender (M:F): 52/8. Ethnicity: Not reported
Further population details	1. Age: Young people (13-18 years) (age between 12 and 17 years). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (SDQ hyp. 7.66 (2.65), IOWA Connors IO teacher 12.38 (3.84), IOWA Connors IO parent 11.78 (3.56); (SDQ hyp. = Strengths and Difficulties Questionnaire Hyperactivity scale, IOWA Connors IO = Inattention/Overactivity subscale total)).
Extra comments	Adolescents (12-17) learning disabilities and comorbid ADHD.
Indirectness of population	No indirectness
Interventions	(n=36) Intervention 1: Neurocognitive training - Memory training. 45 minutes, 4-5 day per week. Cogmed RoboMemoThe WM training program consists of a set of visualspatial and auditory-verbal WM tasks, with a fixed number of trials. The difficulty of each task is adapted to the individual's ability on that task on a trial-by-trial basis. Thus, training takes place at the limit of the individual's working memory capacity. Training plans were individualized and modified based on current performance, but the typical plans included 12 different WM training exercises.. Duration 5 weeks. Concurrent medication/care: Treatment as usual Further details: 1. Location of intervention: In educational or work setting (...the WM training program in a

	school setting). 2. Mode of delivery: Directed self-help (There was supervision from a Cogmed training coach, the intervention is via the computer). 3. Study design: Parallel trial (n=24) Intervention 2: School/work-based interventions - School-based interventions. 45 minutes for 4/5 days a week. Academy of Math; www.autoskill.com), believed to have beneficial effects on math skill development across 10 essential skill areas, including number sense, calculation, equations, measurement, and geometry (Torlakovic, 2011). Computerized placement tests identify skill gaps and create individual training plans that are monitored and automatically adjusted to optimize challenge and remediation. Within each skill area, procedural fluency, conceptual understanding, and strategic competence are targeted. Academy of Math includes features similar to those of the WM training program, including built-in reinforcement and individually based algorithms, adjusted based on student mastery.. Duration 5 weeks. Concurrent medication/care: Treatment as usual Further details: 1. Location of intervention: In educational or work setting 2. Mode of delivery: Directed self-help (It was via the computer). 3. Study design: Parallel trial
Funding	Academic or government funding (Funding for this project was provided by the Ontario Provincial Centre of Excellence for Child and Youth Mental Health at CHEO, the Canada Research Chairs Program, and the Social Science and Humanities Research Council.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: MEMORY TRAINING versus SCHOOL-BASED INTERVENTIONS

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Children and young people: Strengths and Weakness of ADHD-symptoms and Normal-behavior scale (SWAN, Swanson et al., 2001) Teacher
at 8 weeks (3 weeks PT); Group 1: mean 47.82 (SD 21.88); n=36, Group 2: mean 45.6 (SD 15.21); n=24; Strengths and Weakness of ADHD-symptoms and Normal-behavior scale (SWAN, Swanson et al., 2001) Teacher 7 point scale with 30 items Top=High is poor outcome
Risk of bias: All domain - --, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - A neatly preformed RCT with adolescents with severe learning disabilities and comorbid ADHD

; Indirectness of outcome: No indirectness ; Baseline details:

Sex, Age, ADHD severity, academic achievement

; Blinding details: Due to the school-based setting, it was not possible to keep teachers and parents officially 'blind' to condition.

; Group 1 Number missing: 4, Reason: move/left school and withdrew; Group 2 Number missing: 4, Reason: move/left school and withdrew
- Actual outcome for Children and young people: Strengths and Weakness of ADHD-symptoms and Normal-behavior scale (SWAN, Swanson et al., 2001) Parent
at 8 weeks (3 weeks PT); Group 1: mean 64.59 (SD 15.94); n=36, Group 2: mean 63.88 (SD 14.08); n=24; Strengths and Weakness of ADHD-symptoms and Normal-behavior scale (SWAN, Swanson et al., 2001) Parent 7 point scale with 30 items Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, symptoms, academic achievement

; Blinding details: RCT's into psychological interventions cannot be blinded.; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: IOWA Conners scale (Pelham, Milich, Murphy, & Murphy, 1989), Teacher

at 8 weeks (3 weeks PT); Group 1: mean 11.66 (SD 3.7); n=36, Group 2: mean 11.62 (SD 3.41); n=24; IOWA Conners scale (Pelham, Milich, Murphy, & Murphy, 1989) IO subscale, Teacher 0-15 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, symptoms, academic achievement

; Blinding details: RCT's into psychological interventions cannot be blinded.; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: IOWA Conners scale (Pelham, Milich, Murphy, & Murphy, 1989), Parent

at 8 weeks (3 weeks PT); Group 1: mean 10.17 (SD 3.23); n=36, Group 2: mean 9.71 (SD 4.1); n=24; IOWA Conners scale (Pelham, Milich, Murphy, & Murphy, 1989) IO subscale, Parent 0-15 Top=High is poor outcome
Risk of bias: All domain - --, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover -

Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - A neatly preformed RCT with adolescents with severe learning disabilities and comorbid ADHD

; Indirectness of outcome: No indirectness ; Baseline details:

Sex, Age, ADHD severity, academic achievement

; Blinding details: Due to the school-based setting, it was not possible to keep teachers and parents officially 'blind' to condition.

; Group 1 Number missing: 4, Reason: move/left school and withdrew; Group 2 Number missing: 4, Reason: move/left school and withdrew

Protocol outcome 2: Numeracy outcomes at < 3 months
- Actual outcome for Children and young people: Wide-Range Achievement Test-4-Progress Monitoring Version (WRAT-4PM; Roid & Ledbetter, 2006) Mathematics subscale

at 8 weeks (3 weeks PT); Group 1: mean 498.91 (SD 15.68); n=36, Group 2: mean 505.08 (SD 15.72); n=24; Wide-Range Achievement Test-4-Progress Monitoring Version (WRAT-4PM; Roid & Ledbetter, 2006) Mathematics subscale Unclear Top=High is good outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, symptoms, academic achievement

; Blinding details: RCT's into psychological interventions cannot be blinded.; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 3: Literacy outcomes at < 3 months
- Actual outcome for Children and young people: Wide-Range Achievement Test-4-Progress Monitoring Version (WRAT-4PM; Roid & Ledbetter, 2006) word reading, sentence comprehension and spelling subscale.

at 8 weeks (3 weeks PT); Group 1: mean 490.275 (SD 24.3981); n=36, Group 2: mean 495.213 (SD 23.34); n=24; Wide-Range Achievement Test-4-Progress Monitoring Version (WRAT-4PM; Roid & Ledbetter, 2006) word reading, sentence comprehension and spelling subscale. Unclear Top=High is good outcome Risk of bias: All domain - --, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - A neatly preformed RCT with adolescents with severe learning disabilities and comorbid ADHD ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, ADHD severity, academic achievement ; Blinding details: Due to the school-based setting, it was not possible to keep teachers and parents officially 'blind' to condition. ; Group 1 Number missing: 4, Reason: move/left school and withdrew; Group 2 Number missing: 4, Reason: move/left school and withdrew	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at > 6 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Gu 2016[195]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=56)
Countries and setting	Conducted in China
Line of therapy	1st line
Duration of study	Intervention + follow up: 6 weeks + 3 month FU
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Adults
Subgroup analysis within study	Not applicable
Inclusion criteria	Participants were required to be currently recruited undergraduate students between the ages of 19 and 24, and to meet DSM-V criteria for ADHD in adulthood, including symptoms that were present prior to age 12 and functional impairment of 5 symptoms in multiple domains. Primary diagnosis of ADHD were confirmed by 3 psychiatrists.
Exclusion criteria	Exclusion criteria were as follows: major depressive episode, bipolar disorder, substance abuse/dependence within the last 6 months, active suicidality, history of psychotic disorder, and learning difficulties or other cognitive impairments.
Recruitment/selection of patients	Recruited from 5 universities in a large city in the south of China.
Age, gender and ethnicity	Age - Mean (SD): 20.29 (7.34). Gender (M:F): 30 male, 24 female. Ethnicity: Not stated.
Further population details	1. Age: Young adults (18-25 years) (19-24). 2. Baseline symptom severity: Mixed population
Extra comments	. Participants receiving pharmacological medication for ADHD must have remained at a stable dose for 1 month prior to enrolment.
Indirectness of population	No indirectness
Interventions	(n=30) Intervention 1: Mindfulness - Mindfulness CBT. Mindfulness-Based Cognitive Therapy (MBCT) - 6 weekly sessions for 1 hr. MBCT was applied to an individual in place of the traditional group format. Assignments guided by CD were required on average for 30 minutes of self-practice per day, alongside workbooks incorporating psycho-educative sessions, which were specific to ADHD. Treatment sessions were conducted at an on-campus outpatient psychology clinic. Intervention was delivered by a group leader and co-leader who were psychiatrists specializing in ADHD with 8 years' experience as MBCT trainers. Intervention was supervised by a licensed psychologist. . Duration 6 weeks . Concurrent medication/care: Participants receiving pharmacological medication for ADHD must have remained at a stable dose for 1 month prior to enrolment. Further details: 1. Location of intervention: In educational or work setting (Conducted at an on-campus

	outpatient psychology clinic). 2. Mode of delivery: Face to face (1 on 1) 3. Study design: Parallel trial (RCT). (n=26) Intervention 2: No treatment. Control group - Wait List control group. Fulfilled the same criteria and were assessed with the same methodology. Were offered MBCT at the end of the study. . Duration 6 weeks. Concurrent medication/care: Participants receiving pharmacological medication for ADHD must have remained at a stable dose for 1 month prior to enrolment. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial (RCT).
Funding	No funding (The author(s) received no financial support for the research, authorship, and/or publication of this article.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: MINDFULNESS CBT versus CONTROL GROUP

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Adults: Conners Adult ADHD self-rating scale (CAARS) - index at 6 weeks PT; Group 1: mean 60.71 (SD 8.35); n=30, Group 2: mean 71.77 (SD 9.17); n=26
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 2, Reason: Could not participate due to scheduling constraints; Group 2 Number missing: 0, Reason: N/A

Protocol outcome 2: ADHD symptoms total at >6 months
- Actual outcome for Adults: Conners Adult ADHD self-rating scale (CAARS) - index at 3 months FU; Group 1: mean 61.5 (SD 9.81); n=30, Group 2: mean 72.15 (SD 8.44); n=26
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 2, Reason: Could not participate due to scheduling constraints; Group 2 Number missing: 0, Reason: N/A

Protocol outcome 3: ADHD symptoms inattention at <3 months
- Actual outcome for Adults: Conners Adult ADHD self-rating scale (CAARS) - inattention at 6 weeks PT; Group 1: mean 51.64 (SD 8.39); n=30, Group 2: mean 64.23 (SD 9.99); n=26
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 2, Reason: Could not participate due to scheduling constraints; Group 2 Number missing: 0, Reason: N/A

Protocol outcome 4: ADHD symptoms inattention at >6 months
- Actual outcome for Adults: Conners Adult ADHD self-rating scale (CAARS) - inattention at 3 months FU; Group 1: mean 52.14 (SD 8.23); n=30, Group 2: mean 64.01 (SD 9.98); n=26

Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 2, Reason: Could not participate due to scheduling constraints; Group 2 Number missing: 0, Reason: N/A Protocol outcome 5: ADHD symptoms hyperactivity at <3 months - Actual outcome for Adults: Conners Adult ADHD self-rating scale (CAARS) - hyperactivity at 6 weeks PT; Group 1: mean 60.86 (SD 7.48); n=30, Group 2: mean 71.15 (SD 9.63); n=26 Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 2, Reason: Could not participate due to scheduling constraints; Group 2 Number missing: 0, Reason: N/A Protocol outcome 6: ADHD symptoms hyperactivity at >6 months - Actual outcome for Adults: Conners Adult ADHD self-rating scale (CAARS) - hyperactivity at 3 months FU ; Group 1: mean 59.21 (SD 8.16); n=30, Group 2: mean 71.38 (SD 9.04); n=26 Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 2, Reason: Could not participate due to scheduling constraints; Group 2 Number missing: 0, Reason: N/A Protocol outcome 7: Emotional dysregulation at < 3 months - Actual outcome for Adults: Beck Depression Inventory - 2nd edition (BDI-2) - total (self-rated) at 6 weeks PT; Group 1: mean 7.07 (SD 2.71); n=30, Group 2: mean 9.42 (SD 3.44); n=26 Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 2, Reason: Could not participate due to scheduling constraints; Group 2 Number missing: 0, Reason: N/A Protocol outcome 8: Emotional dysregulation at >6 months - Actual outcome for Adults: Beck Depression Inventory - 2nd edition (BDI-2) - total (self-rated) at 3 months FU; Group 1: mean 7.14 (SD 2.46); n=30, Group 2: mean 8.62 (SD 3.11); n=26 Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 2, Reason: Could not participate due to scheduling constraints; Group 2 Number missing: 0, Reason: N/A	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6

months

Study	Handen 2015[205]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=64)
Countries and setting	Conducted in USA; Setting: Trial conducted at three sites - University of Pittsburgh Medical Centre, The Ohio State University, and University of Rochester
Line of therapy	1st line
Duration of study	Intervention time: 10 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Participants enrolled irrespective of severity of noncompliance scores. Participants were free of psychotropic medications for two weeks prior to study randomization. A single anticonvulsant for seizure control was allowed, provided that stable doses and seizure free status had been six months or more.
Exclusion criteria	Exclusion criteria included Rett's disorder, childhood disintegrative disorder, lifetime diagnosis of schizophrenia, other psychotic disorder, bipolar disorder, or current diagnosis of major depression or obsessive compulsive disorder. Children with significant medical conditions (e.g. heart, liver, renal or pulmonary disease) or significant abnormalities on routine lab tests and ECG were excluded. Other exclusion criteria included a prior adequate trial of ATX within the last 2 years, and regular usage of beta adrenergic blocking agents, asthma medicine, such as albuterol, and prior involvement in a highly structured parent training program.
Age, gender and ethnicity	Age - Mean (SD): 7.95 (1.95). Gender (M:F): male - 52, female - 12 . Ethnicity: 78.15% Caucasian, remainder mixed
Further population details	1. Age: School age children (6-13 years) (Aged 5 - 14). 2. Baseline symptom severity: Mixed population
Extra comments	
Indirectness of population	No indirectness
Interventions	(n=32) Intervention 1: Carer and family training programmes - Programmes including the person with ADHD. Parent training - Families met weekly for individual sessions with a PT clinician. Sessions were adapted from the RUPP Parent Training manual and covered topics such as preventing behavior problems, reinforcement, time out, and planned ignoring. Each session lasted 60-90 min's and included didactic materials, videos, and role playing. Parents were given weekly homework assignments and kept data on target behaviours. A home visit was also conducted between second and third session. PT clinicians were trained by supervisors who

	were licensed clinical psychologists with specialized training in behavioral interventions and developmental disabilities. Regular telephone conferences were held between site PT clinicians and supervisors to achieve standardization and to provide feedback from randomly viewed tapes. . Duration 10 weeks. Concurrent medication/care: Study visits occurred weekly to assess medication response, monitor adverse events and adjust doses. Further details: 1. Location of intervention: Clinic (and home visits between 2nd and 3rd session). 2. Mode of delivery: Face to face (1 on 1) 3. Study design: Parallel trial (n=32) Intervention 2: Placebo. Placebo. . Duration 10 weeks. Concurrent medication/care: Study visits occurred weekly to assess medication response, monitor adverse events and adjust doses. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Not applicable / Not stated / Unclear
Funding	Academic or government funding (Supported by grants from the National Institute of Mental Health to Ohio State University , University of Pittsburgh, and University of Rochester.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PARENT TRAINING versus PLACEBO

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Children and young people: SNAP parent rated ADHD score at 10 weeks PT; Group 1: mean 1.45 (SD 0.62); n=32, Group 2: mean 1.74 (SD 0.86); n=32
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 1, Reason: Did not return for a week 1 visit ; Group 2 Number missing: 1, Reason: Did not return for a week 1 visit
- Actual outcome for Children and young people: SNAP teacher rated ADHD score at 10 weeks PT; Group 1: mean 1.46 (SD 0.82); n=32, Group 2: mean 1.44 (SD 0.85); n=32
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 1, Reason: Did not return for a week 1 visit ; Group 2 Number missing: 1, Reason: Did not return for a week 1 visit

Protocol outcome 2: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: SNAP parent rated inattention score at 10 weeks PT; Group 1: mean 1.45 (SD 0.71); n=32, Group 2: mean 1.79 (SD 0.84); n=32
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 1, Reason: Did not return for a week 1 visit ; Group 2 Number missing: 1, Reason: Did not return for a week 1 visit
- Actual outcome for Children and young people: SNAP teacher rated inattention score at 10 weeks PT; Group 1: mean 1.64 (SD 0.82); n=32, Group 2: mean 1.63 (SD 0.98); n=32

	Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 1, Reason: Did not return for a week 1 visit ; Group 2 Number missing: 1, Reason: Did not return for a week 1 visit Protocol outcome 3: ADHD symptoms hyperactivity at <3 months - Actual outcome for Children and young people: SNAP parent rated hyperactivity score at 10 weeks PT; Group 1: mean 1.44 (SD 0.72); n=32, Group 2: mean 1.69 (SD 0.97); n=32 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 1, Reason: Did not return for a week 1 visit ; Group 2 Number missing: 1, Reason: Did not return for a week 1 visit - Actual outcome for Children and young people: SNAP teacher rated hyperactivity score at 10 weeks PT; Group 1: mean 1.28 (SD 0.99); n=32, Group 2: mean 1.25 (SD 0.92); n=32 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 1, Reason: Did not return for a week 1 visit ; Group 2 Number missing: 1, Reason: Did not return for a week 1 visit Protocol outcome 4: CGI-I (much improved or very much improved) at <3 months - Actual outcome for Children and young people: CGI-I score completed by blinded rater at 10 weeks PT; Group 1: 9/31, Group 2: 6/31; Comments: scale 1 - 7, higher is worse Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 1, Reason: Did not return for a week 1 visit ; Group 2 Number missing: 1, Reason: Did not return for a week 1 visit Protocol outcome 5: Function/behaviour at <3 months - Actual outcome for Children and young people: SNAP parent rated ODD score at 10 weeks PT; Group 1: mean 0.7 (SD 0.55); n=32, Group 2: mean 0.79 (SD 0.5); n=32 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 1, Reason: Did not return for a week 1 visit ; Group 2 Number missing: 1, Reason: Did not return for a week 1 visit - Actual outcome for Children and young people: SNAP teacher rated ODD score at 10 weeks PT; Group 1: mean 0.56 (SD 0.66); n=32, Group 2: mean 0.83 (SD 0.84); n=32 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 1, Reason: Did not return for a week 1 visit ; Group 2 Number missing: 1, Reason: Did not return for a week 1 visit
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at >6 months; Discontinuation due to adverse events

at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months	

Study	Hepark 2015[222]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=103)
Countries and setting	Conducted in Netherlands
Line of therapy	1st line
Duration of study	Intervention time: 12 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Adults
Subgroup analysis within study	Not applicable
Inclusion criteria	A primary diagnosis of ADHD according to the Diagnostic and Statistical Manual of Mental Disorders. Patients with all subtypes of ADHD according to the manual were included in the study.
Exclusion criteria	(a) substance abuse/dependence within the last 6 months, (b) comorbid psychotic disorders, (c) borderline and/or antisocial personality disorders, (d) learning difficulties, (e) chronic suicidality, and (f) automutilation.
Recruitment/selection of patients	Patients were recruited at the specialist ADHD service of the Radboudumc outpatient department of psychiatry.
Age, gender and ethnicity	Age - Mean (SD): 35.85 (9.5). Gender (M:F): 47 male : 56 female. Ethnicity: Not stated.
Further population details	1. Age: Adults (25-65 years) (Sample was composed of 18 - 65 years). 2. Baseline symptom severity: Mixed population (Patients with all subtypes of ADHD according to the manual were included in the study.).
Extra comments	. Stimulant medication dosage had been stabilized for 2 weeks prior to participation and non-stimulant medication for 4 weeks.
Indirectness of population	No indirectness
Interventions	(n=55) Intervention 1: Mindfulness. Adapted from the MBCT protocol developed for recurrent depression. Frequency of sessions extended from 8 to 12 weekly sessions. Duration of sessions extended with a break of 15 to 30 minutes halfway the session to make it easier for patients to sustain their attention during the meeting. One guided silent practice session included. Psycho-education about ADHD consisting of neurobiology of ADHD, coping with symptoms of ADHD, and ways to integrate mindfulness in daily life. Participants received workbooks and CDs to support home practice , that is, approximately 30 mins of self-practice each day with increasing duration. Group was instructed by 2 experienced mindfulness teachers. Duration 12 weeks. Concurrent medication/care: The WL and MBCT group were not allowed to participate in other group interventions, such as a psycho education group or a cognitive behavioral therapy group. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Face to face (group intervention) 3. Study design: Not applicable / Not stated / Unclear (RCT).

	(n=48) Intervention 2: No treatment. Wait List. . Duration 12 weeks. Concurrent medication/care: All patients in both conditions were asked to keep their medication stable during the study. The WL and MBCT group were not allowed to participate in other group interventions, such as a psycho education group or a cognitive behavioral therapy group. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Not applicable / Not stated / Unclear
Funding	No funding (The authors received no financial support for the research, authorship, and/or publication of this article.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: MINDFULNESS-BASED COGNITIVE THERAPY versus NO TREATMENT

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Adults: Conners Adult ADHD Rating Scale (CAARS-INV) - Total score - Investigator rated at 12 weeks PT; Mean; -6.7 (95%CI -9.8 to -3.6);
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 14, Reason: 1 - dropped out before completing baseline assessment, 1 - baseline assessments completed but got lost. 12 - did not complete study ; Group 2 Number missing: 6, Reason: 1 - baseline assessments completed but got lost, 5 - did not complete post-assessments.
- Actual outcome for Adults: Conners Adult ADHD Rating Scale (CAARS-INV) - Total score - Self-reported at 12 weeks PT; Mean; -4.5 (95%CI -7.3 to -1.8);
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 14, Reason: 1 - dropped out before completing baseline assessment, 1 - baseline assessments completed but got lost. 12 - did not complete study ; Group 2 Number missing: 6, Reason: 1 - baseline assessments completed but got lost, 5 - did not complete post-assessments.

Protocol outcome 2: ADHD symptoms inattention at <3 months
- Actual outcome for Adults: Conners Adult ADHD Rating Scale (CAARS-INV) - Inattention - Investigator rated at 12 weeks PT; Mean; -3.6 (95%CI -5.5 to -1.8);
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 14, Reason: 1 - dropped out before completing baseline assessment, 1 - baseline assessments completed but got lost. 12 - did not complete study ; Group 2 Number missing: 6, Reason: 1 - baseline assessments completed but got lost, 5 - did not complete post-assessments.
- Actual outcome for Adults: Conners Adult ADHD Rating Scale (CAARS-INV) - Inattention - Self-reported at 12 weeks PT; Mean; -2.7 (95%CI -4.3 to -1.2);
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low,

	Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 14, Reason: 1 - dropped out before completing baseline assessment, 1 - baseline assessments completed but got lost. 12 - did not complete study ; Group 2 Number missing: 6, Reason: 1 - baseline assessments completed but got lost, 5 - did not complete post-assessments. Protocol outcome 3: ADHD symptoms hyperactivity at <3 months - Actual outcome for Adults: Conners Adult ADHD Rating Scale (CAARS-INV) - Hyperactive/impulsive - Investigator rated at 12 weeks PT; Mean; -3.2 (95%CI -5 to -1.4); Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 14, Reason: 1 - dropped out before completing baseline assessment, 1 - baseline assessments completed but got lost. 12 - did not complete study ; Group 2 Number missing: 6, Reason: 1 - baseline assessments completed but got lost, 5 - did not complete post-assessments. - Actual outcome for Adults: Conners Adult ADHD Rating Scale (CAARS-INV) - Hyperactive/impulsive - Self-reported at 12 weeks PT; Mean; -1.8 (95%CI -3.4 to -0.2); Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 14, Reason: 1 - dropped out before completing baseline assessment, 1 - baseline assessments completed but got lost. 12 - did not complete study ; Group 2 Number missing: 6, Reason: 1 - baseline assessments completed but got lost, 5 - did not complete post-assessments. Protocol outcome 4: Function/behaviour at <3 months - Actual outcome for Adults: Executive Functioning using the Behavior Rating Inventory of Executive Function - Adult self-report version - Total score at 12 weeks PT; Mean; -18.4 (95%CI -26.6 to -10.1); Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 14, Reason: 1 - dropped out before completing baseline assessment, 1 - baseline assessments completed but got lost. 12 - did not complete study ; Group 2 Number missing: 6, Reason: 1 - baseline assessments completed but got lost, 5 - did not complete post-assessments. Protocol outcome 5: Emotional dysregulation at < 3 months - Actual outcome for Adults: The Beck Depression Inventory (BDI-II-NL) - self reported - depression at 12 weeks PT; Mean; -1.9 (95%CI -4.8 to 1); Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 14, Reason: 1 - dropped out before completing baseline assessment, 1 - baseline assessments completed but got lost. 12 - did not complete study ; Group 2 Number missing: 6, Reason: 1 - baseline assessments completed but got lost, 5 - did not complete post-assessments.
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6

	months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months

Study	Hirvikoski 2011[226]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=51)
Countries and setting	Conducted in Sweden; Setting:
Line of therapy	1st line
Duration of study	Intervention + follow up: 66 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: Multiple sources of information: a clinical interview based on the DSM-IV criteria (American Psychiatric Association, 1994) was conducted in all cases. The patients also completed standardized self-rating questionnaires such as the Wender Utah Rating Scale, WURS for the assessment of childhood ADHD symptoms. In 82% of the cases, further information could be gathered by interviewing the participants' significant others in order to obtain a more complete diagnostic history of each individual.
Stratum	Adults
Subgroup analysis within study	Not applicable
Inclusion criteria	ADHD as the main neurodevelopmental diagnosis; age of 18 years or older; if on any psychoactive drug treatment (for ADHD or other diagnoses), the treatment should have been stable for at least three months. Another explicit goal was to control for effects (both negative and positive) of medical treatment. The participants in both groups were asked to try to stay on stable pharmacological treatment during the whole group treatment. However, the responsibility for the participants' pharmacological treatment stayed with their local psychiatrist. According to the study plan the individuals who could not stay on stable pharmacological treatment would not be included in the statistical analysis of the data (on-treatment or per protocol analyses) but they were allowed to finish their group treatment if they wished to do so.
Exclusion criteria	Ongoing substance abuse (during the last 3 months); diagnosed mental retardation (IQ ≤ 70); diagnosed organic brain injury; autism spectrum disorder; suicidality; all clinically unstable psychosocial circumstances or psychiatric disorders that were of such a severity that participation was impossible such as being homeless, or having severe depression, psychosis, or bipolar syndrome not under stable pharmacological treatment (judged by a clinical psychologist and a psychiatrist).
Recruitment/selection of patients	The participants were mainly recruited from the Neuropsychiatric Unit Karolinska, Karolinska University Hospital, Department of Psychiatry; a clinical unit specialized in the assessment of developmental disorders in adults (two patients were recruited from other psychiatric clinics in Stockholm)..

Age, gender and ethnicity	Age - Mean (SD): 38.96 (9.33). Gender (M:F): 19/32. Ethnicity: Not reported
Further population details	1. Age: Adults (25-65 years) 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Indirectness of population	No indirectness: large proportion of females
Interventions	(n=26) Intervention 1: Dialectical behaviour therapy (DBT) - DBT. DBT-based skills training group. In this group the original manual/workbook was followed with only a few modifications that were made in order to adapt the material to a Swedish context, mainly based on the feedback from the pilot group. Moreover, some written descriptions of mindfulness meditation exercises were added to the material given to the participants and one session with the theme “Homework” was added (in the manual/workbook, this theme is discussed with the participants prior to the therapy). In the current study, the treatment program thus consisted of 14 sessions. The group sizes ranged between 4 and 8 individuals at the beginning of the group therapy. The groups were chaired by two clinical psychologists trained in CBT (a few being trained in DBT as well), who were supervised by a clinical psychologist/licensed psychotherapist trained in both CBT and DBT. The 2-h sessions always followed the same structure: after a short repetition and opportunity to give feedback on the previous session, homework was reviewed during the first hour. After a break, a new topic and homework for the following week were introduced. The participants got written material from each session which they placed in folders and brought to the sessions. A contract regarding the rules of participation was signed during the first session (Hesslinger et al., 2004), according to which participants were excluded from the group if they failed to attend more than two sessions in a row without a legitimate excuse. . Duration 14 weeks. Concurrent medication/care: Among those individuals who finished the group (21 in skills training; 20 in control group), a majority of participants fulfilled the criteria of stable medication status and were included in the main statistical analysis (n 19 in skills training, 12 women and 7 men; n 18 in control group, 10 women and 8 men). However, two individuals in the skills training group started pharmacological treatment during ongoing skills training (one two different sedatives, antidepressants as well as sleeping pills; one antidepressant). Likewise, two individuals in the control group were defined as unstable with regard to psychoactive medication (one started methylphenidate medication but also discontinued the treatment due to side effects while still in control group; one started mood stabilizing medication).

	Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Face to face (group intervention) 3. Study design: Parallel trial (n=25) Intervention 2: No treatment. The control group consisted of a loosely structured discussion group, supported by two clinical psychologists. The controls had 14 sessions like the skills training group. The sessions were 2 h long with a pause in the middle. The participants chose an ADHD-related theme which was discussed during the session. The participants were asked to follow certain rules during the session (not to interrupt others; everyone was encouraged to participate actively; try to adhere to the theme of the session) and they also signed a contract comparable to the one in the skills training group (influence of alcohol or drugs was forbidden during the session; the participants were expected to come to as many sessions as possible although they were not excluded if they failed to attend). The clinical psychologists reminded the participants of the rules during the sessions, if necessary. Otherwise, the psychologists' role was passive. However, some psychoeducation was included (as an answer to a question addressed to the group leaders) and if the discussion became very problem-oriented, the psychologists directed the content by asking the participants about possible solutions and strategies. During these discussions the psychologists always referred to the experiences of the participants and avoided the use of the treatment components included in the skills training group. However, the group leaders were encouraging and supportive and gave positive feedback for constructive and creative problem solving. In order to avoid group leader effects and to facilitate the work of the group leaders in the control group (it would be easier not to use the treatment components from the skills training group with a thorough knowledge on them), we shifted group leaders after each semester i.e. those clinical psychologists that started as group leaders for skills training group shifted to control group and vice versa. . Duration 14 weeks. Concurrent medication/care: Among those individuals who finished the group (21 in skills training; 20 in control group), a majority of participants fulfilled the criteria of stable medication status and were included in the main statistical analysis (n 19 in skills training, 12 women and 7 men; n 18 in control group, 10 women and 8 men). However, two individuals in the skills training group started pharmacological treatment during ongoing skills training (one two different sedatives, antidepressants as well as sleeping pills; one antidepressant). Likewise, two individuals in the control group were defined as unstable with regard to psychoactive medication (one started methylphenidate medication but also

	discontinued the treatment due to side effects while still in control group; one started mood stabilizing medication). Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Face to face (group intervention) 3. Study design: Parallel trial
Funding	Academic or government funding (Psykiatrifonden and Bror Gadelius Minnesfond)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: DBT versus NO TREATMENT

Protocol outcome 1: CGI-I (much improved or very much improved) at <3 months
- Actual outcome for Adults: 21% reduction of ADHD symptoms (Current ADHD Symptom Scale Self-Report Form)

at 17 weeks PT; Group 1: 8/19, Group 2: 0/18
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Age, gender, adhd subtype, pharmacological
treatment of adhd or any other drug, comorbid condition, employment and
education, Q, stress, depression and anxiety symptoms, sleep and disability; Blinding details: Self-report ; Group 1 Number missing: 7, Reason: Excluded from analysis (started medication during the DBT skills training n=2; excluded from therapy n=5)

; Group 2 Number missing: 7, Reason: Excluded from analysis (started medication during discussion group n=2; dropped out n=4)

Protocol outcome 2: Serious adverse events at < 3 months
- Actual outcome for Adults: Serious adverse events

at 17 weeks PT; Group 1: 0/19, Group 2: 0/18
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Age, gender, adhd subtype, pharmacological
treatment of adhd or any other drug, comorbid condition, employment and
education, Q, stress, depression and anxiety symptoms, sleep and disability; Blinding details: Self-report ; Group 1 Number missing: 7, Reason: Excluded

from analysis (started medication during the DBT skills training n=2; excluded from therapy n=5) ; Group 2 Number missing: 7, Reason: Excluded from analysis (started medication during discussion group n=2; dropped out n=4)	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Hoath 2002[231]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=21)
Countries and setting	Conducted in Australia; Setting: Group sessions with a practitioner at one of two local state primary schools
Line of therapy	1st line
Duration of study	Intervention + follow up: 12 weeks + 13 weeks
Method of assessment of guideline condition	Partially adequate method of assessment/diagnosis: All children accepted into the program had to have a clinical diagnosis of ADHD. In most cases this diagnosis had been made by a paediatrician or mental health professional.
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Define
Exclusion criteria	Define
Recruitment/selection of patients	Participants were recruited through a variety of sources including general practitioners, paediatricians and schools. A community outreach campaign was used to promote awareness about the project and included advertisements in local newspapers, council newsletters, primary school newsletters and fliers displayed in community health centers and paediatricians' offices in the local area.
Age, gender and ethnicity	Age - Mean (SD): 7.696125 (1,37) years. Gender (M:F): Define. Ethnicity: Not reported
Further population details	1. Age: School age children (6-13 years) (5-9 years). 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Extra comments	.
Indirectness of population	No indirectness
Interventions	(n=10) Intervention 1: Carer and family training programmes - Programme not including the person with ADHD. The intervention was an enhanced version of "Standard Group Triple P" targeting specific ADHD characteristics . The intervention involved distributing resources to the parents, five group sessions and four telephone consultation session. Each parent received a copy of Every Parent 's Group Workbook and three Triple P Tip Sheets. Attention Deficit Hyperactivity Disorder (ADHD), was produced for the purpose of this research and Supporting Your Partner and Coping With Stress also distributed. The group program involved teaching parents 17 core child management strategies. Ten of the strategies are designed to promote children's competence and development (i.e." quality time"; talking with children; physical affection; praise; attention; engaging activities; setting a good ex ample; Ask Say Do; incidental teaching; and behaviour charts), and seven strategies are designed to help parentsmanage behaviour (i.e. setting rules; directed discussion; planned ignoring; clear, direct instructions; logical consequences ; quiet

	time; and time -out) . In addition, parents were taught a six-step planned activities routine to enhance generalisation and maintenance of parenting skills (i.e., plan ahead, decide on rules, select engaging activities, decide on rewards and consequences, and hold a follow-up discussion with child). Parents received active skills training and sup- port from a trained practitioner as described by Sanders and Dadds (1993). Active skills training methods included modelling, role- plays, feedback and the use of specific home- work tasks. Throughout the program minor modifications were made to target ADHD symptoms and behaviours. The first four sessions followed the Standard Group Program with minor changes. Session 1 included psychoeducational information on ADHD in the section titled "Causes of Child Behaviour Problems: Genetic Make-Up" . The ADHD tip sheet was produced during this session. Session 2, 3 and 4 followed the standard program, with additional emphasis placed on ADHD children's impulsivity, emotionality and limited attention span and concentration. The need for consistency and predictability in discipline routines was also highlighted due to ADHD children's difficulty with forward planning and lack of insight regarding consequences of their actions. The fifth and final group session covered "partner/social support" and "coping skills". Tip sheets for these topics were handed out to participants; the "Partner Support" and "Coping Skills" Triple P videos were viewed; and a group problem solving exercise, relaxation techniques and a personal coping plan were modelled and practiced during this session . Each family received four 20-30 minute telephone consultations. . Duration 12 weeks. Concurrent medication/care: The child was not currently having regular contact with another professional or agency for behavioural problems. Eight of the 10 children in the EGTP group were taking stimulant medication compared to 7 out of 11 children in the WL group. No attempt was made to control the child's medication during the course of the intervention. Further details: 1. Location of intervention: In educational or work setting (Families allocated to the EGTP condition attended five, 2-hour weekly group sessions with a practitioner at one of two local state primary school). 2. Mode of delivery: Face to face (group intervention) (Families allocated to the EGTP condition attended five, 2-hour weekly group sessions with a practitioner at one of two local state primary school). 3. Study design: Parallel trial (n=11) Intervention 2: No treatment. Waitlist. Duration 12 weeks. Concurrent medication/care: The child was not currently having regular contact with another professional or agency for behavioural problems. Eight of the 10 children in the EGTP group were taking stimulant medication compared to 7 out of 11 children in the WL group. No attempt was made to control the child's medication during Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial

Funding	Funding not stated

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PROGRAMME NOT INCLUDING THE PERSON WITH ADHD versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Child Attention Problems Rating Scale (CAPS) - inattention (Parent)

at 12 weeks PT; Group 1: mean 8.11 (SD 2.37); n=9, Group 2: mean 9.18 (SD 2.18); n=11; Child Attention Problems Rating Scale (CAPS) - inattention (Parent) Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Age child and parents, number of siblings, employment, family income, dosage of medication.; Group 1 Number missing: 1; Group 2 Number missing:
- Actual outcome for Children and young people: Child Attention Problems Rating Scale (CAPS) - inattention (Teacher)

at 12 weeks PT; Group 1: mean 4.43 (SD 2.7); n=9, Group 2: mean 6.91 (SD 4.48); n=11; Child Attention Problems Rating Scale (CAPS) - inattention (Teacher) Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Age child and parents, number of siblings, employment, family income, dosage of medication.; Group 1 Number missing: 1; Group 2 Number missing:

Protocol outcome 2: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: Child Attention Problems Rating Scale (CAPS) - overactivity (Teacher)

at 12 weeks PT; Group 1: mean 3.43 (SD 1.13); n=9, Group 2: mean 7.36 (SD 1.63); n=11; Child Attention Problems Rating Scale (CAPS) - overactivity (Teacher) Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Age child and parents, number of siblings, employment, family income, dosage of medication.; Group 1 Number missing: 0.9, Reason: The group consisted of 10 participants, one dropped out. ; Group 2 Number missing:
- Actual outcome for Children and young people: Child Attention Problems Rating Scale (CAPS) - overactivity (Parent)

at 12 weeks PT; Group 1: mean 6.33 (SD 1.58); n=9, Group 2: mean 7.36 (SD 1.63); n=11; Child Attention Problems Rating Scale (CAPS) - overactivity

(Parent) Unclear Top=High is poor outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Age child and parents, number of siblings, employment, family income, dosage of medication.; Group 1 Number missing: 1; Group 2 Number missing: Protocol outcome 3: Function/behaviour at <3 months - Actual outcome for Children and young people: Eyberg Child Behavior Inventory (ECBI) subscale amount of conduct problems at 12 weeks PT; Group 1: mean 13.78 (SD 13); n=9, Group 2: mean 16.82 (SD 9.98); n=11; Eyberg Child Behavior Inventory (ECBI) subscale amount of conduct problems 0-36 Top=High is poor outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Age child and parents, number of siblings, employment, family income, dosage of medication.; Group 1 Number missing: 1; Group 2 Number missing:	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Horn 1990[235]
Study type	RCT (randomised; Parallel)
Number of studies (number of participants)	1 (n=42)
Countries and setting	Conducted in USA; Setting: a university based psychological clinic
Line of therapy	1st line
Duration of study	Intervention + follow up: 47 weeks (12 weeks treatment and 35 week FU)
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: Diagnostic and Statistical Manual of Mental Disorders (3rd ed. rev. [DSM-111-R]) criteria. This evaluation included a clinical interview with the parents.
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	(a) there was exact agreement on the presence or absence of ADHD between the initial interviewer and the subsequent reviewer and (b) the child had a score on the Hyperkinesis index of the CPRS or CTRS that was 2 SD or more above the published means. Additional inclusion criteria were: The identified problem child was between ages 7 years, 0 months and 11 years, 6 months; the child was not receiving medication for control of ADHD symptoms; and gross physical impairments, intellectual deficits, or psychoses were absent in the child and the parent. The Peabody Picture Vocabulary Test-Revised was used as a screening measure of the child's intellectual status.
Exclusion criteria	None
Recruitment/selection of patients	a university based psychological clinic
Age, gender and ethnicity	Age - Mean (SD): . Gender (M:F): 34/8. Ethnicity: 36 Whites, 4 Blacks, 1 Elispanic, 1 Asian
Further population details	1. Age: School age children (6-13 years) (between ages 7 and 11). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (CBCL Hyperactivity (Parent) / CTRS Hyperkinesis Index (Teacher) [mean (SD)]: PT= 76.5 (8)/15.8(6.8); SC= 72.4(10.7)/17.5(7.3); PT+SC= 71.5(8.3)/17(5.6)).

Extra comments	.
Indirectness of population	--
Interventions	(n=15) Intervention 1: Carer and family training programmes - Programme not including the person with ADHD. Each parent training group consisted of the parents of seven children. The focus of the parent training groups was on teaching parents to apply social learning theory principles to the management of their child's behavior. Training sessions consisted of didactic presentations, discussions, and role plays. In addition, all parents were expected to complete weekly homework assignments, including reading from Living With Children: New Methods for Parents and Teachers, and to work on individualized behavior management projects with their children. The following topics were discussed over the course of the 12-week intervention: basic social learning principles, defining and tracking behavior, the use of positive reinforcement (social and material rewards, "catching your child being good"), mild punishment ("time out," "natural consequences," "ignoring"), relationship enhancement ("special time"), compliance training, home-based school behavior change programs, and contingency contracting. The material for the parent training sessions was derived from several sources. In addition to the clinic based therapies, a school consultation component was incorporated into each of the treatment conditions in order to help facilitate generalization to the classroom. Specifically, the classroom teacher of each of the children involved in the treatment program was contacted at three different points in time (once after the 1st therapy session, once after the 6th therapy session, and once after the 10th therapy session) by one of the therapists in order to inform the teacher as to the treatment being provided and to instruct the teacher in ways to intervene with the child in the classroom. The content of these teacher contacts varied as a function of treatment condition. For example, in cases where the child's parents were receiving parent training, the child's teacher was instructed in the use of a daily home report card system. In cases where the child was receiving cognitive-behavioral self-control therapy, teachers were instructed in ways to prompt and reinforce the use of the Problem-Solving Plan. In cases where a child was involved in the child therapy and the child's parents were receiving the parent training, both types of instructions were provided to the teacher. . Duration 12 weeks. Concurrent medication/care: No medication before entering trial Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Face to face (group intervention) 3. Study design: Parallel trial (n=13) Intervention 2: Relaxation - Exercise. Children in the self-control therapy groups also met weekly in groups of seven. This intervention component consisted of instruction in the self-control strategies. More specifically, each child was taught a "Problem-Solving Plan" that incorporated the following self-instructional steps: (a) Am I having a problem? Take a deep breath and think "calm . . . relax." (b) What is my problem? (c) How many solutions can I think of? (d) How good is each solution? (e) Pick the best solution and try it. (0 How did my solution work? Deep muscle relaxation, in conjunction with imaginal rehearsal, was incorporated

	into the problem-solving training. At each step of the problem-solving plan, children were taught to monitor their level of body tension and to initiate their relaxation skills when they perceived themselves as becoming tense. Training was comprised of didactic presentations, modelling by group leaders, guided practice, and role plays. The role plays dealt with both academic and interpersonal problems (i.e., conflicts with peers, parents, and teachers). In addition, a token reinforcement system was used for behavioral control of the children in the group training sessions. In addition to the clinic based therapies, a school consultation component was incorporated into each of the treatment conditions in order to help facilitate generalization to the classroom. Specifically, the classroom teacher of each of the children involved in the treatment program was contacted at three different points in time (once after the 1st therapy session, once after the 6th therapy session, and once after the 10th therapy session) by one of the therapists in order to inform the teacher as to the treatment being provided and to instruct the teacher in ways to intervene with the child in the classroom. The content of these teacher contacts varied as a function of treatment condition. For example, in cases where the child's parents were receiving parent training, the child's teacher was instructed in the use of a daily home report card system. In cases where the child was receiving cognitive-behavioral self-control therapy, teachers were instructed in ways to prompt and reinforce the use of the Problem-Solving Plan. In cases where a child was involved in the child therapy and the child's parents were receiving the parent training, both types of instructions were provided to the teacher. . Duration 12 weeks . Concurrent medication/care: No medication before entering trial Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Face to face (group intervention) 3. Study design: Parallel trial Comments: The Class for this intervention is not correct. Should be something else. (n=14) Intervention 3: Combination of the above - Describe. Combination of the two other treatment interventions. Duration 12 weeks. Concurrent medication/care: No medication before entering trial Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Face to face (group intervention) 3. Study design: Parallel trial
Funding	Funding not stated

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PROGRAMME NOT INCLUDING THE PERSON WITH ADHD versus EXERCISE

Protocol outcome 1: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: Child Behavior Checklist (CBCL) - Hyperactivity subscale (Parent)

at 12 weeks PT ; Group 1: mean 70.5 (SD 10.1); n=12, Group 2: mean 70.5 (SD 10.9); n=12; Child Behavior Checklist (CBCL) - Hyperactivity subscale (Parent) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 2
- Actual outcome for Children and young people: Conners Teacher Rating Scale (CTRS) Hyperkinesis Index (Teacher)
at 12 weeks PT ; Group 1: mean 12.1 (SD 7.1); n=12, Group 2: mean 13.6 (SD 5); n=12; Conners Teacher Rating Scale (CTRS) Hyperkinesis Index (Teacher) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 2

Protocol outcome 2: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: Child Behavior Checklist (CBCL) - Hyperactivity subscale (Parent)

at 47 weeks FU ; Group 1: mean 69.2 (SD 8.4); n=12, Group 2: mean 70.3 (SD 11.7); n=12; Child Behavior Checklist (CBCL) - Hyperactivity subscale (Parent) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 2
- Actual outcome for Children and young people: Conners Teacher Rating Scale (CTRS) Hyperkinesis Index (Teacher)
at 47 weeks FU ; Group 1: mean 13.2 (SD 6.2); n=12, Group 2: mean 19.6 (SD 6.6); n=12; Conners Teacher Rating Scale (CTRS) Hyperkinesis Index (Teacher) Unclear Top=High is poor outcome

Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 2

Protocol outcome 3: Function/behaviour at <3 months
- Actual outcome for Children and young people: Child Behavior Checklist (CBCL) – Externalizing subscale (Parent)

at 12 weeks PT ; Group 1: mean 73 (SD 5.6); n=12, Group 2: mean 71.7 (SD 9); n=12; Child Behavior Checklist (CBCL) – Externalizing subscale (Parent) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 2
- Actual outcome for Children and young people: Conners Teacher Rating Scale (CTRS) Conduct Problems (Teacher)
at 12 weeks PT ; Group 1: mean 4.7 (SD 3.8); n=12, Group 2: mean 6.1 (SD 4.1); n=12; Conners Teacher Rating Scale (CTRS) Conduct Problems (Teacher) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 2

Protocol outcome 4: Function/behaviour at >6 months
- Actual outcome for Children and young people: Child Behavior Checklist (CBCL) – Externalizing subscale (Parent)

at 47 weeks FU ; Group 1: mean 71.4 (SD 5.1); n=12, Group 2: mean 69.8 (SD 7.9); n=12; Child Behavior Checklist (CBCL) – Externalizing subscale

(Parent) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 2
- Actual outcome for Children and young people: Conners Teacher Rating Scale (CTRS) Conduct Problems (Teacher)
at 47 weeks FU ; Group 1: mean 5.9 (SD 5.1); n=12, Group 2: mean 5.2 (SD 5.5); n=12; Conners Teacher Rating Scale (CTRS) Conduct Problems (Teacher) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 2

Protocol outcome 5: Numeracy outcomes at < 3 months
- Actual outcome for Children and young people: Wide Range Achievement Test-Revised (WRAT-R) Arithmetic
at 12 weeks PT ; Group 1: mean 103.3 (SD 3.8); n=12, Group 2: mean 95.2 (SD 9); n=12; Wide Range Achievement Test-Revised (WRAT-R) Arithmetic Unclear Top=High is good outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 2

Protocol outcome 6: Numeracy outcomes at > 6 months
- Actual outcome for Children and young people: Wide Range Achievement Test-Revised (WRAT-R) Arithmetic
at 47 weeks FU; Group 1: mean 99.3 (SD 5.1); n=12, Group 2: mean 88.6 (SD 8); n=12; Wide Range Achievement Test-Revised (WRAT-R) Arithmetic Unclear Top=High is good outcome

Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 2

Protocol outcome 7: Literacy outcomes at < 3 months
- Actual outcome for Children and young people: Wide Range Achievement Test-Revised (WRAT-R) Reading
at 12 weeks PT ; Group 1: mean 119.4 (SD 21.8); n=12, Group 2: mean 106.4 (SD 15.7); n=12; Wide Range Achievement Test-Revised (WRAT-R) Reading Unclear Top=High is good outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 2

Protocol outcome 8: Literacy outcomes at > 6 months
- Actual outcome for Children and young people: Wide Range Achievement Test-Revised (WRAT-R) Reading
at 47 weeks FU; Group 1: mean 114.4 (SD 22); n=12, Group 2: mean 104.3 (SD 12); n=12; Wide Range Achievement Test-Revised (WRAT-R) Reading Unclear Top=High is good outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 2

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PROGRAMME NOT INCLUDING THE PERSON WITH ADHD versus DESCRIBE

Protocol outcome 1: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: Child Behavior Checklist (CBCL) - Hyperactivity subscale (Parent)

at 12 weeks PT ; Group 1: mean 70.5 (SD 10.1); n=12, Group 2: mean 64.5 (SD 7.1); n=11; Child Behavior Checklist (CBCL) - Hyperactivity subscale (Parent) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 3
- Actual outcome for Children and young people: Conners Teacher Rating Scale (CTRS) Hyperkinesis Index (Teacher)
at 12 weeks PT ; Group 1: mean 12.1 (SD 7.1); n=12, Group 2: mean 14.7 (SD 4.8); n=11; Conners Teacher Rating Scale (CTRS) Hyperkinesis Index (Teacher) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 3

Protocol outcome 2: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: Child Behavior Checklist (CBCL) - Hyperactivity subscale (Parent)

at 47 weeks FU ; Group 1: mean 69.2 (SD 8.4); n=12, Group 2: mean 63.7 (SD 4.9); n=11; Child Behavior Checklist (CBCL) - Hyperactivity subscale (Parent) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 3

- Actual outcome for Children and young people: Conners Teacher Rating Scale (CTRS) Hyperkinesis Index (Teacher)
at 47 weeks FU ; Group 1: mean 13.2 (SD 6.2); n=12, Group 2: mean 16.2 (SD 7.6); n=11; Conners Teacher Rating Scale (CTRS) Hyperkinesis Index (Teacher) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 3

Protocol outcome 3: Function/behaviour at <3 months
- Actual outcome for Children and young people: Child Behavior Checklist (CBCL) – Externalizing subscale (Parent)

at 12 weeks PT ; Group 1: mean 73 (SD 5.6); n=12, Group 2: mean 68.5 (SD 8.4); n=11
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 3
- Actual outcome for Children and young people: Conners Teacher Rating Scale (CTRS) Conduct Problems (Teacher)
at 12 weeks PT ; Group 1: mean 4.7 (SD 3.8); n=12, Group 2: mean 6.1 (SD 3.6); n=11; Conners Teacher Rating Scale (CTRS) Conduct Problems (Teacher) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 3

Protocol outcome 4: Function/behaviour at >6 months
- Actual outcome for Children and young people: Child Behavior Checklist (CBCL) – Externalizing subscale (Parent)

at 47 weeks FU ; Group 1: mean 71.4 (SD 5.1); n=12, Group 2: mean 65.6 (SD 5.9); n=11; Child Behavior Checklist (CBCL) – Externalizing subscale (Parent) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 3
- Actual outcome for Children and young people: Conners Teacher Rating Scale (CTRS) Conduct Problems (Teacher)
at 47 weeks FU ; Group 1: mean 5.9 (SD 5.1); n=12, Group 2: mean 6.3 (SD 5.3); n=11; Conners Teacher Rating Scale (CTRS) Conduct Problems (Teacher) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 3

Protocol outcome 5: Numeracy outcomes at < 3 months
- Actual outcome for Children and young people: Wide Range Achievement Test-Revised (WRAT-R) Arithmetic
at 12 weeks PT ; Group 1: mean 103.3 (SD 3.8); n=12, Group 2: mean 97.6 (SD 7.2); n=11; Wide Range Achievement Test-Revised (WRAT-R) Arithmetic Unclear Top=High is good outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 3

Protocol outcome 6: Numeracy outcomes at > 6 months
- Actual outcome for Children and young people: Wide Range Achievement Test-Revised (WRAT-R) Arithmetic

at 47 weeks FU; Group 1: mean 99.3 (SD 5.1); n=12, Group 2: mean 94.9 (SD 11.9); n=11; Wide Range Achievement Test-Revised (WRAT-R) Arithmetic Unclear Top=High is good outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 3

Protocol outcome 7: Literacy outcomes at < 3 months
- Actual outcome for Children and young people: Wide Range Achievement Test-Revised (WRAT-R) Reading
at 12 weeks PT ; Group 1: mean 119.4 (SD 21.8); n=12, Group 2: mean 109.5 (SD 16.1); n=11; Wide Range Achievement Test-Revised (WRAT-R) Reading Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 3

Protocol outcome 8: Literacy outcomes at > 6 months
- Actual outcome for Children and young people: Wide Range Achievement Test-Revised (WRAT-R) Reading
at 47 weeks FU; Group 1: mean 114.4 (SD 22); n=12, Group 2: mean 107.3 (SD 13.7); n=11
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 3; Group 2 Number missing: 3

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: EXERCISE versus DESCRIBE

Protocol outcome 1: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: Child Behavior Checklist (CBCL) - Hyperactivity subscale (Parent)

at 12 weeks PT ; Group 1: mean 70.5 (SD 10.9); n=12, Group 2: mean 64.5 (SD 7.1); n=11; Child Behavior Checklist (CBCL) - Hyperactivity subscale (Parent) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 2; Group 2 Number missing: 3
- Actual outcome for Children and young people: Conners Teacher Rating Scale (CTRS) Hyperkinesis Index (Teacher)
at 12 weeks PT ; Group 1: mean 13.6 (SD 5); n=12, Group 2: mean 14.7 (SD 4.8); n=11; Conners Teacher Rating Scale (CTRS) Hyperkinesis Index (Teacher) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 2; Group 2 Number missing: 3

Protocol outcome 2: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: Child Behavior Checklist (CBCL) - Hyperactivity subscale (Parent)

at 47 weeks FU ; Group 1: mean 70.3 (SD 11.7); n=12, Group 2: mean 63.7 (SD 4.9); n=11; Child Behavior Checklist (CBCL) - Hyperactivity subscale (Parent) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 2; Group 2 Number missing: 3

- Actual outcome for Children and young people: Conners Teacher Rating Scale (CTRS) Hyperkinesis Index (Teacher)
at 47 weeks FU ; Group 1: mean 19.6 (SD 6.6); n=12, Group 2: mean 16.2 (SD 7.6); n=11; Conners Teacher Rating Scale (CTRS) Hyperkinesis Index (Teacher) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 2; Group 2 Number missing: 3

Protocol outcome 3: Function/behaviour at <3 months
- Actual outcome for Children and young people: Child Behavior Checklist (CBCL) – Externalizing subscale (Parent)

at 12 weeks PT ; Group 1: mean 71.7 (SD 9); n=12, Group 2: mean 68.5 (SD 8.4); n=11; Child Behavior Checklist (CBCL) – Externalizing subscale (Parent) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 2; Group 2 Number missing: 3
- Actual outcome for Children and young people: Conners Teacher Rating Scale (CTRS) Conduct Problems (Teacher)
at 12 weeks PT ; Group 1: mean 5.2 (SD 5.5); n=12, Group 2: mean 6.1 (SD 3.6); n=11; Conners Teacher Rating Scale (CTRS) Conduct Problems (Teacher) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 2; Group 2 Number missing: 3

Protocol outcome 4: Function/behaviour at >6 months

- Actual outcome for Children and young people: Child Behavior Checklist (CBCL) – Externalizing subscale (Parent)

at 47 weeks FU ; Group 1: mean 69.8 (SD 7.9); n=12, Group 2: mean 65.6 (SD 5.9); n=11; Child Behavior Checklist (CBCL) – Externalizing subscale (Parent) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 2; Group 2 Number missing: 3
- Actual outcome for Children and young people: Conners Teacher Rating Scale (CTRS) Conduct Problems (Teacher)
at 47 weeks FU ; Group 1: mean 5.2 (SD 5.5); n=12, Group 2: mean 6.3 (SD 5.3); n=11; Conners Teacher Rating Scale (CTRS) Conduct Problems (Teacher) Unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 2; Group 2 Number missing: 3

Protocol outcome 5: Numeracy outcomes at < 3 months
- Actual outcome for Children and young people: Wide Range Achievement Test-Revised (WRAT-R) Arithmetic
at 12 weeks PT; Group 1: mean 95.2 (SD 9); n=12, Group 2: mean 97.6 (SD 7.2); n=11; Wide Range Achievement Test-Revised (WRAT-R) Arithmetic Unclear Top=High is good outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 2; Group 2 Number missing: 3

Protocol outcome 6: Numeracy outcomes at > 6 months

- Actual outcome for Children and young people: Wide Range Achievement Test-Revised (WRAT-R) Arithmetic
at 47 weeks FU; Group 1: mean 88.6 (SD 8); n=12, Group 2: mean 94.9 (SD 11.9); n=11; Wide Range Achievement Test-Revised (WRAT-R) Arithmetic Unclear Top=High is good outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 2; Group 2 Number missing: 3

Protocol outcome 7: Literacy outcomes at < 3 months
- Actual outcome for Children and young people: Wide Range Achievement Test-Revised (WRAT-R) Reading
at 12 weeks PT ; Group 1: mean 106.4 (SD 15.7); n=12, Group 2: mean 109.5 (SD 16.1); n=11; Wide Range Achievement Test-Revised (WRAT-R) Reading Unclear Top=High is good outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 2; Group 2 Number missing: 3

Protocol outcome 8: Literacy outcomes at > 6 months
- Actual outcome for Children and young people: Wide Range Achievement Test-Revised (WRAT-R) Reading
at 47 weeks FU; Group 1: mean 104.3 (SD 12); n=12, Group 2: mean 107.3 (SD 13.7); n=11; Wide Range Achievement Test-Revised (WRAT-R) Reading Unclear Top=High is good outcome
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, race, sex, IQ, secondary diagnoses, parental marital status, family income, and family functioning

; Group 1 Number missing: 2; Group 2 Number missing: 3

Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Iseman 2011[246]
Study type	RCT (randomised; Parallel)
Number of studies (number of participants)	1 (n=29)
Countries and setting	Conducted in USA; Setting: Undertaken in school.
Line of therapy	Mixed line
Duration of study	Intervention time: 10 days
Method of assessment of guideline condition	Partially adequate method of assessment/diagnosis: Diagnosis of ADHD and LD based on parent report, teacher report, multidisciplinary team report and/or school, medical or psychological records.
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Participants with ADHD and learning difficulties.
Exclusion criteria	None detailed.
Recruitment/selection of patients	All participants attended a private school for children with learning problems.
Age, gender and ethnicity	Age - Mean (range): 13 (10-15). Gender (M:F): Male: 21, Female: 8. Ethnicity: 90% Caucasian
Further population details	1. Age: Not applicable / Not stated / Unclear (10-15 years old). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (Not stated).
Extra comments	All participants had moderate/severe LD. Classes randomised rather than participants.
Indirectness of population	No indirectness
Interventions	(n=14) Intervention 1: School/work-based interventions - School-based interventions. Brief cognitive instruction strategy. Completed 26 worksheets over approximately 3 weeks. During the baseline phase regular mathematical instruction occurred. During the intervention phase, planning strategy discussions occurred. All of the sessions were conducted on the students' regular classrooms. . Duration 10 days. Concurrent medication/care: None detailed Further details: 1. Location of intervention: In educational or work setting (In classroom). 2. Mode of delivery: Face to face (group intervention) 3. Study design: Parallel trial (n=15) Intervention 2: No treatment. Participants received typical mathematics instruction. Duration 10 days. Concurrent medication/care: None detailed Further details: 1. Location of intervention: In educational or work setting (In normal school classroom). 2. Mode of delivery: Face to face (group intervention) 3. Study design: Parallel trial
Funding	No funding (Authors received no financial support for the research)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: COGNITIVE STRATEGY INSTRUCTION versus NO TREATMENT

Protocol outcome 1: Academic outcome at < 3 months
- Actual outcome for Children and young people: Maths worksheets at Completed during 10 intervention days; Group 1: mean 42.7 (SD 21); n=14, Group 2: mean 37.8 (SD 21); n=14
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar in terms of age, race, parental education, CAS scores, number of patients taking medication, diagnoses of depression, diagnoses of anxiety disorders. No details of medications being utilised. ; Group 1 Number missing: 0; Group 2 Number missing: 1
- Actual outcome for Children and young people: WJ-III ACH Math Fluency at Completed after 10 intervention days; Group 1: mean 86.1 (SD 23.6); n=14, Group 2: mean 79.4 (SD 43.6); n=13
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar in terms of age, race, parental education, CAS scores, number of patients taking medication, diagnoses of depression, diagnoses of anxiety disorders. No details of medications being utilised. ; Group 1 Number missing: 0; Group 2 Number missing: 2
- Actual outcome for Children and young people: WIAT-II Numerical Operations at Completed after 10 intervention days; Group 1: mean 16.6 (SD 5.6); n=14, Group 2: mean 14 (SD 7.6); n=14
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar in terms of age, race, parental education, CAS scores, number of patients taking medication, diagnoses of depression, diagnoses of anxiety disorders. No details of medications being utilised. ; Group 1 Number missing: 0; Group 2 Number missing: 1

Protocol outcome 2: Academic outcome at > 6 months
- Actual outcome for Children and young people: WJ-III ACH Math Fluency at 1 year after study completion; Group 1: mean 16.08 (SD 19); n=13, Group 2: mean 3.21 (SD 18.21); n=14
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar in terms of age, race, parental education, CAS scores, number of patients taking medication, diagnoses of depression, diagnoses of anxiety disorders. No details of medications being utilised. ; Group 1 Number missing: 0; Group 2 Number missing: 2

Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at

> 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months	

Study	Khalili kermani 2016[261]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=60)
Countries and setting	Conducted in Iran; Setting: At 3 psychiatric centers in Tehran.
Line of therapy	1st line
Duration of study	Intervention + follow up:
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	The inclusion criteria were; meeting DSM-IV diagnostic criteria for ADHD and age between 8 and 11 years at the start of the intervention.
Exclusion criteria	Exclusion criteria were being treated with stimulants such as atomoxetine, neuroleptic, or any other psychoactive drugs, fulfilling the diagnostic criteria for oppositional defiant disorder, autistic syndrome, Asperger's syndrome, conduct disorder, bipolar disorder, obsessive-compulsive disorder, tic or depression based on the psychiatrist diagnosis, IQ <80 (based on the WISC-IV and school history) or medical illness requiring immediate treatment.
Age, gender and ethnicity	Age - Mean (range): 9.85 (8.5-11.2). Gender (M:F): 35 male, 25 female. Ethnicity: Not stated.
Further population details	1. Age: School age children (6-13 years) (8.5 - 11.2 years). 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Indirectness of population	No indirectness
Interventions	(n=30) Intervention 1: Neurocognitive training - Memory training. Working Memory Training - In the form of structured games. Program comprises of 20 different games with various techniques, involving WM and executive functions. Structured games were conducted in a period of 12 weeks consisting of two 60-minute sessions weekly. Selecting games in each session was done based on the conducted assessments. WM operations consist of some kinds of transformation or manipulation of information. a) Converting data into coded form of long term memory in the form of basic and complex encoding. b) Linking new data to the existing long-term representations. c) Maintaining the sub-products of calculative procedures until the last product is obtained. d) technique of managing a conscious, direct investigation for information collected in the long term memory. e) chunking related items into categories or groups. f) organizing new information in form of meaningful categorization. The exercises varied in their inherent complexity and the program adjusted the level of difficulty for each exercise to the child ability's to constantly challenge the capacity of the child's working memory. Parents were encouraged to conduct games at an easy level at home and gradually make them harder to motivate the child to continue the games. . Duration 12 weeks.

	Concurrent medication/care: No intervention was done for the control group. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear (Home and psychiatric centres). 2. Mode of delivery: Mixed involving face to face contact (Individual, 1:1 with help from parents, conducted by therapists and parents at home). 3. Study design: Not applicable / Not stated / Unclear (RCT). (n=30) Intervention 2: No treatment. No treatment. They received treatment at the end of the study, which was not assessed nor entered into this research. . Duration 12 weeks. . Concurrent medication/care: No intervention was done for the control group. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Not applicable / Not stated / Unclear
Funding	Funding not stated
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: WORKING MEMORY TRAINING versus NO TREATMENT Protocol outcome 1: ADHD symptoms total at <3 months - Actual outcome for Children and young people: CBCL - parent rated at 12 weeks PT; Group 1: mean 45 (SD 6.85); n=30, Group 2: mean 72.6 (SD 5.17); n=30 Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Langberg 2008[279]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=37)
Countries and setting	Conducted in USA; Setting: After school program.
Line of therapy	Mixed line
Duration of study	Intervention time: 8 weeks
Method of assessment of guideline condition	Partially adequate method of assessment/diagnosis: 6 or more symptoms on either the parent or teacher Vanderbilt ADHD Rating Scale.
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Children with ADHD in USA grades 4-7 in a suburban USA public school district. Participants met an impairment criteria: a score of 4 or higher in 1 or more areas of impairment on both the parent and teacher Vanderbilt ratings.
Exclusion criteria	None detailed.
Recruitment/selection of patients	Students referred by teachers and school counselors.
Age, gender and ethnicity	Age - Range: 9-14 years old. Gender (M:F): Male: 31, Female: 6. Ethnicity: Caucasian: 70%, African American: 30%.
Further population details	1. Age: Not applicable / Not stated / Unclear (Aged from 9-14 years old). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (Not stated.).
Indirectness of population	No indirectness
Interventions	(n=24) Intervention 1: School/work-based interventions - School-based interventions. Organisational skills intervention. 2 days per week and 1.25 hours per intervention day. 55 minutes of individual intervention time and 55 minutes of group intervention. Intervention components were 1) organisation intervention, 2) homework management intervention, 3) behaviour management / reward system, 4) patient involvement. Staffed by undergraduate psychology students. . Duration 8 weeks. Concurrent medication/care: 11 taking medication for ADHD. 8 of 11 on stimulant medication. Further details: 1. Location of intervention: In educational or work setting (Education setting). 2. Mode of delivery: Mixed involving face to face contact 3. Study design: Parallel trial (n=13) Intervention 2: No treatment. Placed on waiting list for organisational skills program. . Duration 8 weeks. . Concurrent medication/care: 5 participants taking medication for ADHD. 3 of 5 taking stimulant medication. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear (No treatment). 2. Mode of

	delivery: Not applicable / Not stated / Unclear (No treatment). 3. Study design: Parallel trial
Funding	Academic or government funding (Supported in part by the Princeton City School District of Cincinnati)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: ORGANISATIONAL SKILLS versus NO TREATMENT

Protocol outcome 1: Academic outcome at < 3 months
- Actual outcome for Children and young people: Academic Performance Rating Scale (APRS) Total (teacher completed) at Post-intervention; Group 1: mean 63.83 (SD 10.4); n=24, Group 2: mean 60.92 (SD 10.8); n=13
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for current ADHD medication and stimulant use. ; Group 1 Number missing: ; Group 2 Number missing:
- Actual outcome for Children and young people: Academic Performance Rating Scale (APRS) Academic Productivity subscale (teacher completed) at Post-intervention; Group 1: mean 42.38 (SD 10.3); n=24, Group 2: mean 39.62 (SD 9.7); n=13
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for current ADHD medication and stimulant use. ; Group 1 Number missing: ; Group 2 Number missing:
- Actual outcome for Children and young people: Academic Performance Rating Scale (APRS) Academic Success subscale (parent completed) at Post-intervention; Group 1: mean 21.49 (SD 7.6); n=24, Group 2: mean 22.23 (SD 4.7); n=13
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for current ADHD medication and stimulant use. ; Group 1 Number missing: ; Group 2 Number missing:
- Actual outcome for Children and young people: Homework Problems Checklist (HPC) Total (parent completed) at Post-intervention; Group 1: mean 34.25 (SD 8.8); n=24, Group 2: mean 41.46 (SD 12.2); n=13
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for current ADHD medication and stimulant use. ; Group 1 Number missing: ; Group 2 Number missing:
- Actual outcome for Children and young people: Homework Problems Checklist (HPC) Inattention/Avoidance subscale (parent completed) at Post-intervention; Group 1: mean 19.96 (SD 5.4); n=24, Group 2: mean 22.92 (SD 7.1); n=13
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for current ADHD medication and stimulant use. ; Group 1 Number missing: ; Group 2 Number missing:
- Actual outcome for Children and young people: Homework Problems Checklist (HPC) Noncompliance subscale (parent completed) at Post-intervention; Group 1: mean 14.29 (SD 4.1); n=24, Group 2: mean 18.54 (SD 6.1); n=13
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for current ADHD medication and stimulant use. ; Group 1 Number missing: ; Group 2 Number missing:

Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Langberg 2012[278]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=47)
Countries and setting	Conducted in USA; Setting: School
Line of therapy	1st line
Duration of study	Intervention time: 11 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: Diagnostic Interview Schedule for Children – IV
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Students had to meet DSM-IV criteria for a diagnosis of ADHD -Inattentive Type or Combined Type and have an estimated full scale IQ > 75. And have at least four symptoms in one domain endorsed as often or very often on the VATRS
Exclusion criteria	Children with comorbid conditions were included in the study (see Table 1) unless they met criteria for Bipolar Disorder, Psychotic Disorder, or Substance Dependence
Recruitment/selection of patients	Students were referred to the study by the school mental health providers.
Age, gender and ethnicity	Age - Range: 11-14. Gender (M:F): 36/11. Ethnicity: Not reported
Further population details	1. Age: School age children (6-13 years) (grades 6–8). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (ADHD hyper (Mean (SD)): Intervention= 1.33 (0.71), Comparison= 1.14 (0.66); ADHD inatt. (Mean (SD)): Intervention= 2.02 (0.55), Comparison= 2.00 (0.54)).

Extra comments	.
Indirectness of population	No indirectness
Interventions	(n=23) Intervention 1: School/work-based interventions - School-based interventions. The Homework, Organization, and Planning Skills (HOPS)intervention delivered in this study was an individual (i.e., 1:1), 16-session intervention, delivered during the school day, with each session designed to last no longer than 20 minutes. Initial sessions occurred twice weekly and then moved to once-a-week for the last six sessions. As a result, the 16 sessions can be completed over an 11-week period. Three main skills areas were covered: school materials organization, homework recording and management, and planning/time-management. Materials organization and homework recording and management skills were introduced first and time-management/planning was introduced second. The HOPS intervention included a point system. SMH providers completed skills tracking checklists at every intervention session that included operationalized definitions of materials organization and homework management. At each HOPS session, students' materials (e.g., binder, bookbag, and planner) were visually inspected by the SMH provider. Students received points for each criterion they met on the skills tracking checklists (e.g., no loose papers in bookbag = 1point). In later sessions, the SMH providers also completed a checklist containing operationalized definitions of time-management, and the student earned points for effectively planning and studying for tests and projects(e.g., recorded a test in the planner = 1 point; designated a time to study for the test = 1 point). These points accumulated and students traded in the points for gift card rewards. The HOPS intervention included two 1-hr parent meetings. These meetings were held at the school and included the SMH provider, the student, and one or both parents. The first meeting took place early in the intervention and was designed to orient the parent/guardian to the program. The second meeting took place near the completion of the intervention. The goal of the second parent meeting was to teach the parent how to manage the HOPS checklist completion and reward responsibilities once the intervention period ended. Parents learned about the point system and worked with the SMH provider to establish a plan for providing home-based rewards.. Duration 11 weeks. Concurrent medication/care: Medication was used by 69.6% (n=16) Further details: 1. Location of intervention: In educational or work setting 2. Mode of delivery: Face to face (1 on 1) 3. Study design: Parallel trial (n=24) Intervention 2: No treatment. Waitlist. Duration 11 weeks. Concurrent medication/care: Medication was used by 62,5% (n=15) Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial

Funding	Funding not stated
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: SCHOOL-BASED INTERVENTIONS versus NO TREATMENT Protocol outcome 1: ADHD symptoms total at <3 months - Actual outcome for Children and young people: Vanderbilt ADHD Diagnostic Parent Rating Scale (VADPRS) - Inattentive symptoms (parent) at 11 weeks PT; Group 1: mean 1.62 (SD 0.64); n=23, Group 2: mean 1.97 (SD 0.7); n=24; Vanderbilt ADHD Diagnostic Parent Rating Scale (VADPRS) 0-3 Top=High is poor outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Age, IQ, Comorbid diagnosis, Parent education, Family income and ADHD medication; Group 1 Number missing: 0; Group 2 Number missing: 0 Protocol outcome 2: ADHD symptoms total at >6 months - Actual outcome for Children and young people: Vanderbilt ADHD Diagnostic Parent Rating Scale (VADPRS) - hyperactive/impulsive symptoms (parent) at 11 weeks PT; Group 1: mean 1.22 (SD 0.71); n=23, Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Age, IQ, Comorbid diagnosis, Parent education, Family income and ADHD medication; Group 1 Number missing: 0; Group 2 Number missing: 0	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Lansbergen 2011[280]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=14)
Countries and setting	Conducted in Netherlands; Setting: Secondary care
Line of therapy	1st line
Duration of study	Intervention time: 43 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: diagnosed with ADHD as classified by the DSM-IV-TR (APA 2000) 2000) DSM-IV-TR (APA 2000)
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Children were included if (1) they had been diagnosed with ADHD as classified by the DSM-IV-TR (APA 2000), (2) they had an estimated IQ of at least 80, (3) their QEEG deviated at least 1.5 standard deviation (SD) from a normative database (see ‘‘EEG neurofeedback training and placebo feedback training’’), and (4) they were psychopharmaca- naı¨ve or -free, or used a stable dosage of psychostimulants or atomoxetine with room for improvement.
Exclusion criteria	Children were excluded if they (1) were involved in intensive (i.e., weekly) individual or group psychotherapy during the experiment, (2) used medication other than psycho-stimulants or atomoxetine, (3) had a comorbid disorder, other than oppositional defiant disorder (ODD) or an anxiety disorder, (4) had a neurological disorder and/or a cardiovascular disease, (5) participated in another clinical trial, (5) received neurofeedback training in the past, or (5) used alcohol or drugs.

Recruitment/selection of patients	Advertisement
Age, gender and ethnicity	Age - Mean (SD): 10.2 (2). Gender (M:F): 13/1. Ethnicity: Not reported
Further population details	1. Age: Not applicable / Not stated / Unclear (8-15 years). 2. Baseline symptom severity: Majority moderate symptoms of ADHD (all children were rated as moderately ill (n = 11) or markedly ill (n = 3)).
Indirectness of population	No indirectness
Interventions	(n=6) Intervention 1: Placebo - Sham. 4 months with 2 sessions per week, in total 30 sessions. A session lasted 20 minutes. Children in the placebo feedback group received feedback on a simulated EEG signal, generated by Brain-Master Atlantis software. Duration 17 weeks. Concurrent medication/care: To meet the ethical standards, all participating children were allowed to continue their medication for ADHD, if any, and provided that there was enough room for further symptomatic improvement Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Directed self-help 3. Study design: Parallel trial (n=8) Intervention 2: Neurofeedback. 4 months with 2 sessions per week, in total 30 sessions. A session lasted 20 minutes. Electroencephalography (EEG)-neurofeedback. The aim of the EEG-neurofeedback training was to normalize power within specific frequency bands and at specific electrode sites.. Duration 17 weeks. Concurrent medication/care: To meet the ethical standards, all participating children were allowed to continue their medication for ADHD, if any, and provided that there was enough room for further symptomatic improvement Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Directed self-help 3. Study design: Parallel trial
Funding	Academic or government funding (The authors gratefully acknowledge the support of the BrainGain Smart Mix Programme of The Netherlands Ministry of Economic Affairs and The Netherlands Ministry of Education, Culture and Science.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: NEUROFEEDBACK versus SHAM

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: ADHD DSM-IV scale (DuPaul et al. 1998) Inattentive subscale rated by the investigator in an interview with parents

at 17 weeks PT; Group 1: mean 13.4 (SD 7.8); n=8, Group 2: mean 12.5 (SD 2.3); n=6; ADHD DSM-IV scale (DuPaul et al. 1998) Inattentive subscale rated by the investigator in an interview with parents 0-27 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - RCT is done well, only FU ADHD symptoms are not reported in a way that they can be extracted. ; Indirectness of outcome: No indirectness ; Baseline details: illness severity, sex, age, medication used; Blinding details: All participating children, their parents, and all people involved in the study were blind to group assignment, except for the principal investigator who was not involved in data-collection, data-entry and data-analysis.
; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 2: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: ADHD DSM-IV scale (DuPaul et al. 1998) Inattentive subscale rated by the investigator in an interview with parents

at 43 weeks FU;
Risk of bias: All domain - High, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Very high, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - RCT is done well, only FU ADHD symptoms are not reported in a way that they can be extracted. ; Indirectness of outcome: No indirectness ; Baseline details: illness severity, sex, age, medication used; Blinding details: All participating children, their parents, and all people involved in the study were blind to group assignment, except for the principal investigator who was not involved in data-collection, data-entry and data-analysis.
; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 3: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: ADHD DSM-IV scale (DuPaul et al. 1998) Hyperactive/impulsive subscale rated by the investigator in an interview with parents

at 17 weeks PT; Group 1: mean 10.3 (SD 6); n=8, Group 2: mean 14.7 (SD 6.2); n=6
Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - RCT is done well, only FU ADHD symptoms are not reported in a way that they can be extracted. ; Indirectness of outcome: No indirectness ; Baseline details: illness severity, sex, age, medication used; Blinding details: All participating children, their parents, and all people involved in the study were blind to group assignment, except for the principal investigator who was not involved in data-collection, data-entry and data-analysis.

; Group 1 Number missing: 0; Group 2 Number missing: 0 Protocol outcome 4: ADHD symptoms hyperactivity at >6 months - Actual outcome for Children and young people: ADHD DSM-IV scale (DuPaul et al. 1998) Hyperactive/impulsive subscale rated by the investigator in an interview with parents at 43 weeks FU; Risk of bias: All domain - High, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Very high, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - RCT is done well, only FU ADHD symptoms are not reported in a way that they can be extracted. ; Indirectness of outcome: No indirectness ; Baseline details: illness severity, sex, age, medication used; Blinding details: All participating children, their parents, and all people involved in the study were blind to group assignment, except for the principal investigator who was not involved in data-collection, data-entry and data-analysis. ; Group 1 Number missing: 0; Group 2 Number missing: 0 Protocol outcome 5: CGI-I (much improved or very much improved) at >6 months - Actual outcome for Children and young people: Clinical Global Impressions-Improvement scale (CGI-I; Wigal et al. 2006), rated by the investigator in an interview with parents. at 43 weeks FU; Group 1: 1/8, Group 2: 0/6; Comments: event is a responder (i.e., rated as ‘‘much improved’’) Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - RCT is done well, only FU ADHD symptoms are not reported in a way that they can be extracted. ; Indirectness of outcome: No indirectness ; Baseline details: illness severity, sex, age, medication used; Blinding details: All participating children, their parents, and all people involved in the study were blind to group assignment, except for the principal investigator who was not involved in data-collection, data-entry and data-analysis. ; Group 1 Number missing: 0; Group 2 Number missing: 0	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; CGI-I (much improved or very much improved) at <3 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Looyeh 2012[301]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=14)
Countries and setting	Conducted in Iran; Setting: Psychological services center
Line of therapy	1st line
Duration of study	Intervention + follow up: 11 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: received comprehensive diagnostic evaluations using Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) criteria by experienced clinical psychologists
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	child (a) did not have a prior history of treatment for ADHD, (b) met the Children Symptom Inventory (CSI) symptoms severity cut-off score for a potential diagnosis of ADHD, and (c) subsequently had a confirmed clinical diagnosis of ADHD.
Exclusion criteria	not reported
Recruitment/selection of patients	Participants were selected from consecutive referrals by school districts
Age, gender and ethnicity	Age - Range: 9-11 years. Gender (M:F): 0/14. Ethnicity: Not reported
Further population details	1. Age: School age children (6-13 years) (9-11 years old). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (ADHD symptoms Intervention group 14.71 (1.79) control 15 (2.16) measured by the Children Symptom Inventory).
Indirectness of population	No indirectness
Interventions	(n=7) Intervention 1: Play-based activities (children only) - Other play-based activities. The therapy groups received 12 sessions of approximately 60 minutes of narrative therapy twice weekly with homework between sessions. The sessions were conducted after hours in a school setting. An experienced female school psychologist facilitated the intervention for both groups using a detailed prescribed set of procedures. The procedures were developed and refined in the course of working with children with behavioral problems and tailored to working with children with ADHD. Six group activities provided the medium for story making and storytelling and guiding the participants through the narrative process. The activities are based on and/or adopted from the collection of play therapy activities. The activities in the order they were introduced to the sessions are as follows:

	1. The Feeling Words Game—used in Sessions 1, 2, and 3 required participants to tell a story involving themselves or others. They were asked to name and describe the feelings and the intensity of emotions of the story's characters, the feelings they provoked in others, and somatic and nonverbal behaviors associated with various emotions. In the second and third sessions, participants were encouraged to tell stories about their own experiences at home or school, prompting them to begin to verbalize their narratives without direct reference to ADHD symptoms. 2. Metaphors for Calmness—used Sessions 2, 3, and 6. The therapist told a story with characters exhibiting impulsive behaviors. The conversation focused on naming and characterizing impulsive behaviors. In Sessions 3 and 6, the focus shifted to identifying and evaluating the consequences of behaving differently from how a child with ADHD would behave. 3. The Scarf Story—used in Sessions 3, 4, 5, 6, and 8. Participants told a story and physically acted out the sequential movements of the story's characters, synchronized actions with mental images of behaviors, and identified techniques they could use (e.g., time-out) to exercise self-control and manage restlessness and hyperactivity. 4. Metaphors for Attentiveness—used in Sessions 4, 5, 9, and 10. The therapist acted as a storyteller with animal characters exhibiting attention-deficit disorder (ADD)-type behaviours (e.g., inattentiveness, distractibility, trouble listening or following directions, forgetfulness, and being disorganized). Participants were asked to describe the behavior of the story's characters and their consequences. In Sessions 9 and 10, there was more emphasis on identifying and evaluating alter- native behaviors and verbalizing the consequences of listening to others, paying attention to details of events, responding when spoken to, memorizing, and recalling important points in the story. 5. Storytelling With Objects—used in Sessions 7, 10, 11, and 12, aimed at developing expertise in self-management through identifying, characterizing, and expressing new narratives. Participants were asked to choose one of five objects and tell a new story. The conversation focused on the feelings, beliefs, and thinking of the story's characters and how they could think and react differently to experience a different and more positive outcome. The therapist focused on fostering self-confidence, self- competency, and a sense of control in dealing with different situation. This exercise plays a critical role in the transition to internalizing cognitive self-regulation. 6. Metaphors and Fairy Tales—used in Sessions 7, 8, 11, and 12, focused on internalizing new narratives and initiatives. The therapist told a story with animal characters exhibiting ADHD symptoms in situations similar to the participants' experiences at home or school. The story was enacted in two parts. In the first part, participants identified the ADHD-related behaviors of the story's characters. At different points in the story, the therapist would stop and ask participants to continue the story acting out the ADHD behaviors. In

	the second part, participants were asked to describe the consequences of the ADHD-related behaviours, search for and act out alternative solutions, evaluate the effect of behaving differently, and decide if and why the alternative behaviors were desirable. The stories ended with the animal characters having identified and responded with solutions opposite of what a child with ADHD would do with constructive feedback and positive endings. . Duration 7. Concurrent medication/care: No medication in both groups at pre, post or follow-up Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Face to face (group intervention) 3. Study design: Parallel trial (n=7) Intervention 2: No treatment. Waitlist. Duration 7. Concurrent medication/care: No medication in both groups at pre, post or follow-up Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Funding not stated

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: OTHER PLAY-BASED ACTIVITIES versus NO TREATMENT

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Children and young people: Children Symptom Inventory (Teacher) at 7 weeks PT; Group 1: mean 7 (SD 5.51); n=7, Group 2: mean 11.86 (SD 5.24); n=7; Children Symptom Inventory (Teacher) unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - This was a very small trail with very limited report of baseline details. There is a possibility that the groups are not evenly distributed for possible confounders; Indirectness of outcome: No indirectness ; Baseline details: ADHD symptoms; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: Children Symptom Inventory (Teacher) at 11 weeks FU; Group 1: mean 6.86 (SD 4.29); n=7, Group 2: mean 12 (SD 6.92); n=7; Children Symptom Inventory (Teacher) unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - This was a very small trail with very limited report of baseline details. There is a possibility that the groups are not evenly distributed for possible confounders; Indirectness of outcome: No indirectness ; Baseline details: ADHD symptoms; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 2: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Children Symptom Inventory ADD subscale (Teacher) at 7 weeks PT; Group 1: mean 4.14 (SD 3.18); n=7, Group 2: mean 6.57 (SD 2.44); n=7; Children Symptom Inventory (Teacher) unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - This was a very small trail with very limited report of

baseline details. There is a possibility that the groups are not evenly distributed for possible confounders; Indirectness of outcome: No indirectness ; Baseline details: ADHD symptoms; Group 1 Number missing: 0; Group 2 Number missing: 0 - Actual outcome for Children and young people: Children Symptom Inventory ADD subscale (Teacher) at 11 weeks FU; Group 1: mean 4.29 (SD 3.04); n=7, Group 2: mean 6.29 (SD 3.49); n=7; Children Symptom Inventory (Teacher) unclear Top=High is poor outcome Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - This was a very small trail with very limited report of baseline details. There is a possibility that the groups are not evenly distributed for possible confounders; Indirectness of outcome: No indirectness ; Baseline details: ADHD symptoms; Group 1 Number missing: 0; Group 2 Number missing: 0 Protocol outcome 3: ADHD symptoms hyperactivity at <3 months - Actual outcome for Children and young people: Children Symptom Inventory HD subscale (Teacher) at 7 weeks PT; Group 1: mean 2.86 (SD 3.02); n=7, Group 2: mean 5.29 (SD 3.14); n=7; Children Symptom Inventory (Teacher) unclear Top=High is poor outcome Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - This was a very small trail with very limited report of baseline details. There is a possibility that the groups are not evenly distributed for possible confounders; Indirectness of outcome: No indirectness ; Baseline details: ADHD symptoms; Group 1 Number missing: 0; Group 2 Number missing: 0 - Actual outcome for Children and young people: Children Symptom Inventory HD subscale (Teacher) at 11 weeks FU; Group 1: mean 2.57 (SD 2.29); n=7, Group 2: mean 5.71 (SD 3.86); n=7; Children Symptom Inventory (Teacher) unclear Top=High is poor outcome Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - This was a very small trail with very limited report of baseline details. There is a possibility that the groups are not evenly distributed for possible confounders; Indirectness of outcome: No indirectness ; Baseline details: ADHD symptoms; Group 1 Number missing: 0; Group 2 Number missing: 0
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Matos 2009[308]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=32)
Countries and setting	Conducted in Puerto Rico; Setting: Clinic
Line of therapy	1st line
Duration of study	--: 30 weeks (PT data used, FU data only reported for treatment group)
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: NIMH Diagnostic Interview Schedule for Children IVF Parent Version (NIMH-DISC IV, 1997)
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Attending a preschool program, parents reported hyperactivity and behavior problems; had an ADHD diagnosis, combined or hyperactive-impulsive (HIT) type, had an IQ ≤ 80 on the Peabody Picture Vocabulary Test (PPVT); showed no evidence of significant sensory, language, neurological, or pervasive developmental difficulties; their mothers were Puerto Rican and lived with their children; were not receiving treatment with stimulant or other psychotropic medication; and their parents agreed not to participate in any other form of child psychotherapy and/or pharmacotherapy until completion of study participation. Other inclusion criteria included: absence of domestic violence, severe major depression, substance abuse, psychopathology, or severe mental retardation in participating parents. None of the parents were excluded for any of these criteria. All parents were oriented on other treatment options and informed of their right to leave the treatment at any time. Their primary language was Spanish.
Exclusion criteria	-
Recruitment/selection of patients	Preschool
Age, gender and ethnicity	Age - Range: 4-6 years. Gender (M:F): Define. Ethnicity: Not reported
Further population details	1. Age: Preschool children (0-6 years) 2. Baseline symptom severity: Not applicable / Not stated / Unclear (DBRS-hyperactivity (Mean (SD)): PCIT= 21.10 (4.44); WL=22.67 (2.87)).
Extra comments	Children with ADHD and conduct problems
Indirectness of population	No indirectness

Interventions	(n=20) Intervention 1: Carer and family training programmes - Programmes including the person with ADHD. PARENT-CHILD INTERACTION THERAPY (PCIT) is designed to help parents build a warm and responsive relationship with their child and to manage their child's behavior more effectively. It is conducted in the context of a dyadic play situation. Parents are taught and given time to practice specific communication and behavior management skills with their child in a clinic playroom. Therapists coach parents from an observation room while they are interacting with their child using a bug-in-ear microphone . Duration 15 weeks. Concurrent medication/care: Participants were not receiving treatment with stimulant or other psychotropic medication; and their parents agreed not to participate in any other form of child psychotherapy and/or pharmacotherapy until completion of study participation. Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Face to face (1 on 1) 3. Study design: Parallel trial (n=12) Intervention 2: No treatment. Waitlist. Duration 15 weeks. Concurrent medication/care: Participants were not receiving treatment with stimulant or other psychotropic medication; and their parents agreed not to participate in any other form of child psychotherapy and/or pharmacotherapy until completion of study participation. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Academic or government funding (NIH Research Grant 5R24-MH-49368-12 funded by the National Institute of Mental Health and by the Division of Mental Disorders, Behavioral Research & Aids to Guillermo Bernal.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: FAMILY TRAINING versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Disruptive Behavior Scale for Children Spanish (DBRS) - inattention

at 15 weeks (PT); Group 1: mean 9.9 (SD 4.3); n=20, Group 2: mean 15.83 (SD 6.89); n=12; Disruptive Behavior Scale for Children Spanish (DBRS) - inattention 0-27 Top=High is poor outcome
Risk of bias: All domain - ; Indirectness of outcome: No indirectness

Protocol outcome 2: ADHD symptoms hyperactivity at <3 months

- Actual outcome for Children and young people: Disruptive Behavior Scale for Children Spanish (DBRS) - hyperactivity at 15 weeks (PT); Group 1: mean 13.89 (SD 5.02); n=20, Group 2: mean 20.92 (SD 3.7); n=12; Disruptive Behavior Scale for Children Spanish (DBRS) - hyperactivity 0-27 Top=High is poor outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, age, IQ, parent education, family structure,; Group 1 Number missing: 1, Reason: unclear; Group 2 Number missing: 0 Protocol outcome 3: Function/behaviour at <3 months - Actual outcome for Children and young people: Disruptive Behavior Scale for Children Spanish (DBRS) - ODD at 15 weeks (PT); Group 1: mean 6.38 (SD 3.39); n=20, Group 2: mean 13.5 (SD 4.3); n=12; Disruptive Behavior Scale for Children Spanish (DBRS) - ODD 0-24 Top=High is poor outcome Risk of bias: All domain - ; Indirectness of outcome: No indirectness	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Mawjee 2015[311]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=97)
Countries and setting	Conducted in Canada; Setting: School
Line of therapy	1st line
Duration of study	Intervention + follow up: 19 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: Semi-structured telephone interviews were conducted to assess students' eligibility to participate in the study as well as validate current ADHD symptomology. The students were registered in with Student Disability Services which requires students to provide comprehensive documentation to confirm their diagnosis or undergo a new diagnostic assessment.
Stratum	Adults
Subgroup analysis within study	Not applicable
Inclusion criteria	1) previous diagnosis of ADHD, 2) between 18 to 35 years of age 3) current enrolment in a post-secondary educational institution, 4) registered with Student Accessibility/Disability Services with a confirmed diagnosis of ADHD, 5) current symptoms consistent with diagnostic criteria for ADHD, as indicated by a semi-structured telephone interview based on the first six items of the Adult ADHD Self-Report Scale (ASRS-A Interview), meeting the clinical cut-off score on the 18-item paper-version of the ASRS (ASRS T1), and on a collateral report using the adapted 18-item version of Adult ASRS completed by a significant other (ASRS Other). In addition to the total scores for the different versions of the ASRS, the scale is also used to calculate a 'symptom count'; a score of 2 (sometimes, often, very often) on Items 1 to 3, and 3 (often, very often) on Items 4 to 6, with at least 4/ 6 items meeting these criteria, indicates a current symptom profile consistent with a diagnosis of ADHD.
Exclusion criteria	1) major neurological dysfunction or psychosis, 2) current use of sedating or mood-altering medication other than medication provided for ADHD, 3) uncorrected sensory impairment, 4) motor or perceptual handicap that would

	prevent use of a computer program, or 5) a history of concussion or traumatic brain injury prior to ADHD diagnosis, 6) limited proficiency in English language.
Recruitment/selection of patients	School Semi-structured telephone interviews were conducted to assess students' eligibility to participate in the study as well as validate current ADHD symptomology.
Age, gender and ethnicity	Age - Mean (SD): 23.87 (3.41). Gender (M:F): 39/58. Ethnicity: Not reported
Further population details	1. Age: Young adults (18-25 years) (Inclusion criteria between 18 to 35 years of age (mean age 23.87)). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (ADHD Self-Report Scale total for whole group 45.08 (12.54)).
Extra comments	.
Indirectness of population	No indirectness
Interventions	(n=32) Intervention 1: Neurocognitive training - Memory training. Standard CogMed Cognitive Medical Systems AB. 25 training sessions, typically described as taking about 45 minutes per session, to be completed 5 days per week, for 5 –6 weeks. In the standard-length training group engaged in 45 minutes of training, completing 2 'core' training activities per session that were used throughout training plus another 6 of the remaining 10 possible tasks per session, which were chosen based on random computer selection of tasks, for a total of 90 working memory trials. 12 auditory-verbal and visual-spatial working memory tasks that involve the storage and manipulation of particular sequences of stimuli. For each task, an adaptive algorithm automatically adjusts the difficulty level based on trial-by trial performance to ensure individuals are always working at the upper limit of their working memory capacity. Positive reinforcement is provided at the end of each trial through computerized verbal feedback. And weekly telephone calls from a certified CWMT coach to provide feedback on training performance, address any training challenges, make recommendations for the next week of training, and encourage compliance with the training schedule . Duration 5 weeks. Concurrent medication/care: Participants were advised to maintain their current pharmacological treatment throughout the study.

	Further details: 1. Location of intervention: Home 2. Mode of delivery: Directed self-help (Weekly telephone calls from a certified CWMT coach are conducted to provide feedback on training.). 3. Study design: Parallel trial (n=33) Intervention 2: Neurocognitive training - Memory training. Same as the other Cogmed arm, but it was a shortened-length CogMed Cognitive Medical Systems AB and 30 minute coach calls per week. Those in the shortened-length training group engaged in 15 minutes of training, completing 45 trials of 4 working memory tasks per session, which consisted of the same two 'core' activities used throughout training (as in the standard-length program) plus two additional tasks that changed during each training session based on random computer selection. This shortened-length version was developed by Cogmed at the request of consumers who had completed the standard 25 days mofWMtraining to provide 'extension training', but the company acknowledges that it has no research basis as yet (http://www.cogmed.com/questions-answers-training-of-working-memory-in-children-with-attention-deficits). . Duration 5 weeks. Concurrent medication/care: Participants were advised to maintain their current pharmacological treatment throughout the study. Further details: 1. Location of intervention: Home 2. Mode of delivery: Directed self-help (Weekly telephone calls from a certified CWMT coach are conducted to provide feedback on training.). 3. Study design: Parallel trial (n=32) Intervention 3: No treatment. Waitlist with coach calls. Waitlist control participants did not undergo any training during the 5-week period, but did receive weekly calls from a certified CWMT coach to control for possible effects of coaching, attention and motivation, with each call lasting approximately 30 minutes.. Duration 5 weeks . Concurrent medication/care: Participants were advised to maintain their current pharmacological treatment throughout the study. Further details: 1. Location of intervention: Home 2. Mode of delivery: Facilitated remotely (online or telephone support) (Weekly telephone calls from a certified CWMT coach are conducted to provide feedback on training). 3. Study design: Parallel trial
Funding	Academic or government funding (The study was funded by Canadian Institute of Health Research (CIHR) (Grant#482246; RT) and by Canada Research Chairs Program (RT)

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RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: MEMORY TRAINING versus MEMORY TRAINING

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Adults: Adult ADHD Self- Report Scale (ASRS) to Rate Adult ADHD symptoms
at 8 weeks PT; Group 1: mean 46.48 (SD 9.89); n=32, Group 2: mean 46.63 (SD 9.15); n=33; Adult ADHD self-report scale (ASRS) 0-54 Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - FU results were not reported in a way we could extract them. Also the wait list group received the Cogmed training during follow-up: "We were required to offer CWMT training to waitlist control participants while they were still attending post-secondary education, and so we were not able to put their training on hold for a 3-month period."
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, IQ , taking medication, all outcome measures.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 2: Function/behaviour at <3 months
- Actual outcome for Adults: Barkley Deficits in Executive Functioning Scale Short Form, was used to evaluate executive functioning deficits in everyday life activities.

at 8 weeks PT; Group 1: mean 49.9 (SD 9.22); n=32, Group 2: mean 50.41 (SD 11); n=33; Barkley Deficits in Executive Functioning Scale Short Form unclear Top=High is poor outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - FU results were not reported in a way we could extract them. Also the wait list group received the Cogmed training during follow-up: "We were required to offer CWMT training to waitlist control participants while they were still attending post-secondary education, and so we were not able to put their training on hold for a 3-month period."
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, IQ , taking medication, all outcome measures.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 3: Numeracy outcomes at < 3 months
- Actual outcome for Adults: The Woodcock Johnson-III was used to evaluate math fluency.

at 8 weeks PT; Group 1: mean 115.55 (SD 22.25); n=32, Group 2: mean 118.33 (SD 23.75); n=33; Woodcock Johnson Math unclear Top=High is good outcome

Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - FU results were not reported in a way we could extract them. Also the wait list group received the Cogmed training during follow-up: "We were required to offer CWMT training to waitlist control participants while they were still attending post-secondary education, and so we were not able to put their training on hold for a 3-month period."
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, IQ , taking medication, all outcome measures.

; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 4: Literacy outcomes at < 3 months
- Actual outcome for Adults: The Test of Word Reading Efficiency-II was used to assess reading fluency.

at 8 weeks PT; Group 1: mean 148.78 (SD 17.03); n=32, Group 2: mean 152.83 (SD 14.55); n=33; Test of Word Reading Efficiency unclear Top=High is good outcome
Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - FU results were not reported in a way we could extract them. Also the wait list group received the Cogmed training during follow-up: "We were required to offer CWMT training to waitlist control participants while they were still attending post-secondary education, and so we were not able to put their training on hold for a 3-month period."
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, IQ , taking medication, all outcome measures.

; Group 1 Number missing: 0; Group 2 Number missing: 0

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: MEMORY TRAINING versus NO TREATMENT

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Adults: Adult ADHD Self- Report Scale (ASRS) to Rate Adult ADHD symptoms
at 8 weeks PT; Group 1: mean 46.48 (SD 9.89); n=32, Group 2: mean 47.25 (SD 11.51); n=32; Adult ADHD Self-Report Scale 0-54 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - FU results were not reported in a way we could extract them. Also the wait list group received the Cogmed training during follow-up: "We were required to offer CWMT training to waitlist control participants while they were still attending post-secondary education, and so we were not able to put their training on hold for a 3-month period."
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, IQ , taking medication, all outcome measures.

; Blinding details: Persons on the wait list knew they were not receiving the intervention.; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 2: Function/behaviour at <3 months
- Actual outcome for Adults: Barkley Deficits in Executive Functioning Scale Short Form, was used to evaluate executive functioning deficits in everyday life activities.

at 8 weeks PT; Group 1: mean 49.9 (SD 9.22); n=32, Group 2: mean 48.13 (SD 11.18); n=32; Barkley Deficits in Executive Functioning Scale Short Form unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - FU results were not reported in a way we could extract them. Also the wait list group received the Cogmed training during follow-up: "We were required to offer CWMT training to waitlist control participants while they were still attending post-secondary education, and so we were not able to put their training on hold for a 3-month period."
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, IQ , taking medication, all outcome measures.

; Blinding details: Persons on the wait list knew they were not receiving the intervention.; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 3: Numeracy outcomes at < 3 months
- Actual outcome for Adults: TheWoodcock Johnson-III was used to evaluate math fluency.

at 8 weeks PT; Group 1: mean 115.55 (SD 22.25); n=32, Group 2: mean 114.66 (SD 28.7); n=32
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - FU results were not reported in a way we could extract them. Also the wait list group received the Cogmed training during follow-up: "We were required to offer CWMT training to waitlist control participants while they were still attending post-secondary education, and so we were not able to put their training on hold for a 3-month period."
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, IQ , taking medication, all outcome measures.

; Blinding details: Persons on the wait list knew they were not receiving the intervention.; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 4: Literacy outcomes at < 3 months
- Actual outcome for Adults: The Test of Word Reading Efficiency-II was used to assess reading fluency.

at 8 weeks PT; Group 1: mean 148.78 (SD 17.03); n=32, Group 2: mean 153.58 (SD 15.25); n=32
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low,

Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - FU results were not reported in a way we could extract them. Also the wait list group received the Cogmed training during follow-up: "We were required to offer CWMT training to waitlist control participants while they were still attending post-secondary education, and so we were not able to put their training on hold for a 3-month period."
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, IQ , taking medication, all outcome measures.

; Blinding details: Persons on the wait list knew they were not receiving the intervention.; Group 1 Number missing: 0; Group 2 Number missing: 0

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: MEMORY TRAINING versus NO TREATMENT

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Adults: Adult ADHD Self- Report Scale (ASRS) to Rate Adult ADHD symptoms
at 8 weeks PT; Group 1: mean 46.63 (SD 9.15); n=33, Group 2: mean 47.25 (SD 11.51); n=32
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - FU results were not reported in a way we could extract them. Also the wait list group received the Cogmed training during follow-up: "We were required to offer CWMT training to waitlist control participants while they were still attending post-secondary education, and so we were not able to put their training on hold for a 3-month period."
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, IQ , taking medication, all outcome measures.

; Blinding details: Persons on the wait list knew they were not receiving the intervention.; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 2: Function/behaviour at <3 months
- Actual outcome for Adults: Barkley Deficits in Executive Functioning Scale Short Form, was used to evaluate executive functioning deficits in everyday life activities.

at 8 weeks PT; Group 1: mean 50.41 (SD 11); n=33, Group 2: mean 48.13 (SD 11.18); n=32
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - FU results were not reported in a way we could extract them. Also the wait list group received the Cogmed training during follow-up: "We were required to offer CWMT training to waitlist control participants while they were still attending post-secondary education, and so we were not able to put their training on hold for a 3-month period."
; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, IQ , taking medication, all outcome measures.

; Blinding details: Persons on the wait list knew they were not receiving the intervention.; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 3: Numeracy outcomes at < 3 months
- Actual outcome for Adults: TheWoodcock Johnson-III was used to evaluate math fluency.

at 8 weeks PT; Group 1: mean 118.33 (SD 23.75); n=33, Group 2: mean 114.66 (SD 28.7); n=32; Woodcock Johnson Math Fluency unclear Top=High is good outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - FU results were not reported in a way we could extract them. Also the wait list group received the Cogmed training during follow-up: "We were required to offer CWMT training to waitlist control participants while they were still attending post-secondary education, and so we were not able to put their training on hold for a 3-month period." ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, IQ , taking medication, all outcome measures. ; Blinding details: Persons on the wait list knew they were not receiving the intervention.; Group 1 Number missing: 0; Group 2 Number missing: 0 Protocol outcome 4: Literacy outcomes at < 3 months - Actual outcome for Adults: The Test of Word Reading Efficiency-II was used to assess reading fluency. at 8 weeks PT; Group 1: mean 152.83 (SD 14.55); n=33, Group 2: mean 153.58 (SD 15.25); n=32; Test of Word Reading Efficiency unclear Top=High is good outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - FU results were not reported in a way we could extract them. Also the wait list group received the Cogmed training during follow-up: "We were required to offer CWMT training to waitlist control participants while they were still attending post-secondary education, and so we were not able to put their training on hold for a 3-month period." ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Education, IQ , taking medication, all outcome measures. ; Blinding details: Persons on the wait list knew they were not receiving the intervention.; Group 1 Number missing: 0; Group 2 Number missing: 0	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at > 6 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Merrill 2016[324]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=75)
Countries and setting	Conducted in Unknown
Line of therapy	1st line
Duration of study	Intervention time: 8 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	All participants met DSM-5 diagnostic criteria for ADHD.
Exclusion criteria	If they had an estimated Full-scale IQ below 80, had a previous diagnosis of Autism Spectrum disorder, were currently receiving psychotropic medications for conditions other than ADHD, had conditions that could be made worse by stimulant medication, or had documented intolerability or lack of response to stimulant medication.
Age, gender and ethnicity	Age - Mean (SD): 8 (1.70). Gender (M:F): 53 male, 22 female. Ethnicity: 89% White, 15% Black and 1% American Indian/Alaska Native.
Further population details	1. Age: School age children (6-13 years) (Aged 5 - 12). 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Indirectness of population	No indirectness
Interventions	(n=39) Intervention 1: Carer and family training programmes - Programmes including the person with ADHD. Homework-focused behavioral intervention. A behavioral treatment program based on Power's work developing the FSS and the Homework success program as well as general parent training content from the community parent education program. Homework focused sessions and general parent training skills. Families sit in small subgroups of 7 parents, watch videotaped vignettes of parenting errors, discuss parenting errors and alternative strategies. Parent subgroup leaders report back to the larger group after each discussion and BPT clinicians facilitate discussion. BPT and DRC consists of six 2hr group sessions in the evenings during the first 2 weeks of STP and one 30 min individual session was completed during subsequent 2 weeks. All children had a goal stating "completes homework with 80% accuracy". . Duration 8 weeks. Concurrent medication/care: All children involved in a 3-week double blind placebo/medication crossover. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Face to face (group intervention) 3. Study design: Parallel trial (RCT).

	(n=36) Intervention 2: No treatment. A wait list control group. . Duration 8 weeks . Concurrent medication/care: None specified. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial (RCT).
Funding	Academic or government funding (This research was conducted within a grant funded by the National Institute of Mental Health. Dr Pelham was also supported by grants from the institute of Education Sciences, the National Institute of Mental Health, the National Institute of Alcohol Abuse and Alcoholism and the National Institute on Drug Abuse.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PARENT/FAMILY TRAINING versus NO TREATMENT

Protocol outcome 1: Numeracy outcomes at < 3 months
- Actual outcome for Children and young people: Math accuracy (%) at 8 weeks PT; Group 1: mean 91.89 (SD 5.42); n=39, Group 2: mean 83.85 (SD 8.79); n=36
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0, Reason: Parent/family training group - 1 dropped out before analysis, Wait List group - 3 dropped out before analysis; Group 2 Number missing: 0, Reason: Parent/family training group - 1 dropped out before analysis, Wait List group - 3 dropped out before analysis

Protocol outcome 2: Literacy outcomes at < 3 months
- Actual outcome for Children and young people: Reading/Language Arts (RLA) accuracy (%) at 8 weeks PT; Group 1: mean 91.59 (SD 6.96); n=39, Group 2: mean 82.76 (SD 11.35); n=36
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0, Reason: Parent/family training group - 1 dropped out before analysis, Wait List group - 3 dropped out before analysis; Group 2 Number missing: 0, Reason: Parent/family training group - 1 dropped out before analysis, Wait List group - 3 dropped out before analysis

Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at > 6 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Molina 2008[335]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=23)
Countries and setting	Conducted in USA; Setting: Middle school
Line of therapy	1st line
Duration of study	Intervention + follow up: 10 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: a parent semistructured clinical interview based on ADHD criteria of the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	All participants met minimum IQ requirements (IQ ≥70) and ADHD
Exclusion criteria	not reported
Recruitment/selection of patients	a letter describing the study and ADHD symptoms or impairment was mailed to parents of all incoming sixth, seventh, and eighth graders at the participating middle school
Age, gender and ethnicity	Age - Range: 11-14 years. Gender (M:F): 16/7. Ethnicity: Ethnic/racial minority 11 of 23
Further population details	1. Age: School age children (6-13 years) (11-14 years). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (ADHD severity (DuPaul ADHD rating scale) 36.11 (9.83) versus 37.18 (9.48) (comparison versus treatment)).
Extra comments	.
Indirectness of population	No indirectness
Interventions	(n=12) Intervention 1: School/work-based interventions - School-based interventions. Participants in the treatment group received a 10-week intervention for 2 hours after school on Tuesdays and Thursdays during fall 2003. The manualized treatment (i.e., the Challenging Horizons Program, or CHP) targeted educational, social, and recreational skills, home- work completion, and school and home behavior. Each participant was assigned an individual counselor (i.e., eight undergraduate students closely supervised by a PhD-level

	clinician) who met daily (on CHP days) with the participant to monitor behavior, identify behavioral and academic targets, and provide positive reinforcement for progress toward goals. Counselors maintained regular contact with parents regarding students' progress in the program and initiated contact with teachers regarding appropriate classroom treatment goals. In addition, counselors took turns leading the social skills, recreation, and educational skills groups. During the social skills group, students were taught problem solving and social skills (e.g., starting conversations, giving compliments). Recreation time was used to implement and rein- force skills taught during the social skills group. In the educational skills group, students learned studying and test-taking strategies and note-taking skills. Students had a period of time each day dedicated to homework completion, during which counselors offered assistance as needed. A level-based behavioral point system with individual and group rewards for good behavior was implemented daily during the CHP pro- gram. Parents of participants in the treatment group attended three 2-hr group parent meetings (facilitated by a PhD- or MD-level clinician) to review CHP content and learn skills for managing home behavior. . Duration 10 weeks. Concurrent medication/care: The treatment group had fewer medicated youth (27% versus. 67%, p < .10). Further details: 1. Location of intervention: In educational or work setting 2. Mode of delivery: Mixed involving face to face contact 3. Study design: Parallel trial (n=11) Intervention 2: No treatment. Community comparison group (no other information reported). Duration 10 weeks. Concurrent medication/care: The community comparison group had more medicated youth (27% versus. 67%, p < .10). Further details: 1. Location of intervention: 2. Mode of delivery: 3. Study design:
Funding	Funding not stated

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: SCHOOL-BASED INTERVENTIONS versus NO TREATMENT

Protocol outcome 1: Emotional dysregulation at < 3 months
- Actual outcome for Children and young people: Behavior Assessment Scale for Children (BASC-I) emotional symptoms subscale (child reported)

at 10 weeks PT; Group 1: mean 42 (SD 3.46); n=11, Group 2: mean 45.11 (SD 6.09); n=9; Behavior Assessment Scale for Children (BASC-I) emotional symptoms subscale (child reported) unclear Top=High is poor outcome
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Blinding details: Community

sample used more medication; Group 1 Number missing: 1; Group 2 Number missing: 2 - Actual outcome for Children and young people: Aggression and Conduct Problems Scale (child reported) at 10 weeks PT; Group 1: mean 3.18 (SD 2.48); n=11, Group 2: mean 10.33 (SD 8.66); n=9; Aggression and Conduct Problems Scale (child reported) unclear Top=High is poor outcome Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Blinding details: Community sample used more medication; Group 1 Number missing: 1; Group 2 Number missing: 2	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months

Study	Moretti-altuna 1987[337]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=23)
Countries and setting	Conducted in USA; Setting: Unclear
Line of therapy	1st line
Duration of study	Intervention time: 4 weeks
Method of assessment of guideline condition	Partially adequate method of assessment/diagnosis: Participants diagnosed with ADHD (DSM-III), confirmed by an intake committee (administrative team leader, a psychiatrist, multidisciplinary staffmember).
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Children with ADHD
Exclusion criteria	The participants had to be free from psychosis, neurological disease and not currently on psychoactive medication
Recruitment/selection of patients	Unclear
Age, gender and ethnicity	Age - Range: 6-10 years. Gender (M:F): 23/0. Ethnicity: 5 black, 5 white, 13 Hispanic
Further population details	1. Age: School age children (6-13 years) (6-10 years). 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Extra comments	. Data from a Cochrane review
Indirectness of population	No indirectness
Interventions	(n=9) Intervention 1: Relaxation - Exercise. Meditation-relaxation training (MT): individual sessions, 30minutes twice weekly for 4 weeks. Meditation technique : participants repeated the word “One” out loud

	and progressively more softly until the word was repeated silently. The actual meditation duration was gradually increased from 1 minute to 8 minutes by the end of the 4-week training period. Practice was at least 3 times per week at home. Duration 4 weeks. Concurrent medication/care: The participants couldn't be on psychoactive medication. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear (partly at home). 2. Mode of delivery: Face to face (1 on 1) 3. Study design: Parallel trial (n=8) Intervention 2: No treatment. Standard therapy control (STC): conventional treatment without medication, i.e. milieu, individual, group and/or family therapy. Duration 4 weeks. Concurrent medication/care: The participants couldn't be on psychoactive medication. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Funding not stated
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: EXERCISE versus NO TREATMENT Protocol outcome 1: ADHD symptoms total at <3 months - Actual outcome for Children and young people: Abbreviated Parent-Teacher Questionnaire (PTQ) Conners (Parent) at 4 weeks PT; Group 1: mean 15.78 (SD 8.74); n=9, Group 2: mean 19 (SD 7.29); n=8; Abbreviated Parent-Teacher Questionnaire (PTQ) Conners (Parent) unclear Top=High is poor outcome Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Race and age; Group 1 Number missing: , Reason: Unclear how many per group (total of 6 missing for the whole group, that is about 33%); Group 2 Number missing: , Reason: Unclear how many per group (total of 6 missing for the whole group, that is about 33%) - Actual outcome for Children and young people: Abbreviated Parent-Teacher Questionnaire (PTQ) Conners (Teacher) at 4 weeks PT; Group 1: mean 12.11 (SD 5.51); n=9, Group 2: mean 12.63 (SD 5.73); n=8 Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Race and age; Group 1 Number missing: , Reason: Unclear how many per group (total of 6 missing for the whole group, that is about 33%); Group 2 Number missing: , Reason: Unclear how many per group (total of 6 missing for the whole group, that is about 33%)	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events

at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months	

Study	Ostberg 2012[351]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=61)
Countries and setting	Conducted in Sweden; Setting: 4 child and adolescent psychiatric clinic units in Sweden.
Line of therapy	Mixed line
Duration of study	Intervention time: 10 weeks
Method of assessment of guideline condition	Method of assessment /diagnosis not stated: Diagnosis by a child psychiatrist
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Children aged 7-10 years old, diagnosed with ADHD or with similar problems but not yet diagnosed. Where possible, both parents and 2 teachers were invited to be part of the study.
Exclusion criteria	Not detailed
Age, gender and ethnicity	Age - Mean (SD): Intervention group: 11 (2), control group: 11 (2). Gender (M:F): Male: 51, Female: 10. Ethnicity: Not detailed
Further population details	1. Age: School age children (6-13 years) (7-10 years old). 2. Baseline symptom severity: Mixed population
Indirectness of population	Serious indirectness: 93% participants formally diagnosed with ADHD
Interventions	(n=36) Intervention 1: Combination of the above - Describe. Two interventions. A modified Barkley's parent training programme adapted for Sweden. A similar programme was put together for teachers. Aim of the training was to give parents and teachers tools and strategies to help the child with ADHD. Parents one 2 hour session per week for 10 weeks and teachers had 8 sessions. It was group therapy of the parents/teachers of 8 children with ADHD per session. Home assignments and discussion were part of the therapy. . Duration 10 weeks. Concurrent medication/care: 25 children with ADHD were taking stimulant medication during the study. Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Face to face (group intervention) 3. Study design: Parallel trial (n=34) Intervention 2: No treatment. No treatment. Duration 10 weeks. Concurrent medication/care: 24 children with ADHD were taking stimulant medication during the study. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear (No treatment). 2. Mode of delivery: Not applicable / Not stated / Unclear (No treatment). 3. Study design: Parallel trial
Funding	Academic or government funding (Research was supported by the Swedish Inheritance Fund.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PARENT AND TEACHER TRAINING versus NO TREATMENT Protocol outcome 1: ADHD symptoms total at >6 months - Actual outcome for Children and young people: ADHD-C (parents and teachers) at 3 months follow up; Group 1: mean 7.3 (SD 4); n=23, Group 2: mean 10.4 (SD 4); n=22; ADHD-C (ADHD Rating Scale) 0-54 Top=High is poor outcome Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - High, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for age, gender, parental involvement, parental education, ADHD stimulant medication usage. ; Group 1 Number missing: 13, Reason: Unclear ; Group 2 Number missing: 12, Reason: Unclear - Actual outcome for Children and young people: ADHD-HI (parents and teachers) at 3 months follow up; Group 1: mean 3.3 (SD 2.3); n=23, Group 2: mean 4.8 (SD 2.3); n=22; ADHD-HI (ADHD Rating Scale, HI subscale) 0-27 Top=High is poor outcome Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - High, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for age, gender, parental involvement, parental education, ADHD stimulant medication usage. ; Group 1 Number missing: 13, Reason: Unclear ; Group 2 Number missing: 12, Reason: Unclear - Actual outcome for Children and young people: ADHD-IA (parents and teachers) at 3 months follow up; Group 1: mean 4 (SD 2.2); n=23, Group 2: mean 5.9 (SD 4); n=22; ADHD-HI (ADHD Rating Scale, HI subscale) 0-27 Top=High is poor outcome Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - High, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for age, gender, parental involvement, parental education, ADHD stimulant medication usage. ; Group 1 Number missing: 13, Reason: Unclear ; Group 2 Number missing: 12, Reason: Unclear Protocol outcome 2: Function/behaviour at >6 months - Actual outcome for Children and young people: Strengths and Difficulties Questionnaire (SDQ) (parent and teacher) at 3 months follow up; Group 1: mean 2.4 (SD 0.4); n=23, Group 2: mean 2.9 (SD 0.4); n=22; SDQ total Unclear Top=High is poor outcome Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for age, gender, parental involvement, parental education, ADHD stimulant medication usage. ; Group 1 Number missing: 13, Reason: Unclear ; Group 2 Number missing: 12, Reason: Unclear	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Pettersson 2017[359]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=45)
Countries and setting	Conducted in Sweden; Setting:
Line of therapy	1st line
Duration of study	Intervention + follow up: 10 weeks and 6 month follow up
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Adults
Subgroup analysis within study	Not applicable:
Inclusion criteria	a) being at least 18 years old, b) having ADHD as the primary diagnosis, c) having access to a computer and the internet, and d) being able to set aside one afternoon a week for group meetings.
Exclusion criteria	a) borderline or antisocial personality disorder, b) bipolar disorder, c) ongoing substance abuse, d) suicidal ideation, e) dyslexia, f) mental retardation and g) ongoing psychotherapy.
Recruitment/selection of patients	Adults with a diagnosis of ADHD were recruited from psychiatric clinics within the county of Vastmanland in Sweden or from those referred for ADHD assessment at the Neuropsychological Clinic (NPC), Sweden.
Age, gender and ethnicity	Age - Mean (SD): 37.09 (10.81). Gender (M:F): 16 male, 29 female . Ethnicity: Not applicable.
Further population details	1. Age: Adults (25-65 years) 2. Baseline symptom severity: Mixed population
Extra comments	. Patients who were taking prescribed ADHD medication had to be stable on the medication during the whole study time.

Indirectness of population	No indirectness
Interventions	(n=14) Intervention 1: Cognitive behavioural therapies - CBT. Internet based cognitive behavioral therapy - (group format). Weekly group therapy sessions. Group consisted of 4 -6 individuals who started treatment at the beginning of each semester and met for 3 hr once a week for 10 weeks. The group sessions followed the content of the program modules and were led by 2 experienced therapists. Followed the iCBT program In Focus developed by the Swedish company Livanda-Internet Clinic, Ltd, in collaboration with the NPC. In Focus consists of 9 treatment modules and a follow up module that are worked through in a sequential order. Each module consists of an information component that is related to the theme of the module and an exercise component with therapeutic techniques. Two optional therapeutic techniques, relaxation training and strategies to handle sleeping problems, were chosen for inclusion based primarily on our experience of working with adult ADHD patients who expressed stress and sleeping problems and requested methods for managing these problems. The therapeutic techniques included were as follows: a) behavior analysis, b) mindfulness and acceptance, c) time management, d) gauging attention span, e) reducing distractor's, f) organization and planning, g) problem solving, h) behavior activation, i) cognitive restructuring and j) anger control training. . Duration 10 weeks . Concurrent medication/care: Patients who were taking prescribed ADHD medication had to be stable on the medication during the whole study time. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Mixed involving face to face contact (self-help with weekly group sessions). 3. Study design: Parallel trial (RCT). (n=13) Intervention 2: Cognitive behavioural therapies - CBT. Internet based cognitive behavioral therapy - (self-help format). They received the program and instructions on how to work with the program on their own. Patients also had the optional and non-scheduled support function of being able to ask the NPC therapists questions via an encryption-protected contact function in the program. Followed the iCBT program In Focus developed by the Swedish company Livanda-Internet Clinic, Ltd, in collaboration with the NPC. In Focus consists of 9 treatment modules and a follow up module that are worked through in a sequential order. Each module consists of an information component that is related to the theme of the module and an exercise component with therapeutic techniques. Two optional therapeutic techniques, relaxation training and strategies to handle sleeping problems, were chosen for inclusion based primarily on our experience of working with adult ADHD patients who expressed stress and sleeping problems and requested methods for managing these problems. The therapeutic techniques included were as follows: a) behavior analysis, b) mindfulness and acceptance, c) time management, d) gauging attention span, e) reducing distractor's, f) organization and planning, g) problem solving,

	h) behavior activation, i) cognitive restructuring and j) anger control training. . Duration 10 weeks. Concurrent medication/care: Patients who were taking prescribed ADHD medication had to be stable on the medication during the whole study time. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Directed self-help 3. Study design: Parallel trial (RCT). (n=18) Intervention 3: No treatment. Placed on waiting list. . Duration 10 weeks . Concurrent medication/care: Patients who were taking prescribed ADHD medication had to be stable on the medication during the whole study time. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Not applicable / Not stated / Unclear
Funding	Academic or government funding (The study is funded by "Sjukskrivningsmiljarden", an economic fund established by the Swedish government.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: ICBT-G versus ICBT-S

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Adults: Current Symptoms Scale (CSS) at 10 weeks PT; Group 1: mean 27.36 (SD 11.04); n=14, Group 2: mean 27.31 (SD 12.28); n=13
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: iCBT-G = 31.57, iCBT-S = 35.08, WL = 29.39; Group 1 Number missing: 7, Reason: Not stated. ; Group 2 Number missing: 6, Reason: Not stated.

Protocol outcome 2: Emotional dysregulation at < 3 months
- Actual outcome for Adults: Beck Depression Inventory (BDI) at 10 weeks PT; Group 1: mean 12.43 (SD 9.4); n=14, Group 2: mean 14 (SD 15.73); n=13
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 7, Reason: Not stated. ; Group 2 Number missing: 6, Reason: Not stated.

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: ICBT-G versus NO TREATMENT

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Adults: Current Symptoms Scale (CSS) at 10 weeks PT; Group 1: mean 27.36 (SD 11.04); n=14, Group 2: mean 29.72 (SD 8.17); n=18

Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: iCBT-G = 31.57, iCBT-S = 35.08, WL = 29.39; Group 1 Number missing: 7, Reason: Not stated. ; Group 2 Number missing: 6, Reason: Not stated. Protocol outcome 2: Emotional dysregulation at < 3 months - Actual outcome for Adults: Beck Depression Inventory (BDI) at 10 weeks PT; Group 1: mean 12.43 (SD 9.4); n=14, Group 2: mean 15.11 (SD 10.26); n=18 Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 7, Reason: Not stated. ; Group 2 Number missing: 6, Reason: Not stated. RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: ICBT-S versus NO TREATMENT Protocol outcome 1: ADHD symptoms total at <3 months - Actual outcome for Adults: Current Symptoms Scale (CSS) at 10 weeks PT; Group 1: mean 27.31 (SD 12.28); n=13, Group 2: mean 29.72 (SD 8.17); n=18 Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: iCBT-G = 31.57, iCBT-S = 35.08, WL = 29.39; Group 1 Number missing: 7, Reason: Not stated. ; Group 2 Number missing: 6, Reason: Not stated. Protocol outcome 2: Emotional dysregulation at < 3 months - Actual outcome for Adults: Beck Depression Inventory (BDI) at 10 weeks PT; Group 1: mean 14 (SD 15.73); n=13, Group 2: mean 15.11 (SD 10.26); n=18 Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 7, Reason: Not stated. ; Group 2 Number missing: 6, Reason: Not stated.	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months

Study	Pfiffner 2007[362]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=69)
Countries and setting	Conducted in USA; Setting: Home-school
Line of therapy	1st line
Duration of study	Intervention + follow up: 12 weeks PT (range FU= 13 to 22 weeks after PT)
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: Schedule for Affective Disorders and Schizophrenia for School-Age Children Present and Lifetime Version (K-SADS-PL)
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Inclusion criteria were DSM-IV diagnosis of ADHD-I, IQ >80, living with at least one parent for the past year, and attending school full time and the school consenting to participate in school-based treatment.
Exclusion criteria	Families expecting to change medication status for their child during the study were excluded, as were children with visual or hearing impairment, severe language delay, major neurological illness, psychosis, or pervasive developmental disorder. Additional exclusions were the child being in the same classroom as another participant or having a sibling who was already enrolled.
Recruitment/selection of patients	Most (>80%) were recruited from schools via presentations and mailings to school personnel (e.g., teachers, psychologists, resource specialists, principals); the remainder was recruited from an outpatient specialty clinic for ADHD or through parent recommendations.
Age, gender and ethnicity	Age - Mean (SD): 8.7 (1.2) years. Gender (M:F): 46/23. Ethnicity: Not reported
Further population details	1. Age: School age children (6-13 years) (ages 7 to 11 years). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (Attention-deficit/hyperactivity disorder (ADHD) predominantly inattentive type (ADHD-I). baseline: DSM-IV hyperactivity-impulsivity symptom count Mean 1.7 symptoms (SD 1.6);).
Extra comments	.

Indirectness of population	No indirectness
Interventions	(n=36) Intervention 1: Combination of the above - Describe. Child Life and Attention Skills Program included three components administered : teacher consultation, parent training, and child skills training. Teacher Consultation. Consultation included an overview of behavioral interventions and classroom-based accommodations for ADHD-I (2 hour), followed by up to 4Y5 (2 hour) meetings of teacher, parent, child, and therapist over 12 weeks. A school-home daily report card (Classroom Challenge [CC]) was designed and implemented. A special notebook was created for each child containing copies of the CC. Target behaviors were individualized based on the needs of the child and included common problems for ADHD-I: academic work (e.g., completion of assigned work, completion and return of homework, accuracy of completed work), work behavior/study skills (e.g., following directions, having necessary materials to begin work, getting started on work), and social interactions (e.g., entering peer groups, using assertive behavior). Skills taught in the child group were shared with teachers so that the child`s use of these skills could be reinforced (often by including as a target on the CC) in the naturalistic environment of the school. In addition to the CC, environmental or academic accommodations (e.g., preferential seating, reduction in workload, assignment book, organizational systems, time limits, reminders) were implemented depending on the child`s needs and the teacher`s teaching style. Parent Training. The program began with an overview of ADHDI and the social learning model followed by a set of strategies for managing ADHD-I and associated impairments. Strategies covered included the use of attending, rewards, and other positive consequences; establishing effective routines and planning activities; giving directions and commands; using prudent negative consequences; and changing environmental Bantecedents to promote attention and adaptive functioning. All of the families developed a BHome Challenge (token economy) with specific target behaviors and rewards individualized for each family. Parents were also taught skills for interacting effectively with teachers and how to develop, evaluate, and reinforce the CC. In addition, the modules covered in the children`s groups (see below) were reviewed each week and parents were taught methods to promote and reinforce their child`s use of skills taught during these sessions (e.g., via inclusion of the independence and social skills as targets on the home challenge). Parents attended 8 (cohorts 1Y4) or 10 (cohort 5), 12-hour group sessions and 4 to 5 family sessions (cohorts 2Y5) to tailor their programs and reinforce group lessons over the 12 weeks. Child Skills Training. The child component was divided into modules focused on skills for independence (academic, study, and organization skills; self-care and daily living skills) and skills for social competence. These modules addressed both skill knowledge deficits (e.g., how to enter peer groups, complete work, keep work space organized, track homework) and performance problems through didactic instruction, behavior rehearsal, and in vivo practice in the context of a reward-based contingency management program. Self management of alertness was supported by group-reinforced attention checks (Pelham and Hoza, 1996), during which time the children were prompted to repeat the last comment made or activity that occurred. In addition to the behavioral interventions, the children were taught cognitive-behavioral strategies

	(e.g., problem-solving steps, how to use cues/verbal mediation strategies to stay on-task and focused, use of reminder lists of activities to be completed). The social skills modules included being a good sport, accepting consequences, assertion, dealing with teasing, problem-solving, supplemented with modules specific to the needs of ADHD-I in the areas of friendship-making and play date skills. Modules focused on independence included the following: homework/study skills, self-care skills (e.g., getting ready for school), getting chores done independently, planning, and time management. Role-plays of common problem scenarios for ADHD-I were covered as a part of each module (e.g., joining a game, responding to being teased or being left out of an activity, combating spaciness during a game, staying on-task during homework, staying focused when getting ready in the morning), and children practiced new skills during play activities and mock school/home routines. The module focusing on homework/academic skills was presented early in the sequence and reinforced each week (e.g., by having children bring their classroom challenge notebooks, homework plan worksheets, and/or backpacks to group). Each week, children brought in tokens (stars) earned from their home and school challenges in exchange for rewards (to facilitate generalization of behaviors). Children attended child group at the same time that their parents attended parent group. During the last 15 minutes of group, parents and children met together . Duration 12 weeks. Concurrent medication/care: No change in medication status during the RCT Further details: 1. Location of intervention: Systematic review: mixed (School-Home). 2. Mode of delivery: Mixed involving face to face contact (children parent in groups and with family). 3. Study design: Parallel trial (n=33) Intervention 2: No treatment. no treatment. Duration 12 weeks. Concurrent medication/care: No change in medication status during the RCT Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Academic or government funding (NIMH grant R21MH065927)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: DESCRIBE versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Child Symptom Inventory, inattention subscale (symptom count)

at 12 weeks PT; Group 1: mean 3 (SD 2.1); n=36, Group 2: mean 5.1 (SD 2.5); n=30; Child Symptom Inventory, inattention subscale (symptom count) unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, sex, race, symptoms

	of hyperactivity/impulsivity, comorbid oppositional defiant disorder, anxiety or depression, IQ or academic achievement ; Blinding details: RCT's into psychological interventions cannot be blinded. ; Group 1 Number missing: 0; Group 2 Number missing: 3, Reason: data for three children in the control group were excluded from analyses because their teachers had previously received the school consultation component for another child. - Actual outcome for Children and young people: Child Symptom Inventory, inattention subscale (symptom count) at 25 to 34 weeks FU; Group 1: mean 3.2 (SD 1.9); n=29, Group 2: mean 4.4 (SD 2.4); n=25; Child Symptom Inventory, inattention subscale (symptom count) unclear Top=High is poor outcome Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: child age, sex, race, symptoms of hyperactivity/impulsivity, comorbid oppositional defiant disorder, anxiety or depression, IQ or academic achievement ; Blinding details: RCT's into psychological interventions cannot be blinded. ; Group 1 Number missing: 7, Reason: Data from cohort 1 were excluded from follow-up analyses because teacher follow-up data were not available for this cohort. ; Group 2 Number missing: 8, Reason: Data from cohort 1 were excluded from follow-up analyses because teacher follow-up data were not available for this cohort.
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at

	<3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Pfiffner 2014[360]
Study type	RCT (randomised; Parallel)
Number of studies (number of participants)	1 (n=199)
Countries and setting	Conducted in USA; Setting: Home and School
Line of therapy	1st line
Duration of study	Intervention time: 10-13 week treatment (after treatment a 22-30 week follow-up)
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: Schedule for Affective Disorders and Schizophrenia for School-Age Children Present and Lifetime Version (K-SADS-PL)
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	ADHD- Inattentive subtype, IQ > 80, living with at least one parent for the past year, child age between 7-11 years (and Grades 2-5), attending school full time in a regular classroom, ability to participate in our groups on the days scheduled, school proximity within 45 min of study site to allow for the clinician to conduct school meetings, and teacher consent to participate in a school-based treatment.
Exclusion criteria	Families of children who were taking nonstimulant psychoactive medication were excluded because of difficulty withholding medication to confirm ADHD-1 symptoms, as were cases planning to initiate or change medication treatment (stimulant or otherwise) in the near term. Children with significant developmental disorders (e.g., pervasive developmental disorder) or neurological illnesses were also excluded.
Recruitment/selection of patients	Most were recruited from schools via mailings to principals, school mental health providers, and learning specialists (65%). The remainder were recruited via mailings to offices of paediatricians, child psychiatrists, and psychologists (18%); postings in online parent networks or professional organizations (11%); or through word-of-mouth (6%).
Age, gender and ethnicity	Age - Mean (range): 8.6 (7-11). Gender (M:F): 115/84. Ethnicity: Fifty-four percent were Caucasian, 17% were Latino, 8% were Asian American, 5% were African American, and 17% self-identified as mixed race.

Further population details	1. Age: School age children (6-13 years) (7-11 years). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (K-SADS inattention symptom count M = 7.6, SD = 1.I ; hyperactivity-impulsivity symptom count M = 1.2, SD=1.2).
Indirectness of population	No indirectness
Interventions	(n=74) Intervention 1: Combination of the above - Describe. Child Life and Attention Skills Program included three components administered : teacher consultation, parent training, and child skills training. Teacher Consultation. Consultation included an overview of behavioral interventions and classroom-based accommodations for ADHD-I (2 hour), followed by up to 4Y5 (2 hour) meetings of teacher, parent, child, and therapist over 12 weeks. A school-home daily report card (Classroom Challenge [CC]) was designed and implemented. A special notebook was created for each child containing copies of the CC. Target behaviors were individualized based on the needs of the child and included common problems for ADHD-I: academic work (e.g., completion of assigned work, completion and return of homework, accuracy of completed work), work behavior/study skills (e.g., following directions, having necessary materials to begin work, getting started on work), and social interactions (e.g., entering peer groups, using assertive behavior). Skills taught in the child group were shared with teachers so that the child`s use of these skills could be reinforced (often by including as a target on the CC) in the naturalistic environment of the school. In addition to the CC, environmental or academic accommodations (e.g., preferential seating, reduction in workload, assignment book, organizational systems, time limits, reminders) were implemented depending on the child`s needs and the teacher`s teaching style. Parent Training. The program began with an overview of ADHDI and the social learning model followed by a set of strategies for managing ADHD-I and associated impairments. Strategies covered included the use of attending, rewards, and other positive consequences; establishing effective routines and planning activities; giving directions and commands; using prudent negative consequences; and changing environmental Bantecedents^ to promote attention and adaptive functioning. All of the families developed a BHome Challenge^ (token economy) with specific target behaviors and rewards individualized for each family. Parents were also taught skills for interacting effectively with teachers and how to develop, evaluate, and reinforce the CC. In addition, the modules covered in the children`s groups (see below) were reviewed each week and parents were taught methods to promote and reinforce their child`s use of skills taught during these sessions (e.g., via inclusion of the independence and social skills as targets on the home challenge). Parents attended 8 (cohorts 1Y4) or 10 (cohort 5), 12-hour group sessions and 4 to 5 family sessions (cohorts 2Y5) to tailor their programs and reinforce group lessons over the 12 weeks. Child Skills Training. The child component was divided into modules focused on skills for independence (academic, study, and organization skills; self-care and daily living skills) and skills for social competence.

	These modules addressed both skill knowledge deficits (e.g., how to enter peer groups, complete work, keep work space organized, track homework) and performance problems through didactic instruction, behavior rehearsal, and in vivo practice in the context of a reward-based contingency management program. Self management of alertness was supported by group-reinforced attention checks (Pelham and Hoza, 1996), during which time the children were prompted to repeat the last comment made or activity that occurred. In addition to the behavioral interventions, the children were taught cognitive-behavioral strategies (e.g., problem-solving steps, how to use cues/verbal mediation strategies to stay on-task and focused, use of reminder lists of activities to be completed). The social skills modules included being a good sport, accepting consequences, assertion, dealing with teasing, problem-solving, supplemented with modules specific to the needs of ADHD-I in the areas of friendship-making and play date skills. Modules focused on independence included the following: homework/study skills, self-care skills (e.g., getting ready for school), getting chores done independently, planning, and time management. Role-plays of common problem scenarios for ADHD-I were covered as a part of each module (e.g., joining a game, responding to being teased or being left out of an activity, combating spaciness during a game, staying on-task during homework, staying focused when getting ready in the morning), and children practiced new skills during play activities and mock school/home routines. The module focusing on homework/academic skills was presented early in the sequence and reinforced each week (e.g., by having children bring their classroom challenge notebooks, homework plan worksheets, and/or backpacks to group). Each week, children brought in tokens (stars) earned from their home and school challenges in exchange for rewards (to facilitate generalization of behaviors). Children attended child group at the same time that their parents attended parent group. During the last 15 minutes of group, parents and children met together . Duration 12-13 weeks. Concurrent medication/care: The small number of children taking stimulant medication completed a 1-week wash-out to assess behavior and obtain ratings off-medication. (9% in this group, 1.4% in parent training and 2% in TAU, Difference across groups is significant at p = .035) Further details: 1. Location of intervention: Systematic review: mixed (Home-School). 2. Mode of delivery: Mixed involving face to face contact (children parent in groups and with family). 3. Study design: Parallel trial (n=74) Intervention 2: Carer and family training programmes - Programme not including the person with ADHD. Parent-focused treatment (PFT). PFT included only the parent training group component described as in the CLAS intervention, which was adapted from existing parent training. Parent skills taught were identical to those in the CLAS parent group. However, PFT families did not receive specific training in how to work with teachers and were not informed about the child skills taught in the CLAS condition. PFT families received the same number of parent groups and individual family meetings as CLAS families, although children did not attend the individual family meetings. Childcare was offered to families while the parent group was held. The PFT condition did not include a child skills group or direct teacher consultation. Instead, teachers were contacted by mail regarding the study, given written information about ADHD-I and suggested classroom accommodations, and invited to call the therapists with any questions. Telephone contact with PFT teachers was limited to only a few teachers who had

	general questions about the study or related materials. . Duration 12-13 weeks. Concurrent medication/care: The small number of children taking stimulant medication completed a 1-week wash-out to assess behavior and obtain ratings off-medication. (1.4% in this group, 9% in CLAS group and 2% in TAU, Difference across groups is significant at p = .035) Further details: 1. Location of intervention: Home (Parent training). 2. Mode of delivery: Face to face (group intervention) 3. Study design: Parallel trial (n=51) Intervention 3: No treatment. Treatment as usual (TAU). TAU lid not receive either study treatment. As with all other families, TAU families received a written diagnostic report based on the assessment conducted at baseline. Families in the TAU condition also received a list of community treatment providers but were not given specific treatment recommendations. After TAU families completed their follow-up treatment assessments in the fall, they were offered the opportunity to participate in a two-session parenting workshop focused on the strategies taught in the CLAS groups, with limited individual follow-up if needed. During the period between baseline and posttreatment, 14% received medication (all but one received stimulant medication), 33% received psychotherapy (family therapy, child therapy or parenting group), 51% received educational intervention (special education services at school, tutoring), and 53% received classroom accommodations (e.g.. preferential sealing modified homework, behavioral chart, extra time on tests). During the period between post treatment and follow-up, 21% received medication (all but two received stimulant medication), 38% received psychotherapy, 52% received educational intervention, and 55% received classroom accommodations. . Duration 12-13 weeks. Concurrent medication/care: The small number of children taking stimulant medication completed a 1-week wash-out to assess behavior and obtain ratings off-medication. (2% in this group, 9% in CLAS group and 1.4% in Parent training group, Difference across groups is significant at p = .035) Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Academic or government funding (NIMH)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: DESCRIBE versus PROGRAMME NOT INCLUDING THE PERSON WITH ADHD

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Child Symptom Inventory, inattention subscale (symptom count), Parent at 12-13 weeks PT; Group 1: mean 2.8 (SD 2.56); n=73, Group 2: mean 3.5 (SD 2.58); n=74; Child Symptom Inventory, inattention subscale (symptom count), Parent unclear Top=High is poor outcome

Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - In the intervention groups booster sessions were provided from post treatment to follow-up. ; Indirectness of outcome: No indirectness ; Baseline details: child age, sex, race, symptoms of hyperactivity/impulsivity, comorbid oppositional defiant disorder, anxiety or depression, IQ, medication use, marital status parent.; Group 1 Number missing: 1, Reason: dropout of treatment; Group 2 Number missing: 0
- Actual outcome for Children and young people: Child Symptom Inventory, inattention subscale (symptom count), Teacher at 12-13 weeks PT; Group 1: mean 2.9 (SD 2.56); n=73, Group 2: mean 4.2 (SD 2.55); n=72; Child Symptom Inventory, inattention subscale (symptom count), Parent unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - In the intervention groups booster sessions were provided from post treatment to follow-up. ; Indirectness of outcome: No indirectness ; Baseline details: child age, sex, race, symptoms of hyperactivity/impulsivity, comorbid oppositional defiant disorder, anxiety or depression, IQ, medication use, marital status parent.; Group 1 Number missing: 1, Reason: dropout of treatment; Group 2 Number missing: 2, Reason: dropout of treatment

Protocol outcome 2: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: Child Symptom Inventory, inattention subscale (symptom count), Parent at 32-43 weeks FU; Group 1: mean 2.2 (SD 2.56); n=73, Group 2: mean 3.2 (SD 2.58); n=74; Child Symptom Inventory, inattention subscale (symptom count), Parent unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - In the intervention groups booster sessions were provided from post treatment to follow-up. ; Indirectness of outcome: No indirectness ; Baseline details: child age, sex, race, symptoms of hyperactivity/impulsivity, comorbid oppositional defiant disorder, anxiety or depression, IQ, medication use, marital status parent.; Group 1 Number missing: 1, Reason: dropout of treatment; Group 2 Number missing: 0, Reason: dropout of treatment
- Actual outcome for Children and young people: Child Symptom Inventory, inattention subscale (symptom count), Teacher at 32-43 weeks FU; Group 1: mean 3.7 (SD 3.42); n=73, Group 2: mean 4.2 (SD 3.44); n=74; Child Symptom Inventory, inattention subscale (symptom count), Teacher unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - In the intervention groups booster sessions were provided from post treatment to follow-up. ; Indirectness of outcome: No indirectness ; Baseline details: child age, sex, race, symptoms of hyperactivity/impulsivity, comorbid oppositional defiant disorder, anxiety or depression, IQ, medication use, marital status parent.; Group 1 Number missing: 1, Reason: dropout of treatment; Group 2 Number missing: 0

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: DESCRIBE versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Child Symptom Inventory, inattention subscale (symptom count), Parent at 12-13 weeks PT; Group 1: mean 2.8 (SD 2.58); n=73, Group 2: mean 4.7 (SD 2.74); n=47; Child Symptom Inventory, inattention subscale (symptom count) unclear Top=High is poor outcome

Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - In the intervention groups booster sessions were provided from post treatment to follow-up. ; Indirectness of outcome: No indirectness ; Baseline details: child age, sex, race, symptoms of hyperactivity/impulsivity, comorbid oppositional defiant disorder, anxiety or depression, IQ, medication use, marital status parent.; Group 1 Number missing: 1, Reason: dropout of treatment; Group 2 Number missing: 4, Reason: dropout of treatment
- Actual outcome for Children and young people: Child Symptom Inventory, inattention subscale (symptom count), Teacher at 12-13 weeks PT; Group 1: mean 2.9 (SD 2.56); n=73, Group 2: mean 5 (SD 2.8); n=49; Child Symptom Inventory, inattention subscale (symptom count), Parent unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - In the intervention groups booster sessions were provided from post treatment to follow-up. ; Indirectness of outcome: No indirectness ; Baseline details: child age, sex, race, symptoms of hyperactivity/impulsivity, comorbid oppositional defiant disorder, anxiety or depression, IQ, medication use, marital status parent.; Group 1 Number missing: 1, Reason: dropout of treatment; Group 2 Number missing: 2, Reason: dropout of treatment

Protocol outcome 2: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: Child Symptom Inventory, inattention subscale (symptom count), Teacher at 32-43 weeks FU; Group 1: mean 3.7 (SD 3.42); n=73, Group 2: mean 4.2 (SD 2.8); n=49; Child Symptom Inventory, inattention subscale (symptom count), Teacher unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - In the intervention groups booster sessions were provided from post treatment to follow-up. ; Indirectness of outcome: No indirectness ; Baseline details: child age, sex, race, symptoms of hyperactivity/impulsivity, comorbid oppositional defiant disorder, anxiety or depression, IQ, medication use, marital status parent.; Group 1 Number missing: 1, Reason: dropout of treatment; Group 2 Number missing: 4, Reason: dropout of treatment
- Actual outcome for Children and young people: Child Symptom Inventory, inattention subscale (symptom count), Parent at 32-43 weeks FU; Group 1: mean 2.2 (SD 3.56); n=73, Group 2: mean 4.1 (SD 2.74); n=47; Child Symptom Inventory, inattention subscale (symptom count), Parent Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - In the intervention groups booster sessions were provided from post treatment to follow-up. ; Indirectness of outcome: No indirectness ; Baseline details: child age, sex, race, symptoms of hyperactivity/impulsivity, comorbid oppositional defiant disorder, anxiety or depression, IQ, medication use, marital status parent.; Group 1 Number missing: 1, Reason: dropout of treatment; Group 2 Number missing: 4, Reason: dropout of treatment

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PROGRAMME NOT INCLUDING THE PERSON WITH ADHD versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Child Symptom Inventory, inattention subscale (symptom count), Parent at 12-13 weeks PT; Group 1: mean 3.5 (SD 2.58); n=74, Group 2: mean 4.7 (SD 2.74); n=47; Child Symptom Inventory, inattention subscale (symptom count), Parent Unclear

	Top=High is poor outcome Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - In the intervention groups booster sessions were provided from post treatment to follow-up. ; Indirectness of outcome: No indirectness ; Baseline details: child age, sex, race, symptoms of hyperactivity/impulsivity, comorbid oppositional defiant disorder, anxiety or depression, IQ, medication use, marital status parent.; Group 1 Number missing: 0, Reason: dropout of treatment; Group 2 Number missing: 4, Reason: dropout of treatment - Actual outcome for Children and young people: Child Symptom Inventory, inattention subscale (symptom count), Teacher at 12-13 weeks PT; Group 1: mean 4.2 (SD 2.55); n=72, Group 2: mean 5 (SD 2.8); n=49; Child Symptom Inventory, inattention subscale (symptom count), Parent unclear Top=High is poor outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - In the intervention groups booster sessions were provided from post treatment to follow-up. ; Indirectness of outcome: No indirectness ; Baseline details: child age, sex, race, symptoms of hyperactivity/impulsivity, comorbid oppositional defiant disorder, anxiety or depression, IQ, medication use, marital status parent.; Group 1 Number missing: 2, Reason: dropout of treatment; Group 2 Number missing: 2, Reason: dropout of treatment Protocol outcome 2: ADHD symptoms inattention at >6 months - Actual outcome for Children and young people: Child Symptom Inventory, inattention subscale (symptom count), Parent at 32-43 weeks FU; Group 1: mean 3.2 (SD 2.58); n=74, Group 2: mean 4.1 (SD 2.74); n=47; Child Symptom Inventory, inattention subscale (symptom count), Parent unclear Top=High is poor outcome Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - In the intervention groups booster sessions were provided from post treatment to follow-up. ; Indirectness of outcome: No indirectness ; Baseline details: child age, sex, race, symptoms of hyperactivity/impulsivity, comorbid oppositional defiant disorder, anxiety or depression, IQ, medication use, marital status parent.; Group 1 Number missing: 0; Group 2 Number missing: 4, Reason: dropout of treatment - Actual outcome for Children and young people: Child Symptom Inventory, inattention subscale (symptom count), Teacher at 32-43 weeks FU; Group 1: mean 4.2 (SD 3.44); n=74, Group 2: mean 4.2 (SD 2.8); n=49; Child Symptom Inventory, inattention subscale (symptom count), Teacher unclear Top=High is poor outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - In the intervention groups booster sessions were provided from post treatment to follow-up. ; Indirectness of outcome: No indirectness ; Baseline details: child age, sex, race, symptoms of hyperactivity/impulsivity, comorbid oppositional defiant disorder, anxiety or depression, IQ, medication use, marital status parent.; Group 1 Number missing: 0; Group 2 Number missing: 2, Reason: dropout of treatment
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months;

Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months	

Study	Philipsen 2015[364]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=209)
Countries and setting	Conducted in Germany; Setting:
Line of therapy	1st line
Duration of study	Intervention + follow up: 3 months + 1year FU
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Overall
Subgroup analysis within study	Not applicable
Inclusion criteria	Subjects must speak German fluently, aged 18-60 years, diagnosis of ADHD according to DSM-IV criteria, a score of greater than 30 on the short version of the Wender Utah Rating scale, chronic course of ADHD symptoms from childhood to adulthood, subjects provided written informed consent in accordance with international guidelines and local legislation, unobtrusive physical examination without serious or uncontrolled findings, lab results without clinically relevant findings, the screening has been fully completed, lab results are not more than 6 weeks old and pregnancy test is not more than 2 weeks before time of randomization and it's possible to conduct the baseline assessment within 7 days of randomization and to begin therapy within 14 days.
Exclusion criteria	IQ <85 according to a score of <17 on the multiple choice vocabulary intelligence test, schizophrenia, bipolar affective disorder, borderline personality disorder, antisocial personality disorder, suicidality or self-harm, autism, motor tics, Tourette syndrome, substance abuse or dependence in the previous 6 months before the screening, neurological disorders, seizures, history of stroke, known enlarged prostate, current eating disorder, medication with stimulants or ADHD specific psychotherapy within the previous 6 months before beginning study, participation in a clinical trial within 3 months before beginning this study or concurrent participation in another trial, known hypersensitivity to MPH or other sympathomimetic drugs, unwillingness or inability to comply with the requirements of the study protocol, patient is unable to understand the nature, significance and scope of the study, current or planned pregnancy, use of another psychopharmacological medication in addition to randomized treatment before the start of treatment or during study participation or regular participation in other outpatient psychotherapy during study participation.
Age, gender and ethnicity	Age - Mean (SD): 35 (10.5). Gender (M:F): 103 male : 106 female . Ethnicity: 205 white, remainder unknown
Further population details	1. Age: Adults (25-65 years) (Ranges from 18 - 58). 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Indirectness of population	No indirectness

Interventions	(n=106) Intervention 1: Combination of the above - Describe. Group psychotherapy was conducted according to the manual of Hesslinger and co-workers. Is based on the principles of DBT of borderline personality disorder (BPD) and CBT because ADHD and BPD share several clinical features. The first 12 sessions were weekly. Sessions 13 - 21 took place every 4 weeks. . Duration 12 weeks . Concurrent medication/care: 12 weekly sessions were followed by 10 monthly sessions over 52 weeks. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Not applicable / Not stated / Unclear (n=103) Intervention 2: Coaching, mentoring, psychoeducation, counselling - Counselling. Clinical management - aimed at assessing the patients state to allow for the evaluation of adverse events and to offer supportive counselling to the participants of the control group. CM sessions had a duration of 15-20 minutes. Supportive counselling was comprised of an offer to talk to the investigator about their current situation. . Duration 12 weeks. Concurrent medication/care: 12 weekly sessions were followed by 10 monthly sessions over 52 weeks. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Not applicable / Not stated / Unclear
Funding	Funding not stated

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: CBT/DBT versus COUNSELLING

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Adults: Conners Adult ADHD Rating Scale, long version (CAARS) score - ADHD index at 13 weeks PT;
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: ; Group 2 Number missing:
- Actual outcome for Adults: Conners Adult ADHD Rating Scale, long version (CAARS) score - self-rated - ADHD index at 13 weeks PT;
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: ; Group 2 Number missing:

Protocol outcome 2: ADHD symptoms total at >6 months
- Actual outcome for Adults: Conners Adult ADHD Rating Scale, long version (CAARS) score - ADHD index at 52 weeks FU;
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: ; Group 2 Number missing:
- Actual outcome for Adults: Conners Adult ADHD Rating Scale, long version (CAARS) score - self-rated - ADHD index at 52 weeks FU;
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: ; Group 2 Number missing:

Protocol outcome 3: ADHD symptoms inattention at <3 months - Actual outcome for Adults: Conners Adult ADHD Rating Scale, long version (CAARS) score - Inattention at 13 weeks PT; Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: ; Group 2 Number missing: Protocol outcome 4: ADHD symptoms inattention at >6 months - Actual outcome for Adults: Conners Adult ADHD Rating Scale, long version (CAARS) score - Inattention at 52 weeks FU; Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: ; Group 2 Number missing: Protocol outcome 5: ADHD symptoms hyperactivity at <3 months - Actual outcome for Adults: Conners Adult ADHD Rating Scale, long version (CAARS) score - Hyperactivity at 13 weeks PT; Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: ; Group 2 Number missing: Protocol outcome 6: ADHD symptoms hyperactivity at >6 months - Actual outcome for Adults: Conners Adult ADHD Rating Scale, long version (CAARS) score - Hyperactivity at 52 weeks FU; Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: ; Group 2 Number missing: Protocol outcome 7: Emotional dysregulation at < 3 months - Actual outcome for Adults: Becks depression inventory (BDI) - self rated - total score at 13 weeks PT; Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: ; Group 2 Number missing: Protocol outcome 8: Emotional dysregulation at >6 months - Actual outcome for Adults: Becks depression inventory (BDI) - self rated - total score at 52 weeks FU; Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: ; Group 2 Number missing:	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months

Study	Power 2012[367]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=199)
Countries and setting	Conducted in USA; Setting: secondary care
Line of therapy	1st line
Duration of study	Intervention + follow up: 26 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: Schedule for Affective Disorders and Schizophrenia for School Age Children - DSM IV (K-SADS-P IVR; Ambrosini, 2000) Children - DSM IV (K-SADS-P IVR; Ambrosini, 2000)
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	(a) children enrolled in grades 2 through 6; (b) children meeting criteria for ADHD, Combined Type (ADHD/COM) or ADHD, Inattentive Type (ADHD/I) based upon parent-report on the Schedule for Affective Disorders and Schizophrenia for School Age Children - DSM IV (K-SADS-P IVR; Ambrosini, 2000); (c) children rated at or above the 85th percentile on the Inattention or Hyperactivity-Impulsivity factor of the ADHD Rating Scale-IV School Version (ADHD RS-IV; DuPaul, Power, Anastopoulos, & Reid, 1998), or the Attention Problems or Hyperactivity subscales of the Behavior Assessment System for Children, Second Edition - Teacher Rating Scales (BASC-2; Reynolds & Kamphaus, 2004); (d) children scoring at or above 0.75 of a standard deviation above the mean on the Homework Problem Checklist (HPC; Anesko, Schoiock, Ramirez, & Levine, 1987), which was considered an indicator of educational impairment; and (e) children scoring at or above an estimated IQ of 75 on the 2-subtest version of the Wechsler Abbreviated Scale of Intelligence (WASI; Psychological Corporation, 1999).
Exclusion criteria	Children meeting DSM-IV criteria for a psychotic disorder, bipolar disorder, chronic tic disorder or Tourette's disorder, anxiety or mood disorder serious enough to warrant separate treatment, history of major neurological illness, and history of suicidal or homicidal behavior or ideation were excluded. Furthermore, children were excluded if they were currently receiving psychotropic medications, and their parents chose not to undergo a new medication trial as part of the study. Children with learning disabilities (as assessed using standardized tests administered for this study or as reported by school multidisciplinary evaluation

	teams), disruptive disorders (oppositional defiant disorder and conduct disorder), and internalizing disorders (anxiety and mood disorders, with the exception of bipolar disorder) were included.
Recruitment/selection of patients	Potential subjects for the study were identified in two ways: (a) parent-initiated referrals from the clinic within the hospital's ADHD center; and (b) referrals from school and community providers (e.g., primary care and mental health professionals).
Age, gender and ethnicity	Age - --: Not reported (mean Grade level 3.5). Gender (M:F): 136/63. Ethnicity: n=44 African American; n=144 White; n=4 Asian; n=7 Multiracial;
Further population details	1. Age: School age children (6-13 years) (Grade 2 to 6). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (ADHD, Combined 45.0 versus 51.5 ADHD, Inattentive 55.0 versus 48.5 (%; FSS versus PE)).
Extra comments	.
Indirectness of population	No indirectness
Interventions	(n=100) Intervention 1: Carer and family training programmes - Programmes including the person with ADHD. Family-School Success (FSS), Sessions were held on a weekly basis. The initial session lasted 3 hours. Subsequent group sessions were 90minutes in length. Individualized family sessions lasted 60 minutes. Each school session was approximately 45 minutes in duration. Two phone conferences between the clinician , and the teacher (approximately 10 minutes each after sessions 5 and 7) were conducted to monitor the child's progress and to refine interventions, if needed. Key components of FSS were conjoint behavioral consultation, daily report cards, and behavioral homework interventions. 6 group sessions, 4 individualized family sessions, and 2 school-based consultations. . Duration 12 weeks. Concurrent medication/care: Families were given the option to enrol in the study with or without pharmacological treatment. Children whose parents elected medication were managed by the study team, including two developmental paediatricians. The medication trial was completed before group assignment. Altogether, 93 (69.9%) of the 133 children were assigned to a group. Of these children, 81 (87.1%) entered the psychosocial intervention on medication, 8 (8.6%) chose to discontinue medication use prior to treatment group assignment, and 4 (4.3%) withdrew from the study before psychosocial treatment started. Only 5% of children demonstrated a change in medication status between baseline and post

	intervention involving a shift from off to on medication or a change in medication. Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Mixed involving face to face contact 3. Study design: Parallel trial (n=99) Intervention 2: Coaching, mentoring, psychoeducation, counselling - Psychoeducation. Coping with ADHD through Relationships and Education (CARE). 11 group sessions and 1 family-school meeting, which were held on consecutive weeks. The initial session was conducted on a Saturday for 3 hours and subsequent meetings were 75 minutes (approximately the average amount of time spent with families in FSS sessions). The purpose of the school meeting was to acquire information about school functioning and not to engage in problem solving or behavioral consultation. The same procedures were used to obtain teacher consent and investment as were described for FSS. CARE is a 12-session program designed to provide support and education to parents. There were three components of this program: (a) discussing children's progress at home and school, (b) establishing a context within which parents can support each other in coping with their children's difficulties, and (c) providing generic education to parents about ADHD. Education provided to parents focuses on ADHD, its associated features, and the challenges these children often encounter at home, in school, and with peers (Soffer & Power, 2005b). . Duration 12 weeks. Concurrent medication/care: Families were given the option to enrol in the study with or without pharmacological treatment. Children whose parents elected medication were managed by the study team, including two developmental paediatricians. The medication trial was completed before group assignment. Altogether, 93 (69.9%) of the 133 children were assigned to a group. Of these children, 81 (87.1%) entered the psychosocial intervention on medication, 8 (8.6%) chose to discontinue medication use prior to treatment group assignment, and 4 (4.3%) withdrew from the study before psychosocial treatment started. Only 5% of children demonstrated a change in medication status between baseline and post intervention involving a shift from off to on medication or a change in medication. Families were given the option to enrol in the study with or without pharmacological treatment. Children whose parents elected Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Mixed involving face to face contact (unclear). 3. Study design: Parallel trial
Funding	Academic or government funding (R01MH068290 funded by the National Institute of Mental Health and the Department of Education)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: FAMILY-SCHOOL INTERVENTION versus PSYCHOEDUCATION Protocol outcome 1: Academic outcome at < 3 months - Actual outcome for Children and young people: Academic Performance Rating Scale (APRS). at 12 weeks PT; Group 1: mean 3.32 (SD 0.65); n=92, Group 2: mean 3.2 (SD 0.68); n=96; The Academic Performance Rating Scale (APRS) is a teacher-rated questionnaire 12 item subscale 0-5 (per item, endscore is the mean of all items) Top=High is good outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Grade level, Ethnicity, Marital status, Social Economic status, ADHD-type, Comorbid learning disorders and Children taking medication; Blinding details: RCT's into psychological interventions cannot be blinded. Unclear if teacher new in which intervention group the patient was included.; Group 1 Number missing: 8, Reason: Family withdrew or school declined consent; Group 2 Number missing: 4, Reason: Family withdrew or school declined consent Protocol outcome 2: Academic outcome at > 6 months - Actual outcome for Children and young people: Academic Performance Rating Scale (APRS). at 26 weeks PT; Group 1: mean 3.51 (SD 0.64); n=92, Group 2: mean 3.36 (SD 0.76); n=96; The Academic Performance Rating Scale (APRS) is a teacher-rated questionnaire 12 item subscale 0-5 (per item, endscore is the mean of all items) Top=High is good outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Grade level, Ethnicity, Marital status, Social Economic status, ADHD-type, Comorbid learning disorders and Children taking medication; Blinding details: RCT's into psychological interventions cannot be blinded. Unclear if teacher new in which intervention group the patient was included.; Group 1 Number missing: 8, Reason: Family withdrew or school declined consent; Group 2 Number missing: 4, Reason: Family withdrew or school declined consent	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Rabiner 2010[370]
Study type	RCT (randomised; Parallel)
Number of studies (number of participants)	1 (n=77)
Countries and setting	Conducted in USA; Setting: school
Line of therapy	1st line
Duration of study	Intervention + follow up: 52 weeks
Method of assessment of guideline condition	Unclear method of assessment/diagnosis: CTRS-R:L performed by teachers and parents
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	First graders with ADHD
Exclusion criteria	not reported
Recruitment/selection of patients	school
Age, gender and ethnicity	Age - Range: 6-7. Gender (M:F): 69/8. Ethnicity: The racial/ethnic composition was 58% African American, 24% Hispanic, 11% Caucasian, 7% other (either Asian or multiracial) and consistent with the schools participants attended.
Further population details	1. Age: School age children (6-13 years) (First graders). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (DSM-IV Inattention 71.7 (6.2)).
Indirectness of population	No indirectness
Interventions	(n=25) Intervention 1: Neurocognitive training - Attention training. Computerized Attention Training (CAT) Captain's Log (Braintrain®). Two afternoons per week for 14 weeks; each session lasted about 75 min with 50–60 min spent on computer exercises. A commercially available program that provides structured opportunities for exercising attention. It includes 36 exercises designed to train a variety of cognitive skills. . Duration 14 weeks. Concurrent medication/care: 7% (n=5) were receiving ADHD medication. Further details: 1. Location of intervention: In educational or work setting 2. Mode of delivery: Mixed involving face to face contact 3. Study design: Parallel trial

	(n=27) Intervention 2: School/work-based interventions - School-based interventions. Computer Assisted Instruction (CAI). Two afternoons per week for 14 weeks; each session lasted about 75 min with 50–60 min spent on computer exercises. At the 1st grade level, Destination Reading targets five key skills: phonemic awareness, phonics, fluency, vocabulary, and comprehension. Destination Math covers number sense, counting, addition and subtraction, comparing and ordering, measurement, geometry, and patterns. Students worked on reading and math activities on alternate days. . Duration 14 weeks. Concurrent medication/care: 7% (n=5) were receiving ADHD medication. Further details: 1. Location of intervention: In educational or work setting 2. Mode of delivery: Mixed involving face to face contact 3. Study design: Parallel trial (n=25) Intervention 3: No treatment. Waitlist. Duration 14 weeks. Concurrent medication/care: 7% (n=5) were receiving ADHD medication. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Academic or government funding (Grant R305H050036 from the Department of Education.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: ATTENTION TRAINING versus SCHOOL BASED INTERVENTION

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Conners' Teacher Ratings Scale-Revised: Long Version (CTRS-R:L; Conners 1997), subjects must show a decline of 0.5 SD on the DSM-IV for it to be a positive change (moderate effect size)

at 14 weeks PT; Group 1: 11/25, Group 2: 15/27; Comments: An event is moderate effect of positive change, so more events is better.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: IQ, Inattention, Academic achievement,

; Group 1 Number missing: ?, Reason: For 3 groups 6 missing at PT; Group 2 Number missing: ?, Reason: For 3 groups 6 missing at PT

Protocol outcome 2: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: Conners' Teacher Ratings Scale-Revised: Long Version (CTRS-R:L; Conners 1997), subjects must show a decline of 0.5 SD on the DSM-IV for it to be a positive change (moderate effect size)

at 52 weeks FU; Group 1: 15/25, Group 2: 18/27; Comments: Difference between baseline and FU. An event is moderate effect of positive change, so more events is better.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - Method and results are not clearly separated. This makes it unclear whether the way the presented and analysed the results was pre specified. But I'll give them the benefit of the doubt. ; Indirectness of outcome: No indirectness ; Baseline details: IQ, Inattention, Academic achievement,

; Group 1 Number missing: ?, Reason: For 3 groups 11 missing at PT; Group 2 Number missing: ?, Reason: For 3 groups 11 missing at PT

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: ATTENTION TRAINING versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Conners' Teacher Ratings Scale-Revised: Long Version (CTRS-R:L; Conners 1997), subjects must show a decline of 0.5 SD on the DSM-IV for it to be a positive change (moderate effect size)

at 14 weeks PT; Group 1: 11/25, Group 2: 4/25; Comments: An event is moderate effect of positive change, so more events is better.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: IQ, Inattention, Academic achievement,

; Group 1 Number missing: ?, Reason: For 3 groups 6 missing at PT; Group 2 Number missing: ?, Reason: For 3 groups 6 missing at PT

Protocol outcome 2: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: Conners' Teacher Ratings Scale-Revised: Long Version (CTRS-R:L; Conners 1997), subjects must show a decline of 0.5 SD on the DSM-IV for it to be a positive change (moderate effect size)

at 52weeks FU; Group 1: 15/25, Group 2: 19/25; Comments: Difference between baseline and FU. An event is moderate effect of positive change, so

more events is better.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - Method and results are not clearly separated. This makes it unclear whether the way the presented and analysed the results was pre specified. But I'll give them the benefit of the doubt. ; Indirectness of outcome: No indirectness ; Baseline details: IQ, Inattention, Academic achievement,

; Group 1 Number missing: ?, Reason: For 3 groups 11 missing at PT; Group 2 Number missing: ?, Reason: For 3 groups 11 missing at PT

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: SCHOOL BASED INTERVENTION versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Conners' Teacher Ratings Scale-Revised: Long Version (CTRS-R:L; Conners 1997), subjects must show a decline of 0.5 SD on the DSM-IV for it to be a positive change (moderate effect size)

at 14 weeks PT; Group 1: 15/27, Group 2: 4/25; Comments: An event is moderate effect of positive change, so more events is better.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: IQ, Inattention, Academic achievement,

; Group 1 Number missing: ?, Reason: For 3 groups 6 missing at PT; Group 2 Number missing: ?, Reason: For 3 groups 6 missing at PT

Protocol outcome 2: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: Conners' Teacher Ratings Scale-Revised: Long Version (CTRS-R:L; Conners 1997), subjects must show a decline of 0.5 SD on the DSM-IV for it to be a positive change (moderate effect size)

at 52weeks FU;
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - Method and results are not clearly separated. This makes it unclear whether the way the presented and analysed the results was pre specified. But I'll give them the benefit of the doubt. ; Indirectness of outcome: No indirectness ; Baseline details: IQ, Inattention, Academic achievement,

; Group 1 Number missing: ?, Reason: For 3 groups 11 missing at PT; Group 2 Number missing: ?, Reason: For 3 groups 11 missing at PT

Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Schramm 2016[395]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=113)
Countries and setting	Conducted in Germany
Line of therapy	1st line
Duration of study	Intervention time: 20 sessions
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Participants met the following criteria: a) diagnosis of ADHD based on a clinical interview administered by a clinical psychologist under supervision of a board-certified child and adolescent psychotherapist taking into account ADHD symptom criteria ratings (DSM-IV-TR) by parents and teachers.
Exclusion criteria	b) not meeting criteria for severe comorbid disorders (e.g. psychotic episode; no applicant was excluded based on this criterion).
Recruitment/selection of patients	Adolescents were referred by paediatric centers, psychotherapists, school and parents, through announcements in local newspapers.
Age, gender and ethnicity	Age - Mean (SD): 13.99 (1.45). Gender (M:F): 97 male, 16 female . Ethnicity: Not stated.
Further population details	1. Age: Young people (13-18 years) (12-17). 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Extra comments	.
Indirectness of population	No indirectness
Interventions	(n=40) Intervention 1: Daily activity scheduling and organisational skills - Daily activity scheduling and organisation. Learning skills training for Adolescents with ADHD - is a manualized, multimodal intervention combining an adolescent-direct training approach (maximum of 20 sessions of 60 mins each) with a behavioral training component in methods of contingency management for parents and teachers (3 sessions of 90mins each). All students received intense training on the interventions, followed treatment manuals and were supervised weekly in hour long meetings by the psychologists who developed the protocols. In the main arm, therapists worked with the adolescents in weekly sessions. The intensive adolescent directed one on one training of organizational, learning and problem solving skills uses cognitive behavioral (i.e. self-instructions), behavioral (consistent social reinforcement), and coaching techniques and is furthermore based on empirically identified overall efficacious psychotherapeutic factors. 2 sessions of psycho education are followed by an intense training of organizational, learning, and problem solving skills focusing on direct

	and self-instructional methods. Although trainings were similarly structured, specific contents are chosen in close contact with teachers to bear relevance for the adolescents and to facilitate the transfer of skills gained during the training sessions. Elements of coaching are implemented in cases where familial, teacher, or peer problems are reported to support the adolescents own coping skills. During all sessions contingent positive feedback is given on tasks and wanted behaviors as operant social reinforcement. . Duration 20 weeks . Concurrent medication/care: None stated. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Face to face (1 on 1) 3. Study design: Parallel trial (RCT). (n=36) Intervention 2: No treatment. Wait List - controls were invited twice for data collection with an average interval of 5.76 months in between and expected to start intervention after post measurement, which was offered for ethical reasons. . Duration 20 weeks . Concurrent medication/care: None stated. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial (RCT).
Funding	Funding not stated

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: ORGANISATION versus WAITLIST

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: FBB-HKS - inattention - parent rated at 20 weeks PT; Group 1: mean 1.58 (SD 0.58); n=40, Group 2: mean 1.88 (SD 0.63); n=36
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: FBB-HKS - inattention - teacher rated at 20 weeks PT; Group 1: mean 1.3 (SD 0.65); n=40, Group 2: mean 1.43 (SD 0.54); n=36
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 2: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: FBB-HKS - hyperactivity - parent rated at 20 weeks PT; Group 1: mean 0.94 (SD 0.72); n=40, Group 2: mean 1.1 (SD 0.68); n=36
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: FBB-HKS - hyperactivity - teacher rated at 20 weeks PT; Group 1: mean 0.63 (SD 0.61); n=40, Group 2: mean 0.79 (SD 0.55); n=36
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 3: Function/behaviour at <3 months - Actual outcome for Children and young people: SDQ- parent rated at 20 weeks PT; Group 1: mean 5.85 (SD 2.02); n=40, Group 2: mean 6.44 (SD 2.1); n=36 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0 - Actual outcome for Children and young people: SDQ- teacher rated at 20 weeks PT; Group 1: mean 4.74 (SD 2.52); n=40, Group 2: mean 5.67 (SD 2.19); n=36 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Sibley 2013[413]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	(n=36)
Countries and setting	Conducted in USA; Setting: Not specified
Line of therapy	Unclear
Duration of study	Intervention time: 8 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: DSM-IV
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	(1) meet DSM-IV-TR (American Psychiatric Association 2000) diagnostic criteria for ADHD, (2) be enrolled in the sixth, seventh, or eighth grade, (3) have an estimated IQ of 80 or higher, and (4) have no history of an autism spectrum disorder
Exclusion criteria	Placement in a self-contained special education classroom was exclusionary
Recruitment/selection of patients	Recruited through direct school mailings, word of mouth, and advertisements at local community health fairs. Participants attended 29 different middle schools: 69.4 % attended public school, 13.9 % charter school, and 16.7 % private school
Age, gender and ethnicity	Age - Range: 11-15 years. Gender (M:F): 26/10. Ethnicity: 25% white non Hispanic, 8.35 black non Hispanic, 61.15% Hispanic, 5.55% mixed race
Further population details	1. Age: Not applicable / Not stated / Unclear 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Indirectness of population	No indirectness
Interventions	(n=18) Intervention 1: Carer and family training programmes - Programmes including the person with ADHD. All clinicians participated in a two-day training and demonstrated mastery of the STAND manual through a score of at least 80 % on a procedural test. Clinicians included a post- doctoral trainee, two advanced clinical psychology doctoral students, and a first-year counselling master's student, supervised by a doctoral level licensed clinical psychologist. STAND teaches parents to increase accountability for academics at home and school in areas of organization, time management, homework, studying, and note-taking. STAND clinicians teach parents and adolescents to work together to: (1) correct problem behaviors, (2) monitor success, and (3) reward good performance. This consisted of 8 60 minute weekly family sessions, an optional additional 3 sessions to monitor progress, and 4 monthly group parent sessions.. Duration 8 weeks. Concurrent medication/care: Participants in both

	groups were permitted to seek or continue additional psychosocial treatments during the stud- y. Participants were required to keep medication status (medicated versus. not medicated) constant during the study. 38.9% medicated for ADHD Further details: 1. Location of intervention: Clinic 2. Mode of delivery: Face to face (group intervention) 3. Study design: Parallel trial (n=18) Intervention 2: No treatment. Usual care. No details specified. Duration 8 weeks. Concurrent medication/care: Participants in both groups were permitted to seek or continue additional psychosocial treatments during the study. Participants were required to keep medication status (medicated versus. not medicated) constant during the study. 38.9% medicated for ADHD Further details: 1. Location of intervention: 2. Mode of delivery: 3. Study design:
Funding	Academic or government funding (American Psychological Foundation, the Association for Cognitive and Behavioral Therapies, the American Psychological Association)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PROGRAMMES INCLUDING THE PERSON WITH ADHD (SUPPORTING TEENS' ACADEMIC NEEDS DAILY) versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Disruptive Behaviour Disorder rating scale; inattention severity (parent reported) - mid treatment at 8 weeks; Group 1: mean 1.2 (SD 0.53); n=18, Group 2: mean 1.9 (SD 0.72); n=18; Comments: The DBDS is a DSM-IV symptom rating scale that was completed by parents and teachers.
Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Parents education, gender, subtype and ethnicity differ; Group 1 Number missing: ; Group 2 Number missing:

Protocol outcome 2: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: Disruptive Behaviour Disorder rating scale; inattention severity (parent reported) - follow up at 6 months; Group 1: mean 1.09 (SD 0.54); n=18, Group 2: mean 1.75 (SD 0.71); n=18; Comments: The DBDS is a DSM-IV symptom rating scale that was completed by parents and teachers.

Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Parents education, gender, subtype and ethnicity differ; Group 1 Number missing: ; Group 2 Number missing:
- Actual outcome for Children and young people: Disruptive Behaviour Disorder rating scale; inattention severity (teacher reported) - follow up at 6 months; Group 1: mean 1.72 (SD 0.73); n=18, Group 2: mean 1.52 (SD 1.15); n=18; Comments: The DBDS is a DSM-IV symptom rating scale that was

completed by parents and teachers.

Risk of bias: All domain - Very high, Selection - Very high, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Parents education, gender, subtype and ethnicity differ and baseline of outcome different; Group 1 Number missing: ; Group 2 Number missing:

Protocol outcome 3: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: Disruptive Behaviour Disorder rating scale; hyperactivity severity (parent reported) - mid treatment at 8 weeks; Group 1: mean 1.08 (SD 0.55); n=18, Group 2: mean 1.15 (SD 0.61); n=18; Comments: The DBDS is a DSM-IV symptom rating scale that was completed by parents and teachers.

Risk of bias: All domain - Very high, Selection - Very high, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Parents education, gender, subtype and ethnicity differ and difference in the outcome; Group 1 Number missing: ; Group 2 Number missing:

Protocol outcome 4: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: Disruptive Behaviour Disorder rating scale; hyperactivity severity (teacher reported) - follow up at 6 months; Group 1: mean 1.32 (SD 0.82); n=18,
Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Parents education, gender, subtype and ethnicity differ; Group 1 Number missing: ; Group 2 Number missing:
- Actual outcome for Children and young people: Disruptive Behaviour Disorder rating scale; hyperactivity severity (parent reported) - follow up at 6 months; Group 1: mean 0.64 (SD 0.41); n=18, Group 2: mean 0.9 (SD 0.58); n=18; Comments: The DBDS is a DSM-IV symptom rating scale that was completed by parents and teachers.

Risk of bias: All domain - Very high, Selection - Very high, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Parents education, gender, subtype and ethnicity differ and difference in the outcome; Group 1 Number missing: ; Group 2 Number missing:

Protocol outcome 5: Function/behaviour at <3 months
- Actual outcome for Children and young people: Parent-Adolescent Conflict Behavior (Conflict Behaviour Questionnaire) self-reported at 8 weeks; Group 1: mean 2.34 (SD 0.75); n=18, Group 2: mean 2 (SD 0.54); n=18; Comments: It assessed the parent-teen relationship at each assessment.

Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Parents education, gender, subtype and ethnicity differ; Group 1 Number missing: ; Group 2 Number missing: - Actual outcome for Children and young people: Parent-Adolescent Conflict Behavior (Conflict Behaviour Questionnaire) self-reported (follow up) at 6 months; Group 1: mean 2.24 (SD 0.8); n=18, Group 2: mean 2.9 (SD 0.91); n=18; Comments: It assessed the parent-teen relationship at each assessment. Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Parents education, gender, subtype and ethnicity differ; Group 1 Number missing: ; Group 2 Number missing: - Actual outcome for Children and young people: Parent-Adolescent Conflict Behavior (Conflict Behaviour Questionnaire) parent reported (follow up) at 8 weeks; Group 1: mean 2.91 (SD 0.58); n=18, Group 2: mean 3.06 (SD 0.74); n=18; Comments: It assessed the parent-teen relationship at each assessment. Risk of bias: All domain - Very high, Selection - Very high, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Parents education, gender, subtype and ethnicity differ and difference in the outcome; Group 1 Number missing: ; Group 2 Number missing: Protocol outcome 6: Function/behaviour at >6 months - Actual outcome for Children and young people: Parent-Adolescent Conflict Behavior (Conflict Behaviour Questionnaire) parent reported at 6 months; Group 1: mean 2.24 (SD 0.8); n=18, Group 2: mean 2.18 (SD 0.59); n=18; Comments: It assessed the parent-teen relationship at each assessment. Risk of bias: All domain - Very high, Selection - Very high, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Parents education, gender, subtype and ethnicity differ and difference in the outcome; Group 1 Number missing: ; Group 2 Number missing:	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months;

Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months	

Study	Sibley 2016[412]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=128)
Countries and setting	Conducted in USA; Setting:
Line of therapy	1st line
Duration of study	Intervention + follow up: 10 weeks + 6 month follow up
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Participants were required to a) meet DSM-IV criteria for ADHD, b) be enrolled in sixth through 8th grade, c) display significant academic impairment, d) have an estimated IQ >80 and e) have no history of an autism spectrum disorder.
Exclusion criteria	Placement in a self-contained classroom was exclusionary.
Recruitment/selection of patients	Recruited through referral from local schools and parent inquiry at the university clinic.
Age, gender and ethnicity	Age - Mean (SD): 12.75 (0.87). Gender (M:F): 83 male, 45 female. Ethnicity: Majority Hispanic any race, remainder Black non-Hispanic, White non-Hispanic and other.
Further population details	1. Age: School age children (6-13 years) (aged 11 - 15). 2. Baseline symptom severity: Mixed population
Extra comments	. Groups were matched on medication status using a stratified randomization procedure and slight over randomization of participants to STAND was necessary to maintain medication equivalence given rolling enrolment.
Indirectness of population	No indirectness
Interventions	(n=67) Intervention 1: Carer and family training programmes - Programmes including the person with ADHD. STAND consists of ten 50 minute manualized family therapy sessions attended by the parent and teen. The STAND menu contains 7 possible modular sessions, of which families selected 4: a) recording homework daily, b) creating a homework contract, c) organizing school materials, d) prioritizing and managing time out of school, e) note-taking in class, f) preparing for tests and quizzes and g) troubleshooting problems at home. For each modular session a skill is introduced, a plan for applying the skill is devised and a contract is created to detail contingencies associated with appropriate and consistent skill use during the upcoming week. In addition to weekly family sessions, parents were invited to attend four monthly group sessions facilitated by a STAND therapist. Duration 10 weeks. Concurrent medication/care: Participants in both groups were permitted to seek or continue additional medication and psychosocial treatments during the study and all treatment utilization was monitored.

	Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Face to face (group intervention) 3. Study design: Parallel trial (RCT). (n=61) Intervention 2: No treatment. Treatment as usual - Families were encouraged to seek services in the community, including school and local providers during BL to PT. No direct referrals were provided unless requested. TAU families were offered low intensity group behavioral treatment immediately after the FU assessment to incentivize retention. . Duration 10 weeks . Concurrent medication/care: Participants in both groups were permitted to seek or continue additional medication and psychosocial treatments during the study and all treatment utilization was monitored. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial (RCT).
Funding	Academic or government funding (This project was supported by Grant R34MH092466 from the National Institute of Mental Health and in part by Grant R324A120169 from the Institute for Education Science and the Klingesnstein 3rd Generation Foundation.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: FAMILY TRAINING versus NO TREATMENT

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Children and young people: Disruptive behavior disorder (DBD) scale - parent rated ADHD symptom severity at 10 weeks PT; Group 1: mean 1.31 (SD 0.58); n=67, Group 2: mean 1.76 (SD 0.61); n=61
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: Disruptive behavior disorder (DBD) scale - teacher rated ADHD symptom severity at 10 weeks PT; Group 1: mean 1.31 (SD 0.64); n=67, Group 2: mean 1.38 (SD 0.75); n=61
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 2: ADHD symptoms total at >6 months
- Actual outcome for Children and young people: Disruptive behavior disorder (DBD) scale - parent rated ADHD symptom severity at 6 months FU; Group 1: mean 1.29 (SD 0.6); n=67, Group 2: mean 1.64 (SD 0.51); n=61
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: Disruptive behavior disorder (DBD) scale - teacher rated ADHD symptom severity at 6 months FU; Group 1: mean 1.26 (SD 0.72); n=67, Group 2: mean 1.24 (SD 0.72); n=61
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0

Protocol outcome 3: Function/behaviour at <3 months - Actual outcome for Children and young people: Adolescent Academic Problems Checklist (AAPC) - parent rated at 10 weeks PT; Group 1: mean 0.82 (SD 0.54); n=67, Group 2: mean 1.08 (SD 0.7); n=61 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0 - Actual outcome for Children and young people: Adolescent Academic Problems Checklist (AAPC) - teacher rated at 10 weeks PT; Group 1: mean 0.75 (SD 0.61); n=67, Group 2: mean 0.91 (SD 0.78); n=61 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0 Protocol outcome 4: Function/behaviour at >6 months - Actual outcome for Children and young people: Adolescent Academic Problems Checklist (AAPC) - parent rated at 6 months FU; Group 1: mean 1 (SD 0.87); n=67, Group 2: mean 1.01 (SD 0.52); n=61 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0 - Actual outcome for Children and young people: Adolescent Academic Problems Checklist (AAPC) - teacher rated at 6 months FU; Group 1: mean 0.86 (SD 0.69); n=67, Group 2: mean 0.76 (SD 0.67); n=61 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 0; Group 2 Number missing: 0	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Smith 2016[423]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=92)
Countries and setting	Conducted in China, USA; Setting: USA - after school program China - off site facility outside school hours
Line of therapy	1st line
Duration of study	Intervention time: 15 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Children were eligible to participate in the study if the following criteria were met; a) age between 5 and 9 years; b) a diagnosis of ADHD according to DSM-IV or children at sub-threshold for ADHD, defined as one symptom below diagnostic criteria; c) an intellectual quotient of at least 80; and d) on a stable dose of medication for at least 4 weeks (if on medication for ADHD).
Exclusion criteria	Children were excluded if they had a severe or impairing comorbid psychiatric disorder, or acute behavior problems that required immediate therapeutic attention or a documented physical disability or injury that would prevent them from participating in the IBBS treatment.
Recruitment/selection of patients	USA - achieved by means of a school mailing, which included a letter describing the IBBS research study and a measure assessing ADHD symptomatology. China - Parents were informed about the study by means of delivering brochures, paid advertising, and announcements on social media.
Age, gender and ethnicity	Age - Mean (SD): 7.41 (1.07). Gender (M:F): 53 male, 27 female. Ethnicity: Majority White, remainder African American, Hispanic, Asian or other.
Further population details	1. Age: School age children (6-13 years) (aged 5-9). 2. Baseline symptom severity: Mixed population
Extra comments	. A comorbid diagnosis of an autism spectrum disorder was not deemed exclusionary for study participants if their level of functioning did not interfere with their ability to participate in all aspects of the program.
Indirectness of population	No indirectness
Interventions	(n=48) Intervention 1: Combination of the above - Describe. CT & Exercise - Consisted of a total of 60 sessions delivered in an after-school program format 4 days per week, 2 hours a day for 15 weeks. Made of 3 components; brain, body and social. Brain component - 3 computer games were developed for the purpose of the IBBS intervention. In all the games several parameters of the program were adjusted to increase the level of difficulty and were based on the performance of that child. All responses were recorded

	so progress was easily tracked and online corrective strategy messages were used to facilitate growth. Program teachers were instructed to provide encouragement to support children's efforts during these exercises and children were awarded points within the game framework based on individual performance, which could then be exchanged for virtual prizes. Each computerized cognitive training session lasted 30 minutes and all 3 games were played with the time frame. Body component - Intended to target same cognitive function as the brain components with the intent to increase the likelihood of activating and engaging attentional networks that support these functions. The exercises designed for the IBBS program progressed gradually from single to multiple tasks and from simple to more complicated movements with different requirements for reaction time, speed of processing and hand eye body coordination. Children participated in this component for 45 minutes each session. Social component - The good behavior game (GBG) was played 3 to 5 times for 15-30 mins (length of games gradually increased as disruptive behavior decreased) each session during the brain and body components of IBBS. Students were divided into 2 comparable teams (based on baseline behavioral assessments) and a maximum number of rule violations were agreed upon by teachers implementing IBBS. To win the GBG teams had to receive fewer rule violations than the maximum number permitted by their teachers. Winning teams were rewarded with immediate behavior rewards lasting at most 5 minutes and more long term tangible rewards were given to the team that won the most games each week. . Duration 15 weeks . Concurrent medication/care: Families were instructed to not make any changes to their children's treatments regimens throughout the duration of the study. Further details: 1. Location of intervention: In educational or work setting (USA - after school; China - off-site facility outside of school hours). 2. Mode of delivery: Mixed involving face to face contact 3. Study design: Parallel trial (RCT). (n=44) Intervention 2: No treatment. Treatment as usual - consisted of whatever the child was receiving at the time of the study entry, which included(but was not limited to) psychosocial and/or psychopharmacological interventions for ADHD. . Duration 15 weeks . Concurrent medication/care: Families were instructed to not make any changes to their children's treatments regimens throughout the duration of the study. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial (RCT).
Funding	Academic or government funding (Funded by the National Institutes of Health (NIH) Transformative research program was conducted in the United States and China.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: CT & EXERCISE versus TREATMENT AS USUAL

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Children and young people: SNAP - clinician rated at 15 weeks PT; Group 1: mean 26.8 (SD 8.6); n=42, Group 2: mean 25.6 (SD

7.1); n=38 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 6, Reason: Lost to follow up due to: not interested in participating or unresponsive to follow up calls. Discontinued intervention due to: lack of interest, commitment too large, negative experience during program or behavioral difficulties too severe.; Group 2 Number missing: 6, Reason: Lost to follow up due to: not interested in participating, moved away, severe stress or unresponsive to follow-up calls. Discontinued involvement in research due to: lack of interest/changed mind. - Actual outcome for Children and young people: SNAP - parent rated at 15 weeks PT; Group 1: mean 23.4 (SD 9.8); n=41, Group 2: mean 24.4 (SD 7.8); n=38 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 6, Reason: Lost to follow up due to: not interested in participating or unresponsive to follow up calls. Discontinued intervention due to: lack of interest, commitment too large, negative experience during program or behavioral difficulties too severe.; Group 2 Number missing: 6, Reason: Lost to follow up due to: not interested in participating, moved away, severe stress or unresponsive to follow-up calls. Discontinued involvement in research due to: lack of interest/changed mind. - Actual outcome for Children and young people: SNAP - teacher rated at 15 weeks PT; Group 1: mean 25.1 (SD 10.5); n=34, Group 2: mean 25.2 (SD 12); n=31 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 6, Reason: Lost to follow up due to: not interested in participating or unresponsive to follow up calls. Discontinued intervention due to: lack of interest, commitment too large, negative experience during program or behavioral difficulties too severe.; Group 2 Number missing: 6, Reason: Lost to follow up due to: not interested in participating, moved away, severe stress or unresponsive to follow-up calls. Discontinued involvement in research due to: lack of interest/changed mind.	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Solanto 2010[427]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=88)
Countries and setting	Conducted in USA; Setting: Not stated.
Line of therapy	1st line
Duration of study	Intervention time: 12 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Adults
Subgroup analysis within study	Not applicable
Inclusion criteria	Had to be between the age of 18-65 and have a DSM-IV diagnosis of ADHD, predominantly inattentive or combined subtype. Patients with other axis 1 psychiatric disorders were eligible for participation. Individuals receiving psychotropic medication had to be stabilised on a given drug for at least two months and on a given dose for at least one month. Patients were instructed to defer nonessential changes in their therapeutic regimen (either medication or psychotherapy) until the end of the treatment.
Exclusion criteria	Active substance abuse or dependence; suicidality; overtly hostile or aggressive behaviour likely to alienate group members; "asocial" characteristics (e.g. pervasive developmental disorder); cognitive disability (estimated IQ <80) psychosis; borderline personality disorder; Alzheimer's disease or other dementia; overt neurological disorder; and a childhood history of abuse or trauma or other severe psychiatric condition that confounded ascertainment of childhood ADHD symptoms.
Recruitment/selection of patients	Prospective participants were referred from New York area medical and psychiatric clinics, ADHD advocacy and self-help groups, community psychiatrists and primary care physicians, university health services, and postings on clinical trials web sites.
Age, gender and ethnicity	Age - Mean (SD): Meta cognitive group - 41.04 (11.59), Usual care group - 42.37 (12.09) . Gender (M:F): 30:58. Ethnicity: Meta cognitive group - 89% Caucasian, remainder Asian, black, Hispanic, mixed race Support therapy group - 79% Caucasian, remainder Asian, black, Hispanic, mixed race
Further population details	1. Age: Adults (25-65 years) 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Indirectness of population	No indirectness
Interventions	(n=45) Intervention 1: Cognitive behavioural therapies - Cognitive therapy (note: not for cognitive training). Meta-Cognitive Therapy - Beginning with training in specific skills and progressing to higher order skills that encompass both time management and organisation. The first hour of each 2 hour session is devoted to a roundtable review of each participants experience with the most recent home exercise to ascertain and

	address cognitive, situational, and emotional responses. The second half of each session begins with a presentation of the new topic and corresponding strategies, followed by an in-session exercise to illustrate or model each technique. Sessions conclude with an explanation of the next home exercise and anticipatory troubleshooting. . Duration 12 weeks. Concurrent medication/care: Medication was taken as usual if required. . Indirectness: No indirectness Further details: 1. Location of intervention: 2. Mode of delivery: 3. Study design: (n=43) Intervention 2: Coaching, mentoring, psychoeducation, counselling - Psychoeducation. Supportive therapy condition was designed to control for nonspecific elements of the meta-cognitive therapy programme, including session and treatment duration (2hrs per weeks for 12weeks), group support and validation, therapist attention. and psychoeducation, but without the didactic strategies and exercises contained in the meta-cognitive therapy programme. . Duration 12 weeks. Concurrent medication/care: Medication was taken as usual if required. . Indirectness: No indirectness Further details: 1. Location of intervention: 2. Mode of delivery: 3. Study design:
Funding	Academic or government funding (Supported by NIMH grant to Dr Solanto)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: META-COGNITIVE THERAPY versus SUPPORTIVE THERAPY

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Adults: Total ADHD symptoms measured using Brown Attention-Deficit Disorder Scale, total score (T-score) at Post-treatment (end of 12 week intervention); MD; 0.3 (95%CI -4.2 to 4.7);
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Mean change, mean difference and 95% CI recorded. Least squares mean change - 9.1, 95% CI - 6.0 and 12.2; Group 1 Number missing: 7, Reason: Did not complete treatment (6), made proscribed medication change (1); Group 2 Number missing: 16, Reason: Did not complete treatment (12), made proscribed medication change (4)

Protocol outcome 2: ADHD symptoms inattention at <3 months
- Actual outcome for Adults: Inattention/memory subscale score measured using Conners Adult ADHD Rating Scales self-report: Long version (CAARS-S) at Post-treatment (end of 12 week intervention); MD; 4.8 (95%CI 0.8 to 8.7);
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Mean change, mean difference and 95% CI recorded. Least squares mean change - 5.7, 95% CI - 3.1 and 8.3; Group 1 Number missing: 7, Reason: Did not complete treatment (6), made proscribed medication change (1); Group 2 Number missing: 16, Reason: Did not complete treatment (12), made proscribed medication change (4)

Protocol outcome 3: Function/behaviour at <3 months
- Actual outcome for Adults: Behaviour Rating Inventory of Executive Function (BRIEF) - Adult version, metacognition index (T-score) at Post-treatment (end of 12 week intervention); MD; 4.13 (95%CI -0.5 to 8.7);

Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Treatment - 78.37, Control - 80.71; Group 1 Number missing: 7, Reason: Did not complete treatment (6), made proscribed medication change (1); Group 2 Number missing: 16, Reason: Did not complete treatment (12), made proscribed medication change (4) Protocol outcome 4: Emotional dysregulation at < 3 months - Actual outcome for Adults: Beck depression inventory (BDI) at Post-treatment (end of 12 week intervention); Mean; -0.5 (95%CI -3.2 to 2.2); Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 7, Reason: Did not complete treatment (6), made proscribed medication change (1); Group 2 Number missing: 16, Reason: Did not complete treatment (12), made proscribed medication change (4)	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months

Study	Steeger 2016[437]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=104)
Countries and setting	Conducted in USA; Setting:
Line of therapy	1st line
Duration of study	Intervention time: 5 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	ADHD diagnosis was confirmed by faculty investigators or advanced doctoral students by administering the Computerised Diagnostic Interview schedule for children, version 4 to mothers. ADHD subtype was determined by the C-DISC-IV inattentive and/or hyperactive/impulsive symptoms counts in the ADHD module. Symptom counts included six or more inattentive symptoms for the inattentive subtype, six or more H/I symptoms for H/I subtype and six or more symptoms in both inattentive and H/I impulsive domains from the combined subtype.
Exclusion criteria	None stated.
Recruitment/selection of patients	Recruited from local schools via initial contact letters direct-mailed to students' home addresses.
Age, gender and ethnicity	Age - Mean (SD): 12.3 (1.15). Gender (M:F): 29 male, 15 female. Ethnicity: Caucasian, Hispanic and Biracial.
Further population details	1. Age: Young people (13-18 years) (Adolescents aged 11 -15). 2. Baseline symptom severity: Mixed population
Indirectness of population	No indirectness
Interventions	(n=26) Intervention 1: Combination of the above - Describe. Cogmed Working Memory Training and BPT - 11 exercises completed. The length of the list was automatically adjusted by the program on a trial by trial basis, to match the WM span of the participant on that particular exercise. All participants completed their exercises on a computer with an internet connection. The program provided positive feedback verbally, after most successful trials. Participants completed a total of 120 trials per day (15 trials in each 8 daily exercise) before they were allowed to progress to the next day of training. Researchers made weekly phone calls to the adolescents to provide positive feedback for completing each week of training. Phone calls lasted an average of 5 minutes. All participants were instructed to complete 25 training days, although a minimum of 20 days were required for inclusion in study analyses. BPT - combined aspects of several promising programs into a comprehensive and condensed group

	approach. Content was aimed at increasing positive mother-adolescent interactions, adolescent compliance and maternal control, while reducing mother-adolescent conflict and adolescent oppositional and defiant behavior. Sessions were participatory and involved presentations, discussion and role plays of specific parenting skills. Weekly homework was assigned to mothers to practice content with their adolescents in between the group sessions. . Duration 5 weeks. Concurrent medication/care: Both BPT groups met on Sundays in the same university classroom at different times. The faculty principal investigator of this study and an advanced doctoral student were the facilitator and co-facilitator for both BPT conditions. A blinded researcher with no participant contact randomly assigned treatment to meeting time by a coin flip. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Mixed involving face to face contact (Individual WMT sessions and group BPT sessions). 3. Study design: Parallel trial (RCT). (n=26) Intervention 2: Neurocognitive training - Memory training. Cogmed Working Memory Training + active BPT - 11 exercises completed. The length of the list was automatically adjusted by the program on a trial by trial basis, to match the WM span of the participant on that particular exercise. All participants completed their exercises on a computer with an internet connection. The program provided positive feedback verbally, after most successful trials. Participants completed a total of 120 trials per day (15 trials in each 8 daily exercise) before they were allowed to progress to the next day of training. Researchers made weekly phone calls to the adolescents to provide positive feedback for completing each week of training. Phone calls lasted an average of 5 minutes. All participants were instructed to complete 25 training days, although a minimum of 20 days were required for inclusion in study analyses. Active BPT group - consisted of 5 weeks of didactic lectures on adolescent physical, cognitive, emotional and social development. For homework weekly readings were assigned from a self-help adolescent development guide for parents. There were no opportunities for practice or feedback concerning specific parenting skills during the didactic sessions. . Duration 5 weeks. Concurrent medication/care: Both BPT groups met on Sundays in the same university classroom at different times. The faculty principal investigator of this study and an advanced doctoral student were the facilitator and co-facilitator for both BPT conditions. A blinded researcher with no participant contact randomly assigned treatment to meeting time by a coin flip. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Facilitated remotely (online or telephone support) 3. Study design: Parallel trial (RCT).
Funding	Academic or government funding (Funding for the project was provided to the authors from Translational Research Pilot Fund, Indiana Clinical and Translational Sciences Institute, Pre Doctoral training fellowship in translational research program, Fahs-Beck fund for research and experimentation and the institute for scholarship in the liberal arts, office of research, swarm graduate research award program, and Kill family fund for ADHD research, all at the University of Notre Dame.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: WORKING MEMORY TRAINING AND BPT versus MEMORY TRAINING

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: ADHD rating scale - Inattention, mother rated at 5 weeks PT; Group 1: mean 14.5 (SD 5.8); n=22, Group 2: mean 13.91 (SD 5.1); n=23
Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 4, Reason: 4 = dropped out of intervention; Group 2 Number missing: 3, Reason: 3 = dropped out of intervention
- Actual outcome for Children and young people: ADHD rating scale - Inattention, teacher rated at 5 weeks PT; Group 1: mean 9.77 (SD 7.5); n=22, Group 2: mean 7.77 (SD 5.7); n=23
Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 4, Reason: 4 = dropped out of intervention; Group 2 Number missing: 3, Reason: 3 = dropped out of intervention

Protocol outcome 2: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: ADHD rating scale - Hyperactivity/impulsivity, mother rated at 5 weeks PT; Group 1: mean 9.55 (SD 6.1); n=22, Group 2: mean 9.81 (SD 5.9); n=23
Risk of bias: All domain - High, Selection - High, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 4, Reason: 4 = dropped out of intervention; Group 2 Number missing: 3, Reason: 3 = dropped out of intervention
- Actual outcome for Children and young people: ADHD rating scale - Hyperactivity/impulsivity, teacher rated at 5 weeks PT; Group 1: mean 4.55 (SD 5.3); n=22, Group 2: mean 4.95 (SD 4.8); n=23
Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 4, Reason: 4 = dropped out of intervention; Group 2 Number missing: 3, Reason: 3 = dropped out of intervention

Protocol outcome 3: Function/behaviour at <3 months
- Actual outcome for Children and young people: CBCL rating scale - Oppositional behaviors, mother rated at 5 weeks PT; Group 1: mean 3.5 (SD 2.5); n=22, Group 2: mean 3.81 (SD 2.5); n=23
Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 4, Reason: 4 = dropped out of intervention; Group 2 Number missing: 3, Reason: 3 = dropped out of intervention
- Actual outcome for Children and young people: BRIEF rating scale - Global Executive Deficit, mother rated at 5 weeks PT; Group 1: mean 146.55 (SD 27.5); n=22, Group 2: mean 142.18 (SD 20.4); n=23
Risk of bias: All domain - High, Selection - High, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 4, Reason: 4 = dropped out of intervention; Group 2 Number missing: 3, Reason: 3 = dropped out of intervention
- Actual outcome for Children and young people: BRIEF rating scale - Global Executive Deficit, teacher rated at 5 weeks PT; Group 1: mean 114.45 (SD 30.3); n=22, Group 2: mean 116 (SD 29.5); n=23

Risk of bias: All domain - High, Selection - High, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 4, Reason: 4 = dropped out of intervention; Group 2 Number missing: 3, Reason: 3 = dropped out of intervention	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Steiner 2011[440]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=41)
Countries and setting	Conducted in USA; Setting: School
Line of therapy	1st line
Duration of study	Intervention time: 17 weeks
Method of assessment of guideline condition	Partially adequate method of assessment/diagnosis: Children were eligible if they had a diagnosis of ADHD confirmed by their physician
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Sufficient English ability to complete assessments and intervention protocols. Both boys and girls were eligible, regardless of their subtype of ADHD or medication use.
Exclusion criteria	Coexisting diagnosis of conduct disorder, pervasive developmental disorder, or other serious mental illness (e.g., psychosis).
Recruitment/selection of patients	School
Age, gender and ethnicity	Age - Mean (SD): 12.4 (0.9). Gender (M:F): 21/20. Ethnicity: Caucasian 74%, Asian American 24%, African American 6%, Hispanic ethnicity 12%
Further population details	1. Age: School age children (6-13 years) (Children in grades 6, 7, or 8). 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Indirectness of population	No indirectness
Interventions	(n=13) Intervention 1: Neurofeedback. Play Attention, 45-minute sessions twice a week . Duration 17 weeks. Concurrent medication/care: During NF training sessions, children play a simple computer game that involves flying an airplane. Children are told that if they concentrate, the airplane will go up, and if not, the plane will go down. An individual baseline is set at the beginning of each session, and as the children progress they reach higher (more challenging) levels. The computer interface provides children with immediate auditory and visual feedback about the degree to which they are successful in paying attention Further details: 1. Location of intervention: In educational or work setting 2. Mode of delivery: Directed self-

	help 3. Study design: Parallel trial (n=13) Intervention 2: Neurocognitive training - Attention training. Brain Train, 45-minute sessions twice a week . Duration 17. Concurrent medication/care: An array of visual and auditory exercises designed to reduce impulsivity and increase attentiveness to the task being presented. The participants in this study used the attention training and working memory modules. Further details: 1. Location of intervention: In educational or work setting 2. Mode of delivery: Directed self-help 3. Study design: Parallel trial (n=15) Intervention 3: No treatment. Waitlist. Duration 17 weeks. Concurrent medication/care: No intervention, only TAU Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Academic or government funding (This study was supported by grants from the Deborah Munroe Noonan Memorial Research Fund and the Newton Schools Foundation.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: NEUROFEEDBACK versus ATTENTION AND MEMORY TRAINING

Protocol outcome 1: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: Conners Rating Scales–Revised (CRS-R), Parent version
at 17 weeks PT; Group 1: mean 64.8 (SD 7.44903); n=9,
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Ethnicity, Race, Income, and Children taking medication.

; Group 1 Number missing: 4, Reason: 1 had scheduling problems; 1 moved; 1 found ineligible due to comorbidity
; Group 2 Number missing: 2, Reason: 1 dropped out before intervention; 1 did not complete due to scheduling problems

- Actual outcome for Children and young people: Conners Rating Scales–Revised (CRS-R), Teacher version

at 17 weeks PT; Group 1: mean 55.4 (SD 11.6); n=9, Group 2: mean 55.7 (SD 10.2); n=11; Conners Rating Scales–Revised (CRS-R), Teacher version 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Ethnicity, Race, Income, and Children taking medication.

; Group 1 Number missing: 4, Reason: 1 had scheduling problems; 1 moved; 1 found ineligible due to comorbidity
; Group 2 Number missing: 2, Reason: 1 dropped out before intervention; 1 did not complete due to scheduling problems

Protocol outcome 2: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: Conners Rating Scales–Revised (CRS-R), Parent version
at 17 weeks PT; Group 1: mean 67.65 (SD 19.3529); n=9,
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Ethnicity, Race, Income, and Children taking medication.

; Group 1 Number missing: 4, Reason: 1 had scheduling problems; 1 moved; 1 found ineligible due to comorbidity
; Group 2 Number missing: 2, Reason: 1 dropped out before intervention; 1 did not complete due to scheduling problems

- Actual outcome for Children and young people: Conners Rating Scales–Revised (CRS-R), Teacher version
at 17 weeks PT; Group 1: mean 56.1 (SD 14.3); n=9, Group 2: mean 64.6 (SD 18.4); n=11; Conners Rating Scales–Revised (CRS-R), Teacher version 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Ethnicity, Race, Income, and Children taking medication.

; Group 1 Number missing: 4, Reason: 1 had scheduling problems; 1 moved; 1 found ineligible due to comorbidity
; Group 2 Number missing: 2, Reason: 1 dropped out before intervention; 1 did not complete due to scheduling problems

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: NEUROFEEDBACK versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: Conners Rating Scales–Revised (CRS-R), Parent version
at 17 weeks PT; Group 1: mean 64.8 (SD 7.44903); n=9,
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Ethnicity, Race, Income, and Children taking medication.

; Group 1 Number missing: 4, Reason: 1 had scheduling problems; 1 moved; 1 found ineligible due to comorbidity
; Group 2 Number missing: 0
- Actual outcome for Children and young people: Conners Rating Scales–Revised (CRS-R), Teacher version
at 17 weeks PT; Group 1: mean 55.4 (SD 11.6); n=9, Group 2: mean 59.8 (SD 10); n=15; Conners Rating Scales–Revised (CRS-R), Teacher version 0-84 Top=High is poor outcome
Risk of bias: All domain - --, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: ; Group 2 Number missing:

Protocol outcome 2: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: Conners Rating Scales–Revised (CRS-R), Parent version
at 17 weeks PT; Group 1: mean 67.65 (SD 19.3529); n=9,
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Ethnicity, Race, Income, and Children taking medication.

; Group 1 Number missing: 4, Reason: 1 had scheduling problems; 1 moved; 1 found ineligible due to comorbidity
; Group 2 Number missing: 0

- Actual outcome for Children and young people: Conners Rating Scales–Revised (CRS-R), Teacher version
at 17 weeks PT; Group 1: mean 56.1 (SD 14.3); n=9, Group 2: mean 52.8 (SD 7.2); n=15; Conners Rating Scales–Revised (CRS-R), Teacher version 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Ethnicity, Race, Income, and Children taking medication.

; Group 1 Number missing: 4, Reason: 1 had scheduling problems; 1 moved; 1 found ineligible due to comorbidity
; Group 2 Number missing: 0

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: ATTENTION AND MEMORY TRAINING versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: Conners Rating Scales–Revised (CRS-R), Parent version
at 17 weeks PT; Group 1: mean 59.2 (SD 3.87057); n=11,
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Ethnicity, Race, Income, and Children taking medication.

; Group 1 Number missing: 2, Reason: 1 dropped out before intervention; 1 did not complete due to scheduling problems

; Group 2 Number missing: 0
- Actual outcome for Children and young people: Conners Rating Scales–Revised (CRS-R), Teacher version
at 17 weeks PT; Group 1: mean 55.7 (SD 10.2); n=11, Group 2: mean 59.8 (SD 10); n=15; Conners Rating Scales–Revised (CRS-R), Teacher version 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Ethnicity, Race, Income, and Children taking medication.

; Group 1 Number missing: 4, Reason: 1 had scheduling problems; 1 moved; 1 found ineligible due to comorbidity
; Group 2 Number missing: 0

Protocol outcome 2: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: Conners Rating Scales–Revised (CRS-R), Parent version
at 17 weeks PT; Group 1: mean 59.7 (SD 13.2914); n=11,
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Ethnicity, Race, Income, and Children taking medication.

; Group 1 Number missing: 2, Reason: 1 dropped out before intervention; 1 did not complete due to scheduling problems

; Group 2 Number missing: 0
- Actual outcome for Children and young people: Conners Rating Scales–Revised (CRS-R), Teacher version
at 17 weeks PT; Group 1: mean 64.6 (SD 18.4); n=11, Group 2: mean 52.8 (SD 7.2); n=15; Conners Rating Scales–Revised (CRS-R), Teacher version 0-84 Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low, Comments - ; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age, Ethnicity, Race, Income, and Children taking medication.

; Group 1 Number missing: 2, Reason: 1 dropped out before intervention; 1 did not complete due to scheduling problems

; Group 2 Number missing: 0

Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms hyperactivity at <3 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very

	much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study (subsidiary papers)	Steiner 2014[439] (Steiner 2014[438])
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=104)
Countries and setting	Conducted in USA; Setting: The trial took place in 19 public elementary schools settings in the Greater Boston area.
Line of therapy	1st line
Duration of study	Intervention time: 5 months
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Clinical diagnosis of ADHD per DSM-IV made by the child's clinician, child in second or fourth grade, and ability to speak and understand English sufficiently to follow the intervention protocol, although English need not be their first language. Children were included regardless of medication status.
Exclusion criteria	Children with a co-existing diagnosis of conduct disorder, autism spectrum disorder, or other serious mental illness (e.g. psychosis) or with an intelligence quotient <80 measured by the Kaufman Brief Intelligence Test.
Recruitment/selection of patients	Second and fourth grade students were chosen as the target population because it was important to maintain sampling independence so that students from each school could only be eligible for the study once.
Age, gender and ethnicity	Age - Mean (SD): 8.4 (1.1) - Neurofeedback, 8.9 (1.0) - Cognitive training, 8.4 (1.1) - Control. . Gender (M:F): 70 male : 34 female. Ethnicity: 76 white, remainder black/African American or Asian
Further population details	1. Age: School age children (6-13 years) 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Indirectness of population	No indirectness
Interventions	(n=34) Intervention 1: Neurofeedback. Participants received three 45minute sessions per week for a total of 40 sessions, conducted at a 2:1 or 1:1 student-to-RA ratio. The NF system used trains the child to increase beta waves and suppress theta waves, using EEG sensors embedded in a typical looking bicycle helmet. . Duration 5 months. Concurrent medication/care: All participants were informed to continue with scheduled clinicians visits and standard community treatments independent of study participation. Further details: 1. Location of intervention: In educational or work setting (At public elementary schools.). 2. Mode of delivery: Face to face (1 on 1) (Sessions conducted at a 2:1 or 1:1 student-to-RA ratio depending on logistics.). 3. Study design: Not applicable / Not stated / Unclear (RCT). (n=34) Intervention 2: Neurocognitive training - Other. Participants received three 45minute sessions per week for a total of 40 sessions, conducted at a 2:1 or 1:1 student-to-RA ratio. The CT intervention uses an

	. Duration 5 months. Concurrent medication/care: All participants were informed to continue with scheduled clinicians visits and standard community treatments independent of study participation. Further details: 1. Location of intervention: In educational or work setting (In public elementary schools.). 2. Mode of delivery: Face to face (1 on 1) (Sessions conducted at a 2:1 or 1:1 student-to-RA ratio depending on logistics.). 3. Study design: Not applicable / Not stated / Unclear (RCT). (n=36) Intervention 3: No treatment. The control condition received computer attention training treatment the following school year. . Duration 5 months. Concurrent medication/care: All participants were informed to continue with scheduled clinicians visits and standard community treatments independent of study participation. Further details: 1. Location of intervention: In educational or work setting (In public elementary schools.). 2. Mode of delivery: Face to face (1 on 1) (Sessions were conducted at a 2:1 or 1:! student-to-RA ratio depending on logistics.). 3. Study design: Not applicable / Not stated / Unclear (RCT).
Funding	Academic or government funding (Supported by the Institute of Education Sciences.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: NEUROFEEDBACK versus CONTROL CONDITION

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Conners 3-Teacher rating on inattention. at Post intervention after 5 months; Group 1: mean 65.5 (SD 11.6); n=34, Group 2: mean 68.2 (SD 10.6); n=36; Comments: It is a validated and standardized instrument used to assess ADHD symptoms.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: NF - 68.4 (11.7), Control - 68.1 (10.4) ; Group 1 Number missing: 0, Reason: Not applicable; Group 2 Number missing: 0, Reason: Not applicable
- Actual outcome for Children and young people: Conners 3-Parent rating on inattention. at Post intervention after 5 months; Group 1: mean 71.4 (SD 10.8); n=34, Group 2: mean 75.2 (SD 10.5); n=36; Comments: It is a validated and standardized instrument used to assess ADHD symptoms.

Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: NF - 80.1 (10.8), Control - 76.7 (10.0) ; Group 1 Number missing: 0, Reason: Not applicable; Group 2 Number missing: 0, Reason: Not applicable

Protocol outcome 2: Function/behaviour at <3 months
- Actual outcome for Children and young people: Global Executive Composite at Post intervention after 5 months; Group 1: mean 62.1 (SD 8.9); n=34, Group 2: mean 64.8 (SD 9); n=36; Comments: It is an overall measure based on all 8 scales of the Behaviour Rating Inventory of Executive Function (BRIEF).

Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: NF- 66.3 (10.0), Control -64.7 (9.0); Group 1 Number missing: 2, Reason: Change of school, scheduling conflict ; Group 2 Number missing: 0, Reason: Not applicable
- Actual outcome for Children and young people: Behavioural Observation of Students in Schools (BOSS) Classroom Observation - Total Engagement at Post intervention after 5 months; Group 1: mean 78 (SD 14.6); n=34, Group 2: mean 79.3 (SD 13.6); n=36; Comments: BOSS is a systematic observation method for coding classroom behaviour and reports on engagement and off task behaviours.
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: NF-72.1 (12.4), Control - 78.2 (11.7); Group 1 Number missing: 2, Reason: Change of school, scheduling conflict ; Group 2 Number missing: 0, Reason: Not applicable

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: COGNITIVE TRAINING versus NEUROFEEDBACK

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Conners 3-Parent rating on inattention. at Post intervention after 5 months; Group 1: mean 70.2 (SD 10.3); n=34, Group 2: mean 71.4 (SD 10.8); n=34; Comments: It is a validated and standardized instrument used to assess ADHD symptoms.
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: CT - 74.8 (9.5), NF - 80.1 (10.8); Group 1 Number missing: 2, Reason: Change of school, scheduling conflict ; Group 2 Number missing: 0, Reason: Not applicable
- Actual outcome for Children and young people: Conners 3-Teacher rating on inattention. at Post intervention after 5 months; Group 1: mean 67.6 (SD 9); n=34, Group 2: mean 65.5 (SD 11.6); n=34; Comments: It is a validated and standardized instrument used to assess ADHD symptoms.

Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: CT - 65.2 (10.6), NF - 68.4 (11.7); Group 1 Number missing: 2, Reason: Change of school, scheduling conflict ; Group 2 Number missing: 0, Reason: Not applicable

Protocol outcome 2: Function/behaviour at <3 months
- Actual outcome for Children and young people: Global Executive Composite at Post intervention after 5 months; Group 1: mean 61.5 (SD 8.3); n=34, Group 2: mean 62.1 (SD 8.9); n=34; Comments: It is an overall measure based on all 8 scales of the Behaviour Rating Inventory of Executive Function (BRIEF).

Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: NF- 66.3 (10.0), CT - 61.8 (6.6); Group 1 Number missing: 2, Reason: Change of school, scheduling conflict ; Group 2 Number missing: 0, Reason: Not applicable
- Actual outcome for Children and young people: Behavioural Observation of Students in Schools (BOSS) Classroom Observation - Total Engagement at Post intervention after 5 months; Group 1: mean 77.1 (SD 13.6); n=34, Group 2: mean 78 (SD 14.6); n=34; Comments: BOSS is a systematic observation method for coding classroom behaviour and reports on engagement and off task behaviours.

Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: CT - 73.4 (13.3), NF - 72.1 (12.4); Group 1 Number missing: 2, Reason: Change of school, scheduling conflict ; Group 2 Number missing: 0, Reason: Not applicable

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: COGNITIVE TRAINING versus CONTROL CONDITION

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: Conners 3-Parent rating on inattention. at Post intervention after 5 months; Group 1: mean 70.2 (SD 10.3); n=34, Group 2: mean 75.2 (SD 10.5); n=36; Comments: It is a validated and standardized instrument used to assess ADHD symptoms.
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: CT - 74.8 (9.5), Control - 76.7 (10.0); Group 1 Number missing: 2, Reason: Change of school, scheduling conflict ; Group 2 Number missing: 0, Reason: Not applicable
- Actual outcome for Children and young people: Conners 3-Teacher rating on inattention. at Post intervention after 5 months; Group 1: mean 67.6 (SD 9); n=34, Group 2: mean 68.2 (SD 10.6); n=36; Comments: It is a validated and standardized instrument used to assess ADHD symptoms
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: CT - 65.2 (10.6), Control - 68.1 (10.4); Group 1 Number missing: 2, Reason: Change of school, scheduling conflict ; Group 2 Number missing: 0, Reason: Not applicable

Protocol outcome 2: Function/behaviour at <3 months
- Actual outcome for Children and young people: Global Executive Composite at Post intervention after 5 months; Group 1: mean 61.5 (SD 8.3); n=34, Group 2: mean 64.8 (SD 9); n=36; Comments: It is an overall measure based on all 8 scales of the Behaviour Rating Inventory of Executive Function (BRIEF).

Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low,

Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: CT- 61.8 (6.6), Control -64.7 (9.0); Group 1 Number missing: 2, Reason: Change of school, scheduling conflict ; Group 2 Number missing: 0, Reason: Not applicable - Actual outcome for Children and young people: Behavioural Observation of Students in Schools (BOSS) Classroom Observation - Total Engagement at Post intervention after 5 months; Group 1: mean 77.1 (SD 13.6); n=34, Group 2: mean 79.3 (SD 13.6); n=36; Comments: BOSS is a systematic observation method for coding classroom behaviour and reports on engagement and off task behaviours. Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: CT - 73.4 (13.3), Control - 78.2 (11.7); Group 1 Number missing: 2, Reason: Change of school, scheduling conflict ; Group 2 Number missing: 0, Reason: Not applicable	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Storebo 2011[443]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=56)
Countries and setting	Conducted in Denmark; Setting: Secondary care
Line of therapy	1st line
Duration of study	Intervention + follow up: 34 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: The K-SADS was administered by the first author who was trained to administer the KSADS (OJS).
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	They were screened according to the following inclusion criteria: 8 years to 12 years at the time of the start of assessment, and parents willing to take part in the trial and giving consent for medical treatment of the child as well as to participation of the child in the trial.
Exclusion criteria	Schizophrenia or all the autism diagnoses according to DSM IV, violent and criminal children, both verbal and nonverbal intelligence quotient (IQ) below 80, previously medicated for ADHD, and resistance against participating.
Recruitment/selection of patients	Clinic
Age, gender and ethnicity	Age - Mean (SD): 10.4 (1.31). Gender (M:F): 39/17. Ethnicity: not reported
Further population details	1. Age: School age children (6-13 years) (Inclusion criterion). 2. Baseline symptom severity: Systematic review: mixed
Indirectness of population	No indirectness
Interventions	
Funding	Academic or government funding (Region's Zealand University Hospital (RESUS), Region Zealand Research Foundation, and Psychiatric Research Unit, Region Zealand.)
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6

	months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Tamm 2013[451]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	(n=105)
Countries and setting	Conducted in USA; Setting: Not specified
Line of therapy	Unclear
Duration of study	Intervention time: 8 weeks (with variance so outcomes measured at 12 weeks)
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: K-SADS-PL
Stratum	Children and young people
Subgroup analysis within study	Not applicable:
Inclusion criteria	None specified
Exclusion criteria	(1) IQ < 85, history of head injury (2) history of prenatal drug exposure (3) diagnosis with other congenital or acquired neurological conditions (4) and participating in other non-pharmacological treatment interventions for ADHD
Recruitment/selection of patients	recruited from outpatient clinics at Children's Medical Center at Dallas, the community, and Shelton School, a private school for learning differences
Age, gender and ethnicity	Age - Range: 7-15 years. Gender (M:F): 71/34. Ethnicity: 70% Caucasian, 5% African American, 11% Hispanic, 5% Asian, 9% Mixed race
Further population details	1. Age: Not applicable / Not stated / Unclear 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Indirectness of population	No indirectness
Interventions	(n=54) Intervention 1: Neurocognitive training - Attention training. The intervention consists of 16 bi-weekly 30 minute sessions Participants progressed through 4 modules of attention training, beginning with the simplest sustained attention tasks. After criterion was reached (e.g., gains in speed while maintaining overall accuracy), the next module was started. Not all participants completed all four modules since they progressed at different rates, although the majority completed at least the sustained and selective attention modules. Participants were given immediate feedback regarding their performance and interventionists spent time each session discussing how the targeted attentional skill could be applied in a home or school setting. Pay Attention! Parents were also provided with reading materials about the attention skills being trained and met with the child and interventionist for a few minutes after each session to discuss the activities practiced at each session, which skill was being trained, and how parents could support the child's implementation of the skill in home and school activities. There was variability between subjects as to how long it took them to complete the 16 treatment sessions due to parent and interventionist schedules; thus we

	opted to re-test all participants on the same schedule (i.e., 12 weeks after baseline) . Duration 8 weeks. Concurrent medication/care: Participants were asked to keep their medication constant. 65% were medicated for ADHD Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Mixed involving face to face contact 3. Study design: Parallel trial (n=51) Intervention 2: No treatment. Individuals randomized to the waitlist control condition were asked to not begin any new treatment for ADHD during the wait period and were offered the opportunity to receive the intervention at the end of the wait period.. Duration 8 weeks. Concurrent medication/care: 73% were medicated for ADHD Further details: 1. Location of intervention: 2. Mode of delivery: 3. Study design:
Funding	Academic or government funding (Supported in part by the National Center for Research Resources)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: ATTENTION TRAINING 'PAY ATTENTION!' versus WAITLIST CONTROL

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: SNAP-IV Inattention subscale; parent rated at 12 weeks; Group 1: mean 1.42 (SD 0.5); n=54, Group 2: mean 2.15 (SD 0.5); n=51
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 9; Group 2 Number missing: 5
- Actual outcome for Children and young people: SNAP-IV Inattention subscale; teacher rated at 12 weeks; Group 1: mean 1.84 (SD 0.6); n=54, Group 2: mean 1.68 (SD 0.7); n=51
Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - Very high, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 27, Reason: Many teachers did not respond to questionnaires; Group 2 Number missing: 24
- Actual outcome for Children and young people: SNAP-IV Inattention subscale; investigator rated at 12 weeks; Group 1: mean 1.84 (SD 0.5); n=54, Group 2: mean 2.39 (SD 0.5); n=51
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 9; Group 2 Number missing: 5

Protocol outcome 2: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: SNAP-IV Hyperactivity subscale; parent rated at 12 weeks; Group 1: mean 0.93 (SD 0.6); n=54, Group 2: mean 1.3 (SD 0.7); n=51
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 9; Group 2 Number missing: 5

- Actual outcome for Children and young people: SNAP-IV Hyperactivity subscale; investigator rated at 12 weeks; Group 1: mean 1.27 (SD 0.6); n=54, Group 2: mean 1.51 (SD 0.7); n=51 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 9; Group 2 Number missing: 5 - Actual outcome for Children and young people: SNAP-IV Hyperactivity subscale; teacher rated at 12 weeks; Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - Very high, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 27, Reason: Many teachers did not respond to questionnaires; Group 2 Number missing: 24 Protocol outcome 3: Function/behaviour at <3 months - Actual outcome for Children and young people: Behavioural Assessment System for Children; behavioural symptoms Index; parent rated at 12 weeks; Group 1: mean 53.67 (SD 10.2); n=54, Group 2: mean 57.8 (SD 9.8); n=51 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 9; Group 2 Number missing: 5 - Actual outcome for Children and young people: Behavioural Assessment System for Children; behavioural symptoms Index; teacher rated at 12 weeks; Group 1: mean 61 (SD 8.4); n=54, Group 2: mean 58.72 (SD 11.7); n=51 Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - Very high, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: 27, Reason: Many teachers did not respond to questionnaires; Group 2 Number missing: 24 Protocol outcome 4: Discontinuation due to adverse events at <3 months - Actual outcome for Children and young people: Discontinuation for any reason at 12 weeks; Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Group 1 Number missing: ; Group 2 Number missing:	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at >6 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Thompson 2009[457]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=41)
Countries and setting	Conducted in United Kingdom; Setting: The family home.
Line of therapy	1st line
Duration of study	Intervention + follow up: 2 months intervention + follow up at 7weeks post treatment
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	A score of 16 or over on the PACS ADHD symptom scale. Only parents concerned about their children's ADHD behaviour were recruited. No child entering the trial had been on medication. No child received medication during the trial or the follow-up period and were willing to be seen at home. Families had to be fluent in English; able to commit to the length of the trial including the follow-up period, and were willing to be seen at home.
Exclusion criteria	If they had previously or were currently attending the local child and adolescent services, if the mother was known to have a severe mental illness or if the child had pervasive developmental disorder, severe receptive language impairment, neurological disorder or was on the social services register for a current history of child sexual or physical abuse.
Recruitment/selection of patients	Recruited over an 18month period via local child and family health clinics and by advertisements placed in the local press targeting the total population of the island of Guernsey. There was a three stage screening process.
Age, gender and ethnicity	Age - Mean (SD): 51.20 (11.30) months. Gender (M:F): 31 boys: 10 girls. Ethnicity: N/A
Further population details	1. Age: Preschool children (0-6 years) (Aged 2 1/2 to 6 1/2). 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Indirectness of population	No indirectness
Interventions	(n=21) Intervention 1: Carer and family training programmes - Programmes including the person with ADHD. New forest parenting programme (NFPP) is an 8 week intervention that targets amongst other things, both underlying impairments in self-regulation and the quality of mother child interactions. Two part time nurses were employed to deliver the intervention and were trained in the revised NFPP programme. Weekly telephone and email supervision was supported with monthly visits to supervise the therapists on a face to face basis for the first 6 months and then every 2 months for the last 7 months during the intervention phase.

	All therapy sessions were audiotaped and these tapes were used for supervision sessions to ensure that the intervention . Duration 8 weeks. Concurrent medication/care: N/A Further details: 1. Location of intervention: 2. Mode of delivery: 3. Study design: (n=20) Intervention 2: No treatment. Treatment as usual (TAU) participants received no treatment from study staff, nor were they referred onto services, but were given contact information for Health Visitors, general practitioners or school nurses which they could use as they wished. . Duration 8 weeks. Concurrent medication/care: N/A Further details: 1. Location of intervention: 2. Mode of delivery: 3. Study design:
Funding	Other (The project was funded by The Island of Guernsey Research Fund through Wessex Medical Trust HOPE.)
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: NFPP versus TAU Protocol outcome 1: ADHD symptoms total at <3 months - Actual outcome for Children and young people: ADHD symptoms measured by PACS at Post intervention (after 8 weeks); Group 1: mean 11.62 (SD 6.19); n=17, Group 2: mean 20.46 (SD 7.17); n=13 Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: T1 TAU - 17.77 (6.02) , NFPP - 16.81 (6.10) ; Group 1 Number missing: 4, Reason: Didn't complete T2 assessments or T3 measures, or weren't assessed at T2/T3.; Group 2 Number missing: 7, Reason: Didn't complete T2 assessments or T3 measures, or weren't assessed at T2/T3. Protocol outcome 2: ADHD symptoms total at >6 months - Actual outcome for Children and young people: ADHD symptoms measured by PACS at Follow up at 7 weeks post treatment; Group 1: mean 10.87 (SD 3.99); n=17, Group 2: mean 17.3 (SD 6.93); n=13 Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: T1 TAU - 17.77 (6.02) , NFPP - 16.81 (6.10) ; Group 1 Number missing: 4, Reason: Didn't complete T2 assessments or T3 measures, or weren't assessed at T2/T3.; Group 2 Number missing: 7, Reason: Didn't complete T2 assessments or T3 measures, or weren't assessed at T2/T3.	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes

at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months	

Study	Van den Hoofdakker 2007[463]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=94)
Countries and setting	Conducted in Unknown; Setting: Treatments at mental health outpatient clinic.
Line of therapy	Adjunctive to current care
Duration of study	Intervention + follow up: 5 months BPT and follow up treatment completed 25weeks post intervention
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: DSM-IV criteria met.
Stratum	Children and young people
Subgroup analysis within study	Not stratified but pre-specified: Treatment effects in children with and without medication.
Inclusion criteria	Meet DSM-IV criteria for ADHD IQ>80 Age between 4 and 12 Both parents (if present) willing to participate in BPT
Exclusion criteria	If BPT had been received the year before or if there were problems with the child and/or family that required immediate intervention.
Recruitment/selection of patients	All children had been referred to an outpatient mental health clinic by their GP's. Parents were informed about the research project and invited to participate if behavioural problems were continuing or if they preferred BPT as a first line intervention.
Age, gender and ethnicity	Age - Mean (SD): 7.4 (1.9). Gender (M:F): 76:18. Ethnicity: 95% white, remainder African, Asian or unknown
Further population details	1. Age: School age children (6-13 years) (4-12). 2. Baseline symptom severity: Majority moderate symptoms of ADHD
Indirectness of population	--
Interventions	(n=47) Intervention 1: Carer and family training programmes - Programme not including the person with ADHD. Behavioural Parent Training (BPT) - consisted of twelve 120-minute sessions of group parenting training led by 2 psychologists Six children's parents could participate in each group and specific target behaviours established for each child . Duration Five months. Concurrent medication/care: Routine clinical care (RCC) continued, and children with or without medication could participate. Further details: 1. Location of intervention: Clinic 2. Mode of delivery: 3. Study design: (n=47) Intervention 2: Carer and family training programmes - Programme not including the person with ADHD. Routine clinical care (RCC) - carried out by 4 experienced senior child and adolescent psychiatrists

	at mental health outpatient clinic. Duration Five months. Concurrent medication/care: Medication as normal Further details: 1. Location of intervention: 2. Mode of delivery: 3. Study design:
Funding	Other author(s) funded by industry (Funded by university but one author a paid consultant for Lily and Janssen)
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: BEHAVIOUR PARENT TRAINING versus ROUTINE CLINICAL CARE Protocol outcome 1: ADHD symptoms total at <3 months - Actual outcome for Children and young people: ADHD symptoms measured by CPRS-R:S at Post intervention, not follow up; Group 1: mean 19 (SD 6.2); n=47, Group 2: mean 18.7 (SD 7.7); n=47; Comments: Consists of four subscales; Oppositional, Cognitive Problems/Inattention, Hyperactivity, and the ADHD index (a global screening measure for ADHD). The ADHD sub scale was used to asses and evaluate core ADHD symptoms. Risk of bias: All domain - Very high, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: 7.5 and 7.6 for intervention and control respectively - behaviour reinforcing 71.5 and 69.2 for intervention and control respectively - ADHD symptoms; Group 1 Number missing: 7, Reason: Urgent care needed, dissatisfaction with treatment, no follow up assessment.; Group 2 Number missing: 1, Reason: No follow up assessment.	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Van der Oord 2014[466]
Study type	RCT (randomised; Parallel)
Number of studies (number of participants)	1 (n=43)
Countries and setting	Conducted in Netherlands; Setting: At the participants home.
Line of therapy	1st line
Duration of study	Intervention + follow up: 5 weeks, follow-up 9 weeks later
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	A DSM-IV diagnosis of ADHD established with the parent version of the Diagnostic Interview Schedule for Children (DISC-IV) and an estimated full-scale IQ of 80 or above, as established with a short version of the Dutch Wechsler Intelligence Scale for Children-Revised (WISC-III).
Exclusion criteria	Inadequate mastery of the Dutch language by the child or both parents and use of atomoxetine.
Recruitment/selection of patients	Recruited from two outpatient mental health clinics in the Netherlands. All children, who were currently receiving treatment or who had received treatment for ADHD at these outpatient clinics, were sent an information letter about the research project. They were invited to attend an information session and were asked to participate.
Age, gender and ethnicity	Age - Mean (SD): 10 years (0.97). Gender (M:F): Not stated. . Ethnicity: Not stated.
Further population details	1. Age: School age children (6-13 years) (Aged 8-12). 2. Baseline symptom severity: Not applicable / Not stated / Unclear
Extra comments	. During treatment and during the wait-list period, the dose of methylphenidate was kept stable (no change of methylphenidate dose was allowed), and children and parents were not allowed to initiate or participate in other psychosocial treatments.
Indirectness of population	No indirectness
Interventions	(n=21) Intervention 1: Neurocognitive training - Other. The intervention is a training of three EFs, visuospatial WM, inhibition, and cognitive flexibility embedded in a game world. The game consists of 25 training sessions of approximately 40 minutes. Each session contains two blocks (of about 15 minutes) of the three training tasks. . Duration 5 weeks.. Concurrent medication/care: During treatment and during the wait list period, the dose of methylphenidate was kept stable. Further details: 1. Location of intervention: Home (The child plays the computer game at home.). 2. Mode of delivery: Mixed involving face to face contact (Each week a research assistant visits the child, and watches the child play a session, and answers possible questions about the game.). 3. Study design: Not applicable

	/ Not stated / Unclear (A pilot RCT). (n=22) Intervention 2: No treatment. Waiting list control group. . Duration 5 weeks. . Concurrent medication/care: During treatment and during the wait list period, the dose of methylphenidate was kept stable. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Not applicable / Not stated / Unclear (A pilot RCT).
Funding	Academic or government funding (Grants for this study were provided by the 'Verenigde Spaarbank Fonds [VERSUSBfonds] and the 'Stichting Kinderpostsegels'.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: EXECUTIVE FUNCTIONING versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at <3 months
- Actual outcome for Children and young people: DBDRS-P rating scale of inattention at Post-test, after 5 weeks; Group 1: mean 12.76 (SD 5.12); n=18, Group 2: mean 16.9 (SD 6.56); n=22
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Treatment - 17.47, Control - 16.86; Group 1 Number missing: 3, Reason: Did not complete at least 20 of the 25 sessions. ; Group 2 Number missing: 0, Reason: Not applicable.
- Actual outcome for Children and young people: DBDRS-T rating scale of inattention at Post-test, after 5 weeks; Group 1: mean 10.73 (SD 4.91); n=18, Group 2: mean 11.44 (SD 7.1); n=22
Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Treatment - 15.60, Control - 13.56; Group 1 Number missing: 3, Reason: Did not complete at least 20 of the 25 sessions. ; Group 2 Number missing: 0, Reason: Not applicable.

Protocol outcome 2: ADHD symptoms hyperactivity at <3 months
- Actual outcome for Children and young people: DBDRS-P rating scale of hyperactivity/impulsivity at Post-test, after 5 weeks; Group 1: mean 11.82 (SD 4.13); n=18, Group 2: mean 14.81 (SD 5.87); n=22
Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Treatment - 16.12, Control - 14.90; Group 1 Number missing: 3, Reason: Did not complete at least 20 of the 25 sessions. ; Group 2 Number missing: 0, Reason: Not applicable.
- Actual outcome for Children and young people: DBDRS-T rating scale of hyperactivity/impulsivity at Post-test, after 5 weeks; Group 1: mean 8.2 (SD 3.67); n=18, Group 2: mean 9.31 (SD 6.85); n=22
Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Treatment - 11.40, Control - 9.94; Group 1 Number missing: 3, Reason: Did not complete at least 20 of the 25 sessions. ; Group 2 Number missing: 0, Reason: Not applicable.

Protocol outcome 3: Function/behaviour at <3 months

- Actual outcome for Children and young people: Behaviour Rating Inventory of Executive Function (BRIEF) total score at Post-test, after 5 weeks; Group 1: mean 150.39 (SD 19.07); n=18, Group 2: mean 162.2 (SD 21.77); n=22 Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness ; Baseline details: Treatment - 163.56 , Control - 163.85; Group 1 Number missing: 3, Reason: Did not complete at least 20 of the 25 sessions. ; Group 2 Number missing: 0, Reason: Not applicable.	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Van Dongen-Boomsma 2013[470]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=41)
Countries and setting	Conducted in Netherlands
Line of therapy	Unclear
Duration of study	Intervention time: 4 months
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: Diagnosed according to the DSN-IV-TR criteria
Stratum	Children and young people
Subgroup analysis within study	Not applicable
Inclusion criteria	Children from 8-15 years old, with ADHD, estimated full scale intelligence of at least 80, qEEG deviated by at least 1.5 SDs from normative data, did not use psychoactive drugs or use a stable dose of psychostimulants or atomoxetine, no room for improvement, defined as a minimum score of 2 on a 4 point Likert rating scale for at least 6 items on ADHD-RS-IV.
Exclusion criteria	Involved in individual or group psychotherapy, used medication other than psychostimulants or atomoxetine, have a comorbid disorder other tan oppositional defiant disorder or any anxiety disorder, had a neurologic disorder and/or cardiovascular disease, participate in another clinical trial at the same time, had received EEG neurofeedback in the past, used drugs or alcohol.
Recruitment/selection of patients	Recruited from referrals to Karakter Child and Adolescent Psychiatry University Center in Nijmegen and from a magazine advertisement.
Age, gender and ethnicity	Age - Mean (SD): 10.5 (2.2): neurofeedback group, 10.7 (2.3) placebo group. Gender (M:F): 34 male, 7 female. . Ethnicity: White: 93%, Black: 7%
Further population details	1. Age: Not applicable / Not stated / Unclear (Age range 8-15 years old.). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (Not stated.).
Indirectness of population	No indirectness
Interventions	(n=22) Intervention 1: Neurofeedback. EEG neurofeedback. Thirty 45 minute sessions. The sessions occurred twice per week. Children could earn a 'present' by attending sessions. . Duration 30 sessions of treatment twice per week. Concurrent medication/care: None detailed. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear (Not stated). 2. Mode of delivery: Not applicable / Not stated / Unclear (Not stated). 3. Study design: Parallel trial (n=19) Intervention 2: Placebo - Sham. Placebo neurofeedback. Received simulated EEG signal. Thirty 45 minute sessions. Children could earn a 'present' by attending sessions. . Duration 30 sessions of treatment

	twice per week. Concurrent medication/care: None detailed. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear (Not stated.). 2. Mode of delivery: Not applicable / Not stated / Unclear (Not stated.). 3. Study design: Parallel trial
Funding	Academic or government funding (This study was part of BrainGain, a computer generated program funded by the Netherlands Organisation for Scientific Research (NWO))

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: NEUROFEEDBACK versus SHAM

Protocol outcome 1: ADHD symptoms total at <3 months
- Actual outcome for Children and young people: ADHD-RS-IV total (investigator rated) at After 30 sessions (2 per week); Group 1: mean 23.4 (SD 9.5); n=22, Group 2: mean 26.3 (SD 7.2); n=19
Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for Age, gender, race, IQ, medication, EEG arousal, ADHD subtype, Comorbidity, ADHD-RS-IV score via investigator and teacher, CGI-S and CGAS. ; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: ADHD-RS-IV inattention (investigator rated) at After 30 sessions (2 per week); Group 1: mean 13.2 (SD 6); n=22, Group 2: mean 13.8 (SD 3.1); n=19
Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for Age, gender, race, IQ, medication, EEG arousal, ADHD subtype, Comorbidity, ADHD-RS-IV score via investigator and teacher, CGI-S and CGAS. ; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: ADHD-RS-IV hyperactivity/impulsivity (investigator rated) at After 30 sessions (2 per week); Group 1: mean 10.2 (SD 5.3); n=22, Group 2: mean 12.5 (SD 6.3); n=19
Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for Age, gender, race, IQ, medication, EEG arousal, ADHD subtype, Comorbidity, ADHD-RS-IV score via investigator and teacher, CGI-S and CGAS. ; Group 1 Number missing: 0; Group 2 Number missing: 0
- Actual outcome for Children and young people: ADHD-RS-IV total (teacher rated) at After 30 sessions (2 per week); Group 1: mean 19.3 (SD 11.4); n=22, Group 2: mean 18.9 (SD 10.2); n=19
Risk of bias: All domain - High, Selection - Low, Blinding - Low, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for Age, gender, race, IQ, medication, EEG arousal, ADHD subtype, Comorbidity, ADHD-RS-IV score via investigator and teacher, CGI-S and CGAS. ; Group 1 Number missing: 1; Group 2 Number missing: 1
- Actual outcome for Children and young people: ADHD-RS-IV inattention (teacher rated) at After 30 sessions (2 per week); Group 1: mean 11.3 (SD 5.7); n=22, Group 2: mean 11 (SD 4.8); n=19
Risk of bias: All domain - High, Selection - Low, Blinding - Low, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for Age, gender, race, IQ, medication, EEG

arousal, ADHD subtype, Comorbidity, ADHD-RS-IV score via investigator and teacher, CGI-S and CGAS. ; Group 1 Number missing: 1; Group 2 Number missing: 1 - Actual outcome for Children and young people: ADHD-RS-IV hyperactivity/impulsivity (teacher rated) at After 30 sessions (2 per week); Group 1: mean 8 (SD 7); n=22, Group 2: mean 8 (SD 6.6); n=19 Risk of bias: All domain - High, Selection - Low, Blinding - Low, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for Age, gender, race, IQ, medication, EEG arousal, ADHD subtype, Comorbidity, ADHD-RS-IV score via investigator and teacher, CGI-S and CGAS. ; Group 1 Number missing: 1; Group 2 Number missing: 1 Protocol outcome 2: Serious adverse events at < 3 months - Actual outcome for Children and young people: Pittsburgh Side Effects Rating Scale (PSERS) at After 30 sessions (2 per week); Group 1: mean 4.1 (SD 4.3); n=22, Group 2: mean 3.9 (SD 4.2); n=19 Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for Age, gender, race, IQ, medication, EEG arousal, ADHD subtype, Comorbidity, ADHD-RS-IV score via investigator and teacher, CGI-S and CGAS. ; Group 1 Number missing: 0; Group 2 Number missing: 0	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study	Virta 2010[474]
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=29)
Countries and setting	Conducted in Finland
Line of therapy	Mixed line
Duration of study	Intervention time: 10 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: DSM IV criteria
Stratum	Adults
Subgroup analysis within study	Not applicable
Inclusion criteria	18-49 years old, ADHD diagnosis made by a physician. Deficits of attention, executive function, working memory.
Exclusion criteria	Diagnosis of psychosis, severe depression, paranoia. Current alcohol dependence or drug use. Disability pension. Participation in previous group rehabilitation study. Current psychologic rehabilitation. Medication stable for 3 months.
Recruitment/selection of patients	Recruited via ADHD magazine, ADHD discussion forum, local physicians or ADHD clinics.
Age, gender and ethnicity	Age - Mean (range): CBT: 38 (25-49), CT: 32 (21-44), Control: 34 (22-49). Gender (M:F): Male: 14, Female: 15. Ethnicity: Not detailed
Further population details	1. Age: Not applicable / Not stated / Unclear (21-49 years old.). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (Mean severity (CGI) was CBT: 3.8, CT: 3.4, Control: 3.4. Indicating a mild or moderate severity on average.).
Indirectness of population	No indirectness
Interventions	(n=10) Intervention 1: Cognitive behavioural therapies - CBT. Themes selected to address main symptoms set out in DSM-IV criteria. 10 weekly sessions led by a psychologist experienced in ADHD and training in CBT. Sessions semi-structured to allow individual treatment. Participants assigned homework. . Duration 10 weeks. Concurrent medication/care: 5 of 10 participants took methylphenidate. 1 participant ceased taking medication during rehabilitation and one added short acting methylphenidate to long acting methylphenidate. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear (Not stated.). 2. Mode of delivery: Face to face (1 on 1) (CBT). 3. Study design: Parallel trial (n=9) Intervention 2: Neurocognitive training - Other. Cognitive training: training of attention, executive functions and working memory. 1 hour training on a computer. 20 sessions, twice per week, led by a psychologist. Duration 10 weeks. Concurrent medication/care: 5 of 9 participants took medication, 4 on

	methylphenidate and 1 on modafinil. 1 participant ceased taking methylphenidate and 1 changed to a shorter duration methylphenidate. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear (Not stated). 2. Mode of delivery: Not applicable / Not stated / Unclear (Not stated). 3. Study design: Parallel trial (n=10) Intervention 3: No treatment. Not detailed. Duration 10 weeks. Concurrent medication/care: 7 of 10 participants were on medication for ADHD. 5 on methylphenidate, 1 on modafinil, 1 on atomoxetine. Further details: 1. Location of intervention: Not applicable / Not stated / Unclear (No treatment). 2. Mode of delivery: Not applicable / Not stated / Unclear (No treatment). 3. Study design: Parallel trial
Funding	Academic or government funding (Study supported by RAY, Finland's Slot Machine Association. Manuscript preparation funding from Rinnekoti Research Foundation.)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: CBT versus COGNITIVE TRAINING

Protocol outcome 1: Quality of life at <3 months
- Actual outcome for Adults: Q-LES-Q general at 10 weeks; Group 1: mean 60.9 (SD 14.5); n=7, Group 2: mean 65.2 (SD 14.4); n=8
Risk of bias: All domain - Very high, Selection - Very high, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness; Baseline details: Groups similar for age, education, ADHD medication, antidepressive medication, mean Wurs score, ADHD severity. Groups different for gender, psychiatric co-morbidity, in work or study. The CBT group baseline mean score of 55.7, CT group baseline mean score of 60.3. ; Group 1 Number missing: 3, Reason: Not stated; Group 2 Number missing: 1, Reason: Not stated

Protocol outcome 2: ADHD symptoms total at <3 months
- Actual outcome for Adults: Improved (reduced self-reported symptoms in BADDS, SCL-16, ASRS) at 10 weeks; Group 1: 6/10, Group 2: 2/9
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for age, education, ADHD medication, antidepressive medication, mean Wurs score, ADHD severity. Groups different for gender, psychiatric co-morbidity, in work or study. ; Group 1 Number missing: ; Group 2 Number missing:

Protocol outcome 3: CGI-I (much improved or very much improved) at <3 months
- Actual outcome for Adults: CGI improved (investigator rated) at 10 weeks; Group 1: 7/10, Group 2: 2/9
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for age, education, ADHD medication, antidepressive medication, mean Wurs score, ADHD severity. Groups different for gender, psychiatric co-morbidity, in work or study. ; Group 1 Number missing: ; Group 2 Number missing:

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: CBT versus NO TREATMENT

Protocol outcome 1: Quality of life at <3 months
- Actual outcome for Adults: Q-LES-Q general at 10 weeks; Group 1: mean 60.9 (SD 14.5); n=7, Group 2: mean 59.2 (SD 21); n=6
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for age, education, ADHD medication, antidepressive medication, mean Wurs score, ADHD severity. Groups different for gender, psychiatric co-morbidity, in work or study. ; Group 1 Number missing: 3, Reason: Not stated; Group 2 Number missing: 4, Reason: Not stated

Protocol outcome 2: ADHD symptoms total at <3 months
- Actual outcome for Adults: Improved (reduced self-reported symptoms in BADDS, SCL-16, ASRS) at 10 weeks; Group 1: 6/10, Group 2: 2/10
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for age, education, ADHD medication, antidepressive medication, mean Wurs score, ADHD severity. Groups different for gender, psychiatric co-morbidity, in work or study. ; Group 1 Number missing: ; Group 2 Number missing:

Protocol outcome 3: CGI-I (much improved or very much improved) at <3 months
- Actual outcome for Adults: CGI improved (investigator rated) at 10 weeks; Group 1: 7/10, Group 2: 3/10
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for age, education, ADHD medication, antidepressive medication, mean Wurs score, ADHD severity. Groups different for gender, psychiatric co-morbidity, in work or study. ; Group 1 Number missing: ; Group 2 Number missing:

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: COGNITIVE TRAINING versus NO TREATMENT

Protocol outcome 1: Quality of life at <3 months
- Actual outcome for Adults: Q-LES-Q general at 10 weeks; Group 1: mean 65.2 (SD 14.4); n=8, Group 2: mean 59.2 (SD 21); n=6
Risk of bias: All domain - Very high, Selection - Very high, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness; Baseline details: Groups similar for age, education, ADHD medication, antidepressive medication, mean Wurs score, ADHD severity. Groups different for gender, psychiatric co-morbidity, in work or study. The CT group baseline mean score of 60.3, no treatment group baseline mean score of 54.4.; Group 1 Number missing: 1, Reason: Not stated; Group 2 Number missing: 4, Reason: Not stated

Protocol outcome 2: ADHD symptoms total at <3 months
- Actual outcome for Adults: Improved (reduced self-reported symptoms in BADDS, SCL-16, ASRS) at 10 weeks; Group 1: 2/9, Group 2: 2/10
Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for age, education, ADHD medication, antidepressive medication, mean Wurs score, ADHD severity. Groups different for gender, psychiatric co-morbidity, in work or study. ; Group 1 Number missing: ; Group 2 Number missing:

Protocol outcome 3: CGI-I (much improved or very much improved) at <3 months - Actual outcome for Adults: CGI improved (investigator rated) at 10 weeks; Group 1: 2/9, Group 2: 3/10 Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness ; Baseline details: Groups similar for age, education, ADHD medication, antidepressive medication, mean Wurs score, ADHD severity. Groups different for gender, psychiatric co-morbidity, in work or study. ; Group 1 Number missing: ; Group 2 Number missing:	
Protocol outcomes not reported by the study	Quality of life at >6 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms inattention at >6 months; ADHD symptoms hyperactivity at <3 months; ADHD symptoms hyperactivity at >6 months; CGI-I (much improved or very much improved) at >6 months; Function/behaviour at <3 months; Function/behaviour at >6 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

Study (subsidiary papers)	Webster-Stratton 2011[484] (Webster-Stratton 2013[483])
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=99)
Countries and setting	Conducted in USA; Setting: Unclear
Line of therapy	1st line
Duration of study	Intervention time: 26 weeks (the 1 year follow-up paper only includes the outcomes for the intervention group)
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: Study based on a diagnosis of hyperactive-impulsive or combined subtype ADHD on the Diagnostic Interview Schedule for Children.
Stratum	Children and young people:
Subgroup analysis within study	Not applicable
Inclusion criteria	Children that met DSM–IV criteria for hyperactive-impulsive or combined subtype of ADHD. Taking no medication, length of intervention, no autism diagnosis.
Exclusion criteria	Not meeting inclusion criteria
Recruitment/selection of patients	Participants were recruited through teachers and school counselors at local preschools and elementary schools, paediatricians' offices, mental health professionals, and community parent publications.
Age, gender and ethnicity	Age - Mean (SD): 5.35 (0.67) years. Gender (M:F): 75/24. Ethnicity: 27% belongs to a minority group
Further population details	1. Age: Preschool children (0-6 years) (4–6 years of age). 2. Baseline symptom severity: Not applicable / Not stated / Unclear (Conners' Rating Scale–Revised (Intervention versus Wait list): Inattentive 70.5 (12.6) / 68.2 (13.4); CPRS–R Hyperactive 74.3 (8.6) / 74.3 (8.9)).
Indirectness of population	No indirectness
Interventions	(n=49) Intervention 1: Carer and family training programmes - Programmes including the person with ADHD. Combination of the parent and child program (Incredible Years (IY)) The IY parent training intervention consisted of 20 weekly, 2-hr sessions conducted with six families per group. The newest version of the basic IY preschool curriculum was offered. This updated version of the program has new curriculum material focusing on academic, persistence, social and emotional coaching, establishing predictable household routines and schedules, emotion regulation strategies, and teaching

	children to problem solve. This version of the program includes new vignettes showing children with ADHD in order to enhance parental understanding of how to respond effectively to these children and understand their developmental levels and temperament. Additional sessions from the IY advance parent curriculum included problem solving between adults and with teachers regarding child behavior plans, and strategies to build family interpersonal support, reduce depression, and manage anger. The IY Dinosaur training program was held at the same time as the parent program. Program topics included following group rules, identifying and articulating feelings, problem solving, anger management, friendship skills, and teamwork. Each 2-hr session consisted of three short circle times and three to four planned activities to reinforce concepts presented in circle time. Therapists used coaching methods during unstructured play times to encourage appropriate peer interactions and targeted social and emotional skills. Duration 26 weeks . Concurrent medication/care: No medication during study Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Mixed involving face to face contact 3. Study design: Parallel trial (n=50) Intervention 2: No treatment. Waitlist. Duration 26 weeks. Concurrent medication/care: No medication during study Further details: 1. Location of intervention: Not applicable / Not stated / Unclear 2. Mode of delivery: Not applicable / Not stated / Unclear 3. Study design: Parallel trial
Funding	Academic or government funding (This research was supported by grant # MH067192 from the National Institute of Mental Health

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PROGRAMMES INCLUDING THE PERSON WITH ADHD versus NO TREATMENT

Protocol outcome 1: ADHD symptoms inattention at >6 months
- Actual outcome for Children and young people: Conners' Teacher Rating Scale–Revised (CTRS-R) Inattentive

at 20 weeks PT; Group 1: mean 59.7 (SD 13.8); n=48, Group 2: mean 57.5 (SD 13.2); n=48; CTRS-R Inattentive Unclear Top=High is poor outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and parents), Ethnicity, Marital status, Education parents, Ever imprisoned, Social Economic status, IQ child, Comorbid behavioral disorders.

; Blinding details: RCT's into psychological interventions cannot be blinded. Some children received additional therapy , there were no significant differences between conditions on these variables.; Group 1 Number missing: 1; Group 2 Number missing: 2

- Actual outcome for Children and young people: Conners' Parent Rating Scale–Revised (CPRS–R) Inattentive

at 20 weeks PT; Group 1: mean 64.65 (SD 12.6); n=48, Group 2: mean 66.25 (SD 12.25); n=48; Conners' Parent Rating Scale–Revised (CPRS–R) Inattentive Unclear Top=High is poor outcome; Comments: Mean score and SD of Father and Mother
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and parents), Ethnicity, Marital status, Education parents, Ever imprisoned, Social Economic status, IQ child, Comorbid behavioral disorders.

; Blinding details: RCT's into psychological interventions cannot be blinded. Some children received additional therapy , there were no significant differences between conditions on these variables.; Group 1 Number missing: 1; Group 2 Number missing: 2

Protocol outcome 2: ADHD symptoms hyperactivity at >6 months
- Actual outcome for Children and young people: Conners' Teacher Rating Scale–Revised (CTRS-R) Hyperactive

at 20 weeks PT; Group 1: mean 61.2 (SD 10.9); n=48, Group 2: mean 65.2 (SD 10); n=48; CTRS-R Hyperactive Unclear Top=High is poor outcome
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and parents), Ethnicity, Marital status, Education parents, Ever imprisoned, Social Economic status, IQ child, Comorbid behavioral disorders.

; Blinding details: RCT's into psychological interventions cannot be blinded. Some children received additional therapy , there were no significant differences between conditions on these variables.; Group 1 Number missing: 1; Group 2 Number missing: 2
- Actual outcome for Children and young people: Conners' Parent Rating Scale–Revised (CPRS–R) Hyperactive

at 20 weeks PT; Group 1: mean 64.45 (SD 8.52877); n=48, Group 2: mean 70.15 (SD 10.7641); n=48; Conners' Parent Rating Scale–Revised (CPRS–R) Hyperactive Unclear Top=High is poor outcome; Comments: Mean and SD score from Father and mother
Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and parents), Ethnicity, Marital status, Education parents, Ever imprisoned, Social Economic status, IQ child, Comorbid behavioral disorders.

; Blinding details: RCT's into psychological interventions cannot be blinded. Some children received additional therapy , there were no significant differences between conditions on these variables.; Group 1 Number missing: 1; Group 2 Number missing: 2

Protocol outcome 3: Function/behaviour at >6 months - Actual outcome for Children and young people: Conners' Teacher Rating Scale–Revised (CTRS-R) Oppositional at 20 weeks PT; Group 1: mean 62.5 (SD 12.6); n=48, Group 2: mean 63.9 (SD 15); n=48; CTRS-R Oppositional Unclear Top=High is poor outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and parents), Ethnicity, Marital status, Education parents, Ever imprisoned, Social Economic status, IQ child, Comorbid behavioral disorders. ; Blinding details: RCT's into psychological interventions cannot be blinded. Some children received additional therapy , there were no significant differences between conditions on these variables.; Group 1 Number missing: 1; Group 2 Number missing: 2 - Actual outcome for Children and young people: Conners' Parent Rating Scale–Revised (CPRS–R) Oppositional at 20 weeks PT; Group 1: mean 58.45 (SD 9.92472); n=48, Group 2: mean 61.25 (SD 12.2868); n=48; Conners' Parent Rating Scale–Revised (CPRS–R) Oppositional Unclear Top=High is poor outcome; Comments: Mean and SD of Father and Mother Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and parents), Ethnicity, Marital status, Education parents, Ever imprisoned, Social Economic status, IQ child, Comorbid behavioral disorders. ; Blinding details: RCT's into psychological interventions cannot be blinded. Some children received additional therapy , there were no significant differences between conditions on these variables.; Group 1 Number missing: 1; Group 2 Number missing: 2 - Actual outcome for Children and young people: Eyberg Child Behavior Inventory (ECBI), subscale number of conduct problems at 20 weeks PT; Group 1: mean 13.7 (SD 1); n=48, Group 2: mean 19.7 (SD 1); n=48; Eyberg Child Behavior Inventory (ECBI), subscale number of conduct problems 0-36 Top=High is poor outcome Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness ; Baseline details: Sex, Age (child and parents), Ethnicity, Marital status, Education parents, Ever imprisoned, Social Economic status, IQ child, Comorbid behavioral disorders. ; Blinding details: RCT's into psychological interventions cannot be blinded. Some children received additional therapy , there were no significant differences between conditions on these variables.; Group 1 Number missing: 1; Group 2 Number missing: 2	
Protocol outcomes not reported by the study	Quality of life at <3 months; Quality of life at >6 months; ADHD symptoms total at <3 months; ADHD symptoms total at >6 months; ADHD symptoms inattention at <3 months; ADHD symptoms hyperactivity at <3 months; CGI-I (much improved or very much improved) at <3 months; CGI-I (much improved or very

	much improved) at >6 months; Function/behaviour at <3 months; Discontinuation due to adverse events at <3 months; Discontinuation due to adverse events at >6 months; Serious adverse events at < 3 months; Serious adverse events at > 6 months; Numeracy outcomes at < 3 months; Numeracy outcomes at > 6 months; Literacy outcomes at < 3 months; Literacy outcomes at > 6 months; Academic outcome at < 3 months; Academic outcome at > 6 months; Emotional dysregulation at >6 months; Emotional dysregulation at < 3 months

D.2 Impact of adverse events associated with non-pharmacological treatments of ADHD

Study (ref id)	Smith 2014[422]
Aim	Understanding the reasons of low uptake and completion of parent interventions for ADHD
Population	19 practitioners running services for preschool children with ADHD, and 13 parents of children with ADHD (pre-schoolers)
Setting	UK
Study design	Focus groups
Methods and analysis	Semi-structured focus groups using an interview schedule based on themes from a qualitative literature synthesis. Analysed using thematic analysis
Findings	Parents reported feeling isolated due to group interventions, where they could not relate to the behaviour or experiences of other parents
Limitations and applicability of evidence	Moderate limitations related to the richness of the data

Appendix E: Forest plots for non-pharmacological efficacy

E.1 Children under the age of 5

E.1.1 Family training versus usual care

Figure 3: ADHD symptoms total, Parent (PT, 8-15 weeks, Conners, PACS, higher is poorer)

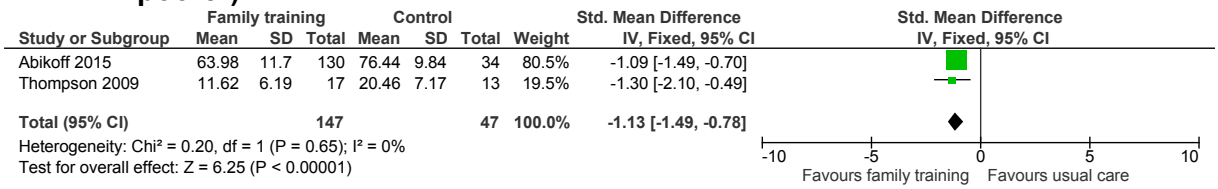


Figure 4: ADHD symptoms total, Parent (FU, 15 weeks, PACS, unclear range, higher is poorer)

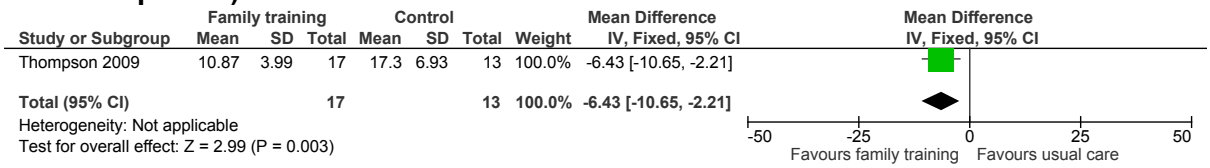


Figure 5: ADHD symptoms total, Teacher (PT, 8 weeks, Conners (0-84), higher is poorer)

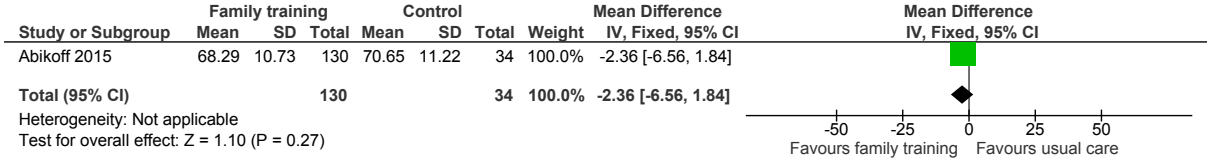


Figure 6: ADHD symptoms total, Clinician (PT, 8 weeks, ADHD-Rating Scale-IV, unclear range, higher is poorer)

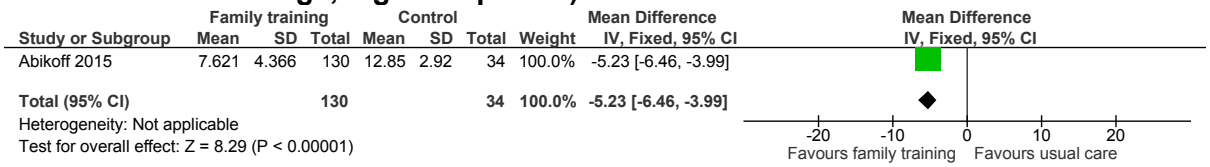


Figure 7: ADHD symptoms inattention, Parent (PT, 8-20 weeks, Conners, DBRS, higher is poorer)

Study or Subgroup	Family training Mean	SD	Total	Control Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Abikoff 2015	62.08	11.69	130	75.31	10.38	34	40.4%	-1.15 [-1.55, -0.75]
Bor 2002	15.95	6.096	36	18.33	5.62	27	35.3%	-0.40 [-0.90, 0.11]
Matos 2009	9.9	4.3	20	15.83	6.89	12	24.4%	-1.07 [-1.84, -0.30]
Total (95% CI)			**186**			**73**	**100.0%**	**-0.87 [-1.38, -0.35]**

Heterogeneity: Tau² = 0.13; Chi² = 5.52, df = 2 (P = 0.06); I² = 64%
Test for overall effect: Z = 3.30 (P = 0.0010)

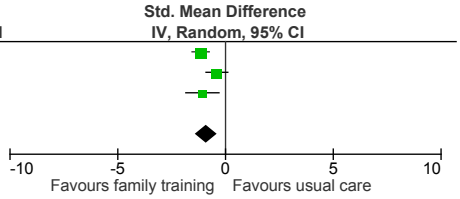


Figure 8: ADHD symptoms inattention, Clinician (PT, 8 weeks, ADHD-Rating Scale-IV, unclear range, higher is poorer)

Study or Subgroup	Family training Mean	SD	Total	Control Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Abikoff 2015	3.211	2.531	130	6.12	2.25	34	100.0%	-2.91 [-3.78, -2.04]
Total (95% CI)			**130**			**34**	**100.0%**	**-2.91 [-3.78, -2.04]**

Heterogeneity: Not applicable
Test for overall effect: Z = 6.53 (P < 0.00001)

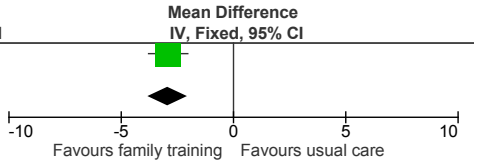


Figure 9: ADHD symptoms inattention, Teacher (PT, 8 weeks, Conners (0-84), higher is poorer)

Study or Subgroup	Family training Mean	SD	Total	Control Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Abikoff 2015	65.12	12.26	130	68.22	11.81	34	100.0%	-3.10 [-7.59, 1.39]
Total (95% CI)			**130**			**34**	**100.0%**	**-3.10 [-7.59, 1.39]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.35 (P = 0.18)

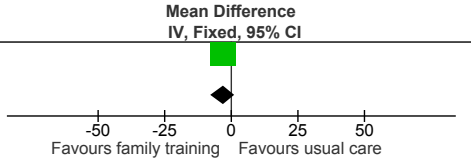


Figure 10: ADHD symptoms hyperactivity, Parent (PT, 8-20 weeks, Conners, DBRS, higher is poorer)

Study or Subgroup	Family training Mean	SD	Total	Control Mean	SD	Total	Weight	Std. Mean Difference IV, Fixed, 95% CI
Abikoff 2015	63.51	11.28	130	74.45	10.67	34	81.2%	-0.98 [-1.37, -0.58]
Matos 2009	13.89	5.02	20	20.92	3.7	12	18.8%	-1.50 [-2.31, -0.68]
Total (95% CI)			**150**			**46**	**100.0%**	**-1.07 [-1.43, -0.72]**

Heterogeneity: Chi² = 1.27, df = 1 (P = 0.26); I² = 21%
Test for overall effect: Z = 5.95 (P < 0.00001)

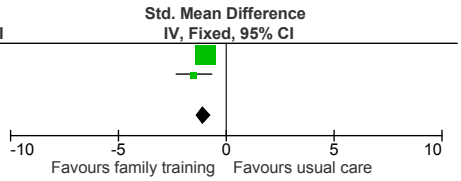


Figure 11: ADHD symptoms hyperactivity, Teacher (PT, 8 weeks, Conners (0-84), higher is poorer)

Study or Subgroup	Family training Mean	SD	Total	Control Mean	SD	Total	Weight	Mean Difference IV, Random, 95% CI
Abikoff 2015	67.95	10.77	130	70.26	11.98	34	100.0%	-2.31 [-6.74, 2.12]
Total (95% CI)			**130**			**34**	**100.0%**	**-2.31 [-6.74, 2.12]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.02 (P = 0.31)

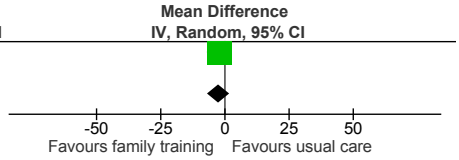


Figure 12: ADHD symptoms hyperactivity, Clinician (PT, 8 weeks, ADHD-Rating Scale-IV, unclear range, higher is poorer)

Study or Subgroup	Family training Mean	SD	Total	Control Mean	SD	Total	Weight	Mean Difference IV, Random, 95% CI
Abikoff 2015	4.41	2.567	130	6.73	1.68	34	100.0%	-2.32 [-3.04, -1.60]
Total (95% CI)			**130**			**34**	**100.0%**	**-2.32 [-3.04, -1.60]**

Heterogeneity: Not applicable
Test for overall effect: Z = 6.34 (P < 0.00001)

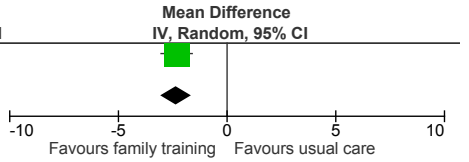
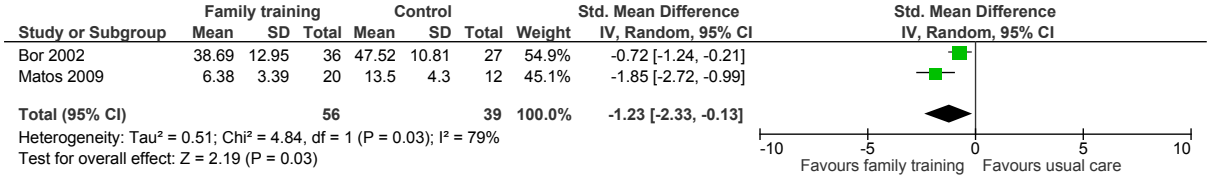


Figure 13: Function/behaviour, Parent (PT, 15-20 weeks, ECBI, DBRS, higher is poorer)



E.2 Children and young people between the age of 5 and 18

E.2.1 Parent/family training versus waitlist/usual care

Figure 14: ADHD symptoms total (7 - 10 weeks PT, parental account of childhood symptoms, SNAP, DBD, high is poor outcome)

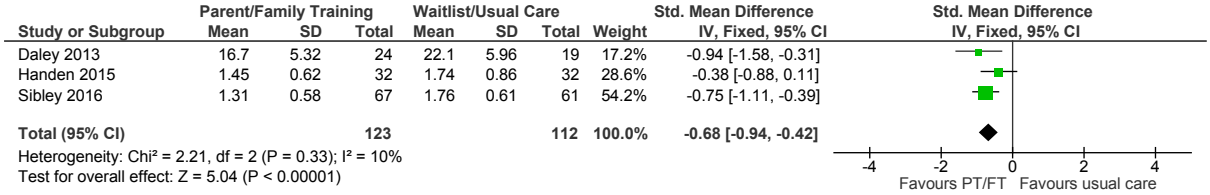


Figure 15: ADHD symptoms total (10 weeks PT, teacher rated SNAP, DBD, high is poor outcome)

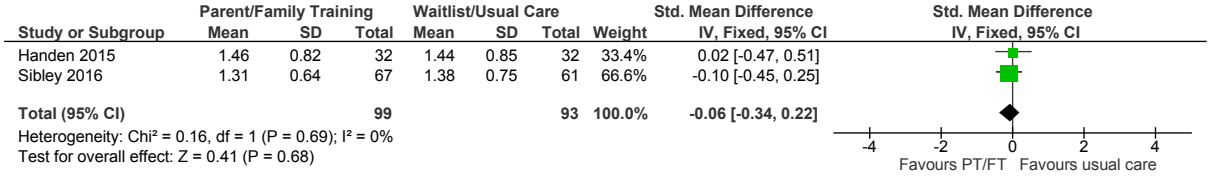


Figure 16: ADHD symptoms total (3-6 months FU, parent rated ADHD-C Rating Scale, DBD, high is poor outcome)

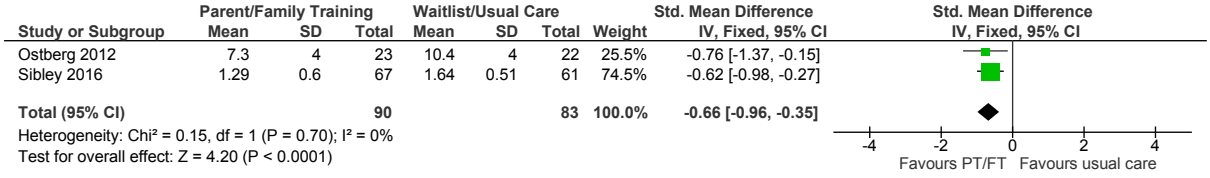


Figure 17: ADHD symptoms total (5 months PT, Conners parent rating scale, 0-84, high is poor outcome)

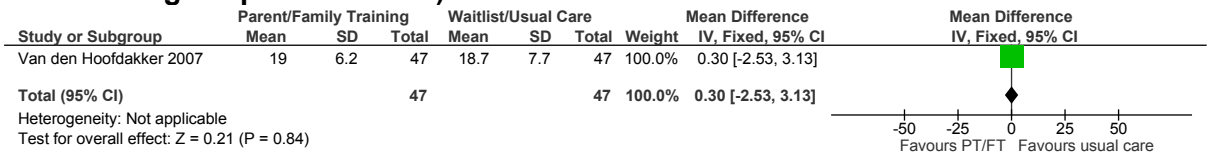


Figure 18: ADHD symptoms total (6 months FU, teacher rated DBD, 0-3, high is poor outcome)

Study or Subgroup	Favours PT/FT Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Sibley 2016	1.26	0.72	67	1.24	0.72	61	100.0%	0.02 [-0.23, 0.27]
Total (95% CI)			**67**			**61**	**100.0%**	**0.02 [-0.23, 0.27]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.16 (P = 0.88)

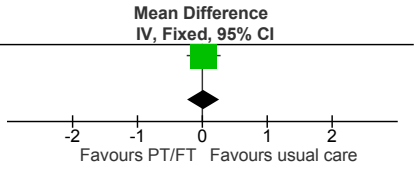


Figure 19: ADHD symptoms inattention, Teacher (PT, 20 weeks, Conners (0-84), higher is poorer)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Webster-stratton 2011	59.7	13.8	48	57.5	13.2	48	100.0%	2.20 [-3.20, 7.60]
Total (95% CI)			**48**			**48**	**100.0%**	**2.20 [-3.20, 7.60]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.80 (P = 0.42)

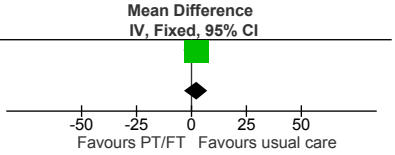


Figure 20: ADHD symptoms inattention, Parent (PT, 20 weeks, Conners (0-84), higher is poorer)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Webster-stratton 2011	64.65	12.6	48	66.25	12.25	48	100.0%	-1.60 [-6.57, 3.37]
Total (95% CI)			**48**			**48**	**100.0%**	**-1.60 [-6.57, 3.37]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.63 (P = 0.53)

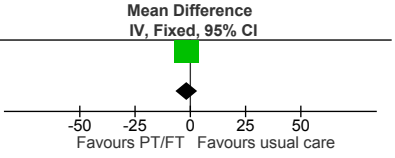


Figure 21: ADHD symptoms inattention, Parent (PT, 7-20 weeks, DBD, DuPaul, Conners , DBRS , higher is poorer)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Sibley 2013	1.2	0.53	18	1.9	0.72	18	12.5%	-1.08 [-1.79, -0.38]
Daley 2013	17.08	4.83	24	21.26	5.26	19	14.3%	-0.82 [-1.45, -0.19]
Pfiffner 2014	3.152	2.604	147	4.7	2.74	47	23.9%	-0.58 [-0.92, -0.25]
Hoath 2002	8.11	2.37	9	9.18	2.18	11	9.1%	-0.45 [-1.35, 0.44]
Handen 2015	1.45	0.71	32	1.79	0.84	32	18.1%	-0.43 [-0.93, 0.06]
Chacko 2009	1.73	0.69	80	1.71	0.65	40	22.1%	0.03 [-0.35, 0.41]
Total (95% CI)			**310**			**167**	**100.0%**	**-0.50 [-0.82, -0.19]**

Heterogeneity: Tau² = 0.08; Chi² = 11.16, df = 5 (P = 0.05); I² = 55%
Test for overall effect: Z = 3.11 (P = 0.002)

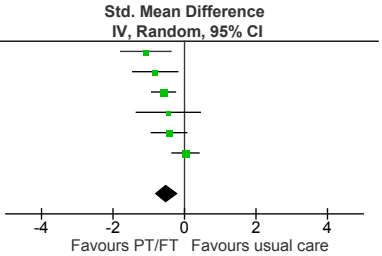


Figure 22: ADHD symptoms inattention, Teacher (PT, 8-20 weeks, Conners , higher is poorer)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Std. Mean Difference IV, Fixed, 95% CI
Handen 2015	1.64	0.82	32	1.63	0.98	32	28.4%	0.01 [-0.48, 0.50]
Hoath 2002	4.43	2.7	9	6.91	4.48	11	8.3%	-0.63 [-1.53, 0.28]
Pfiffner 2014	3.546	2.636	145	5	2.8	49	63.3%	-0.54 [-0.87, -0.21]
Total (95% CI)			**186**			**92**	**100.0%**	**-0.39 [-0.65, -0.13]**

Heterogeneity: Chi² = 3.64, df = 2 (P = 0.16); I² = 45%
Test for overall effect: Z = 2.93 (P = 0.003)

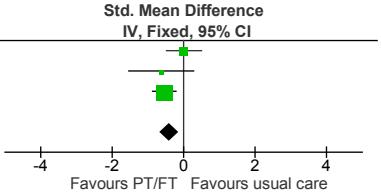


Figure 23: ADHD symptoms inattention (12 weeks PT, parent & teacher rated Children symptom inventory, 0-27, high is poor outcome)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Pfiffner 2007	3	2.1	36	5.1	2.5	30	100.0%	-2.10 [-3.23, -0.97]
Total (95% CI)			**36**			**30**	**100.0%**	**-2.10 [-3.23, -0.97]**

Heterogeneity: Not applicable
Test for overall effect: Z = 3.65 (P = 0.0003)

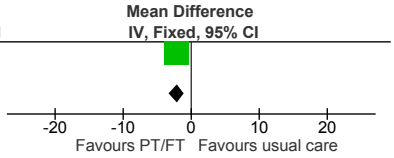


Figure 24: ADHD symptoms inattention (3-5 month FU, parent & teacher rated Children symptom inventory, 0-27, high is poor outcome)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Pfiffner 2007	3.2	1.9	29	4.4	2.4	25	100.0%	-1.20 [-2.37, -0.03]
Total (95% CI)			**29**			**25**	**100.0%**	**-1.20 [-2.37, -0.03]**

Heterogeneity: Not applicable
Test for overall effect: Z = 2.01 (P = 0.04)

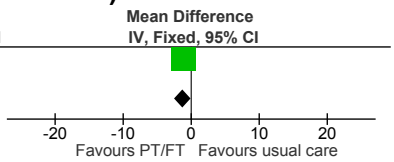


Figure 25: ADHD symptoms inattention (5-7 months FU, teacher rated Children symptom inventory, DBD, high is poor outcome)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Std. Mean Difference IV, Fixed, 95% CI
Pfiffner 2014	3.952	3.439	147	4.2	2.8	49	80.4%	-0.08 [-0.40, 0.25]
Sibley 2013	1.72	0.73	18	1.52	1.15	18	19.6%	0.20 [-0.45, 0.86]
Total (95% CI)			**165**			**67**	**100.0%**	**-0.02 [-0.31, 0.27]**

Heterogeneity: Chi² = 0.56, df = 1 (P = 0.46); I² = 0%
Test for overall effect: Z = 0.14 (P = 0.89)

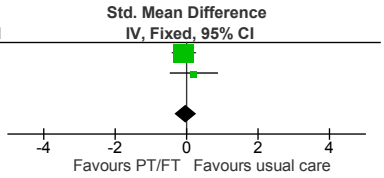


Figure 26: ADHD symptoms inattention (3-7 months FU, parent rated DBD rating scale, ADHD-IA, child symptom inventory, high is poor outcome)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Sibley 2013	1.09	0.54	18	1.75	0.71	18	17.9%	-1.02 [-1.72, -0.32]
Pfiffner 2014	2.703	3.146	147	4.1	2.74	47	31.5%	-0.46 [-0.79, -0.12]
Ostberg 2012	4	2.2	23	5.9	4	22	21.1%	-0.58 [-1.18, 0.02]
Chacko 2009	1.84	0.57	80	1.82	0.57	40	29.5%	0.03 [-0.34, 0.41]
Total (95% CI)			**268**			**127**	**100.0%**	**-0.44 [-0.84, -0.04]**

Heterogeneity: Tau² = 0.10; Chi² = 8.45, df = 3 (P = 0.04); I² = 65%
Test for overall effect: Z = 2.17 (P = 0.03)

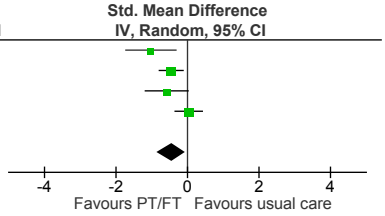


Figure 27: ADHD symptoms hyperactivity, Teacher (PT, 20 weeks, Conners (0-84), higher is poorer)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Webster-stratton 2011	61.2	10.9	48	65.2	10	48	100.0%	-4.00 [-8.18, 0.18]
Total (95% CI)			**48**			**48**	**100.0%**	**-4.00 [-8.18, 0.18]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.87 (P = 0.06)

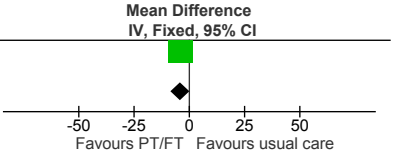


Figure 28: ADHD symptoms hyperactivity, Parent (PT, 20 weeks, Conners (0-84), higher is poorer)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Webster-stratton 2011	64.45	8.528	48	70.15	10.764	48	100.0%	-5.70 [-9.58, -1.82]
Total (95% CI)			**48**			**48**	**100.0%**	**-5.70 [-9.58, -1.82]**

Heterogeneity: Not applicable
Test for overall effect: Z = 2.88 (P = 0.004)

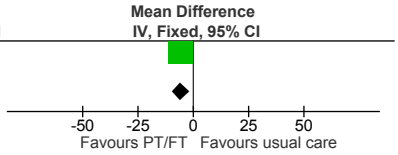


Figure 29: ADHD symptoms hyperactivity, Parent (PT, 7-20 weeks, DBD, Du Paul, Conners, DBRS , higher is poorer)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Chacko 2009	1.64	0.64	80	1.72	0.56	40	29.0%	-0.13 [-0.51, 0.25]
Daley 2013	17.03	4.84	24	23.26	5.98	19	17.8%	-1.14 [-1.79, -0.49]
Handen 2015	1.44	0.72	32	1.69	0.97	32	23.8%	-0.29 [-0.78, 0.20]
Hoath 2002	6.33	1.58	9	7.36	1.63	11	11.6%	-0.61 [-1.52, 0.29]
Sibley 2013	1.08	0.55	18	1.15	0.61	18	17.8%	-0.12 [-0.77, 0.54]
Total (95% CI)			**163**			**120**	**100.0%**	**-0.40 [-0.76, -0.04]**

Heterogeneity: Tau² = 0.08; Chi² = 7.77, df = 4 (P = 0.10); I² = 49%
Test for overall effect: Z = 2.18 (P = 0.03)

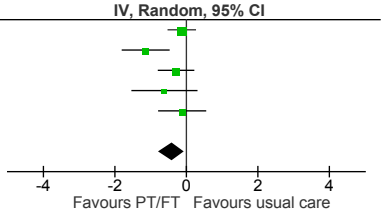


Figure 30: ADHD symptoms hyperactivity, Teacher (PT, 8-20 weeks, Conners, higher is poorer)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Std. Mean Difference IV, Fixed, 95% CI
Handen 2015	1.28	0.99	32	1.25	0.92	32	87.0%	0.03 [-0.46, 0.52]
Hoath 2002	3.43	1.13	9	7.36	1.63	11	13.0%	-2.63 [-3.90, -1.37]
Total (95% CI)			**41**			**43**	**100.0%**	**-0.32 [-0.77, 0.14]**

Heterogeneity: Chi² = 14.77, df = 1 (P = 0.0001); I² = 93%
Test for overall effect: Z = 1.35 (P = 0.18)

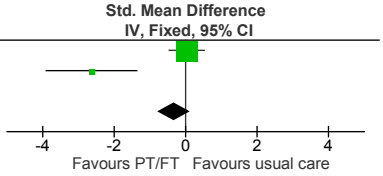


Figure 31: ADHD symptoms hyperactivity/Impulsivity (3-6 months FU, parent rated DBD rating scale, ADHD-HI, , high is poor outcome)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Std. Mean Difference IV, Fixed, 95% CI
Chacko 2009	1.76	0.54	80	1.85	0.48	40	57.9%	-0.17 [-0.55, 0.21]
Ostberg 2012	3.3	2.3	23	4.8	2.3	22	23.2%	-0.64 [-1.24, -0.04]
Sibley 2013	0.64	0.41	18	0.9	0.58	18	18.9%	-0.51 [-1.17, 0.16]
Total (95% CI)			**121**			**80**	**100.0%**	**-0.34 [-0.63, -0.05]**

Heterogeneity: Chi² = 1.96, df = 2 (P = 0.38); I² = 0%
Test for overall effect: Z = 2.33 (P = 0.02)

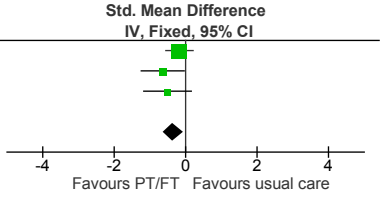


Figure 32: ADHD symptoms hyperactivity/Impulsivity (6 months FU, teacher rated disruptive behaviour disorder rating scale, 0-3, high is poor outcome)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Sibley 2013	1.32	0.82	18	0.6	0.87	18	100.0%	0.72 [0.17, 1.27]
Total (95% CI)			**18**			**18**	**100.0%**	**0.72 [0.17, 1.27]**

Heterogeneity: Not applicable
Test for overall effect: Z = 2.56 (P = 0.01)

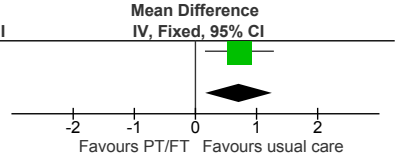


Figure 33: CGI-I ~ much improved or very much improved (10 weeks PT, investigator rated, 1-7)

Study or Subgroup	Parent/Family Training Events	Total	Waitlist/Usual Care Events	Total	Weight	Risk Ratio M-H, Fixed, 95% CI
Handen 2015	9	32	6	32	100.0%	1.50 [0.60, 3.72]
Total (95% CI)		**32**		**32**	**100.0%**	**1.50 [0.60, 3.72]**
Total events	9		6			

Heterogeneity: Not applicable
Test for overall effect: Z = 0.87 (P = 0.38)

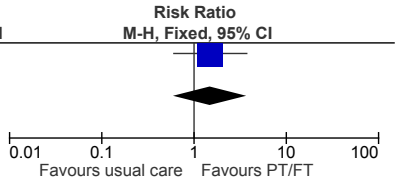


Figure 34: Function/behaviour, Parent (PT, 20 weeks, Conners, (0-84), higher is poorer)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Webster-stratton 2011	58.45	9.924	48	61.25	12.286	48	100.0%	-2.80 [-7.27, 1.67]
Total (95% CI)			**48**			**48**	**100.0%**	**-2.80 [-7.27, 1.67]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.23 (P = 0.22)

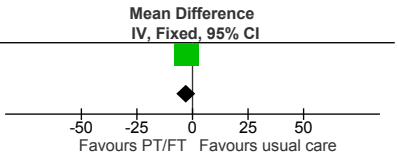


Figure 35: Function/behaviour, Teacher (PT, 8-20 weeks, Conners, SNAP, CBQ , higher is poorer)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Std. Mean Difference IV, Fixed, 95% CI
Handen 2015	0.56	0.66	32	0.83	0.84	32	22.0%	-0.35 [-0.85, 0.14]
Sibley 2016	0.75	0.61	67	0.91	0.78	61	44.4%	-0.23 [-0.58, 0.12]
Webster-stratton 2011	62.5	12.6	48	63.9	15	48	33.6%	-0.10 [-0.50, 0.30]
Total (95% CI)			**147**			**141**	**100.0%**	**-0.21 [-0.44, 0.02]**

Heterogeneity: Chi² = 0.62, df = 2 (P = 0.73); I² = 0%
Test for overall effect: Z = 1.80 (P = 0.07)

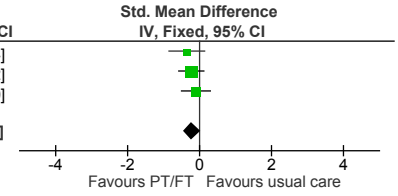


Figure 36: Function/Behaviour (8 weeks PT, self-reported CBQ-20, 0-7, high is poor outcome)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Sibley 2013	2.34	0.75	18	2	0.54	18	100.0%	0.34 [-0.09, 0.77]
Total (95% CI)			**18**			**18**	**100.0%**	**0.34 [-0.09, 0.77]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.56 (P = 0.12)

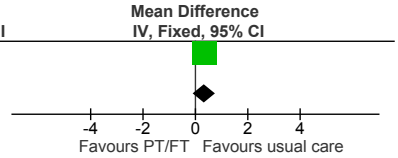


Figure 37: Function/behaviour, Parent (PT, 8-20 weeks, ECBI, Conners, DBD, SNAP, CBQ, AAPC, higher is poorer)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Std. Mean Difference IV, Fixed, 95% CI
Au 2014	11.29	8.26	8	17.78	7.1	7	3.3%	-0.79 [-1.85, 0.28]
Chacko 2009	1.25	0.67	80	1.56	0.72	40	25.1%	-0.45 [-0.83, -0.06]
Fabiano 2012	56.86	7.71	28	61.23	9.15	27	12.8%	-0.51 [-1.05, 0.03]
Handen 2015	0.7	0.55	32	0.79	0.5	32	15.4%	-0.17 [-0.66, 0.32]
Hoath 2002	13.78	13	9	16.82	9.98	11	4.7%	-0.25 [-1.14, 0.63]
Sibley 2013	2.91	0.58	18	3.06	0.74	18	8.6%	-0.22 [-0.88, 0.43]
Sibley 2016	0.82	0.54	67	1.08	0.7	61	30.1%	-0.42 [-0.77, -0.07]
Total (95% CI)			**242**			**196**	**100.0%**	**-0.39 [-0.58, -0.19]**

Heterogeneity: Chi² = 1.96, df = 6 (P = 0.92); I² = 0%
Test for overall effect: Z = 3.93 (P < 0.0001)

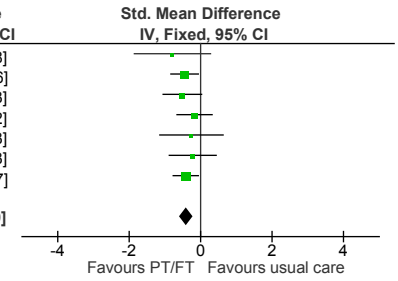


Figure 38: Function/Behaviour (1-6 months FU, parent reported DBD, ECBI, SDQ, CBQ-20, AAPC, high is poor outcome)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Chacko 2009	1.58	0.67	80	1.73	0.72	40	24.0%	-0.22 [-0.60, 0.16]
Fabiano 2012	59.8	10.74	23	63.18	11.17	23	18.1%	-0.30 [-0.88, 0.28]
Ostberg 2012	2.4	0.4	23	2.9	0.4	22	16.6%	-1.23 [-1.87, -0.59]
Sibley 2013	2.24	0.8	18	2.18	0.59	18	16.3%	0.08 [-0.57, 0.74]
Sibley 2016	1	0.87	67	1.01	0.52	61	25.0%	-0.01 [-0.36, 0.33]
Total (95% CI)			**211**			**164**	**100.0%**	**-0.30 [-0.68, 0.08]**

Heterogeneity: Tau² = 0.12; Chi² = 11.73, df = 4 (P = 0.02); I² = 66%
Test for overall effect: Z = 1.55 (P = 0.12)

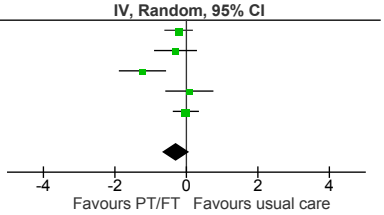


Figure 39: Function/Behaviour (6 months FU, teacher rated AAPC, 0-3, high is poor outcome)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Sibley 2016	0.86	0.69	67	0.76	0.67	61	100.0%	0.10 [-0.14, 0.34]
Total (95% CI)			**67**			**61**	**100.0%**	**0.10 [-0.14, 0.34]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.83 (P = 0.41)

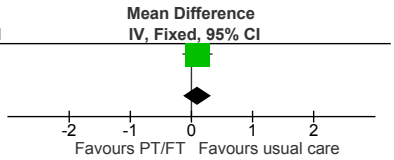


Figure 40: Function/Behaviour (6 months FU, self-reported CBQ-20, 0-7, high is poor outcome)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Sibley 2013	2.24	0.8	18	2.9	0.91	18	100.0%	-0.66 [-1.22, -0.10]
Total (95% CI)			**18**			**18**	**100.0%**	**-0.66 [-1.22, -0.10]**

Heterogeneity: Not applicable
Test for overall effect: Z = 2.31 (P = 0.02)

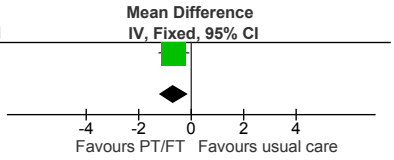


Figure 41: Academic - Literacy (8 weeks PT, reading/language arts (RLA) accuracy %, high is good outcome)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Merrill 2016	91.59	6.96	39	82.76	11.35	36	100.0%	8.83 [4.53, 13.13]
Total (95% CI)			**39**			**36**	**100.0%**	**8.83 [4.53, 13.13]**

Heterogeneity: Not applicable
Test for overall effect: Z = 4.02 (P < 0.0001)

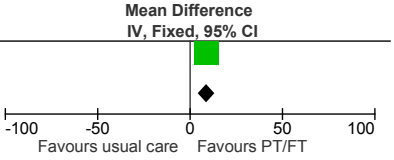
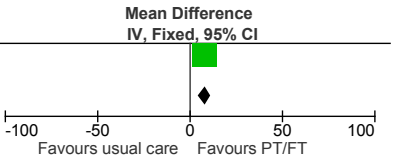


Figure 42: Academic - Numeracy (8 weeks PT, math accuracy %, high is good outcome)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Merrill 2016	91.89	5.42	39	83.85	8.79	36	100.0%	8.04 [4.70, 11.38]
Total (95% CI)			**39**			**36**	**100.0%**	**8.04 [4.70, 11.38]**

Heterogeneity: Not applicable
Test for overall effect: Z = 4.72 (P < 0.00001)



E.2.2 Attention/memory/cognitive training versus waitlist/usual care

Figure 43: ADHD symptoms total (12 weeks PT parent rated, CBCL, unclear range, high is poor outcome)

Study or Subgroup	Attention/memory/cognitive training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Kermani 2016	45	6.85	30	72.6	5.17	30	100.0%	-27.60 [-30.67, -24.53]
Total (95% CI)			**30**			**30**	**100.0%**	**-27.60 [-30.67, -24.53]**

Heterogeneity: Not applicable
Test for overall effect: Z = 17.61 (P < 0.00001)

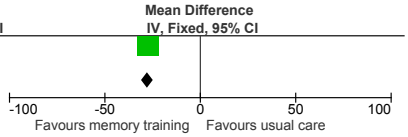


Figure 44: ADHD symptoms total (5-7weeks PT, parent rated ARS-IV, 25-49, high is poor outcome)

Study or Subgroup	Favours memory training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Egeland 2013	25.2	11.5	33	27.6	12.3	34	100.0%	-2.40 [-8.10, 3.30]
Total (95% CI)			**33**			**34**	**100.0%**	**-2.40 [-8.10, 3.30]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.83 (P = 0.41)

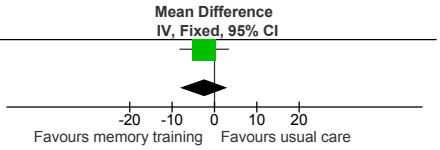


Figure 45: ADHD symptoms total (5-7weeks PT, teacher rated ARS-IV, unclear range, high is poor outcome)

Study or Subgroup	Attention/memory/cognitive training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Egeland 2013	19.9	11.6	33	21.9	12.1	34	100.0%	-2.00 [-7.68, 3.68]
Total (95% CI)			**33**			**34**	**100.0%**	**-2.00 [-7.68, 3.68]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.69 (P = 0.49)

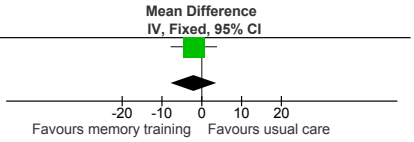


Figure 46: ADHD symptoms total (8 months FU, parent rated ARS-IV, 25-49, high is poor outcome)

Study or Subgroup	Attention/memory/cognitive training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Egeland 2013	27	11.5	33	28.1	11	34	100.0%	-1.10 [-6.49, 4.29]
Total (95% CI)			**33**			**34**	**100.0%**	**-1.10 [-6.49, 4.29]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.40 (P = 0.69)

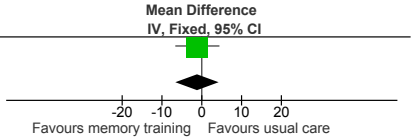


Figure 47: ADHD symptoms total (8 months FU, teacher rated ARS-IV, unclear range, high is poor outcome)

Study or Subgroup	Attention/memory/cognitive training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Egeland 2013	20.1	9.8	33	22.6	12.3	34	100.0%	-2.50 [-7.82, 2.82]
Total (95% CI)			**33**			**34**	**100.0%**	**-2.50 [-7.82, 2.82]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.92 (P = 0.36)

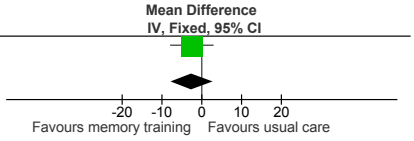


Figure 48: ADHD symptoms inattention (5-7 weeks PT, parent rated ARS-IV, high is poor outcome)

Study or Subgroup	Attention/memory/cognitive training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Egeland 2013	15	5.6	33	16.2	6.2	34	62.1%	-1.20 [-4.03, 1.63]
Van der Oord 2014	12.76	5.12	18	16.9	6.56	22	37.9%	-4.14 [-7.76, -0.52]
Total (95% CI)			**51**			**56**	**100.0%**	**-2.31 [-4.54, -0.09]**

Heterogeneity: Chi² = 1.57, df = 1 (P = 0.21); I² = 36%
Test for overall effect: Z = 2.04 (P = 0.04)

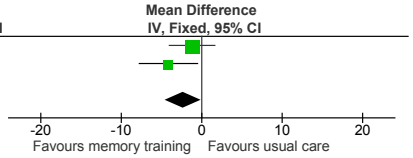


Figure 49: ADHD symptoms inattention (12-20 weeks PT, parent rated Conners Rating Scales–Revised, SNAP, high is poor outcome)

Study or Subgroup	Attention/memory/cognitive training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Steiner 2011	59.2	3.87	11	72.6	10.22	11	24.9%	-1.67 [-2.67, -0.67]
Steiner 2014	70.2	10.3	34	75.2	10.5	36	37.1%	-0.48 [-0.95, 0.00]
Tamm 2013	1.42	0.5	54	2.15	0.5	51	38.0%	-1.45 [-1.88, -1.02]
Total (95% CI)			**99**			**98**	**100.0%**	**-1.14 [-1.91, -0.38]**

Heterogeneity: Tau² = 0.35; Chi² = 10.35, df = 2 (P = 0.006); I² = 81%
Test for overall effect: Z = 2.94 (P = 0.003)

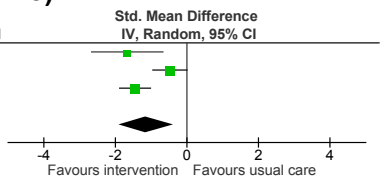


Figure 50: ADHD symptoms inattention (6-8 months FU, parent rated ARS-IV, Conners-3P, high is poor outcome)

Study or Subgroup	Attention/memory/cognitive training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Std. Mean Difference IV, Fixed, 95% CI
Egeland 2013	15.3	5.3	33	16.5	5.6	34	50.4%	-0.22 [-0.70, 0.26]
Steiner 2014	67.56	9.05	34	74.58	10.03	36	49.6%	-0.73 [-1.21, -0.24]
Total (95% CI)			**67**			**70**	**100.0%**	**-0.47 [-0.81, -0.13]**

Heterogeneity: Chi² = 2.13, df = 1 (P = 0.14); I² = 53%
Test for overall effect: Z = 2.70 (P = 0.007)

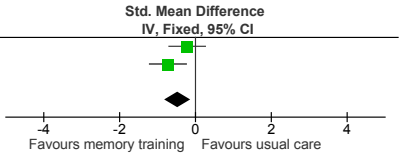


Figure 51: ADHD symptoms inattention (5-7 weeks PT, teacher rated ARS-IV, high is poor outcome)

Study or Subgroup	Attention/memory/cognitive training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Egeland 2013	12.4	6.6	33	13.8	6.8	34	57.5%	-1.40 [-4.61, 1.81]
Van der Oord 2014	10.73	4.91	18	11.44	7.1	22	42.5%	-0.71 [-4.44, 3.02]
Total (95% CI)			**51**			**56**	**100.0%**	**-1.11 [-3.54, 1.33]**

Heterogeneity: Chi² = 0.08, df = 1 (P = 0.78); I² = 0%
Test for overall effect: Z = 0.89 (P = 0.37)

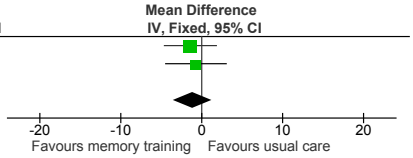


Figure 52: ADHD symptoms inattention (12-20 weeks PT, teacher rated Conners Rating Scales–Revised, SNAP, high is poor outcome)

Study or Subgroup	Attention/memory/cognitive training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Std. Mean Difference IV, Fixed, 95% CI
Steiner 2011	55.7	10.2	11	59.8	10	15	12.5%	-0.39 [-1.18, 0.39]
Steiner 2014	67.6	9	34	68.2	10.6	36	35.2%	-0.06 [-0.53, 0.41]
Tamm 2013	1.84	0.6	54	1.68	0.7	51	52.4%	0.24 [-0.14, 0.63]
Total (95% CI)			**99**			**102**	**100.0%**	**0.06 [-0.22, 0.34]**

Heterogeneity: Chi² = 2.41, df = 2 (P = 0.30); I² = 17%
Test for overall effect: Z = 0.41 (P = 0.69)

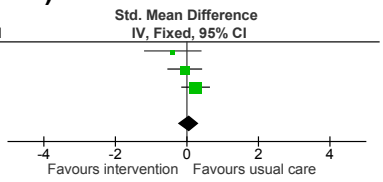


Figure 53: ADHD symptoms inattention (8 months FU, teacher rated ARS-IV, 12-24, high is poor outcome)

Study or Subgroup	Favours memory training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Egeland 2013	13.2	6	33	14.5	6.7	34	100.0%	-1.30 [-4.34, 1.74]
Total (95% CI)			**33**			**34**	**100.0%**	**-1.30 [-4.34, 1.74]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.84 (P = 0.40)

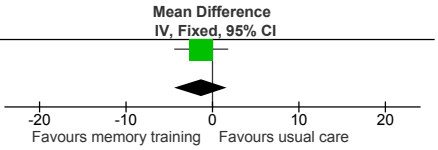


Figure 54: ADHD symptoms inattention (12 weeks PT, investigator rated SNAP, 0-3, high is poor outcome)

Study or Subgroup	Attention/memory/cognitive training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Tamm 2013	1.84	0.5	54	2.39	0.5	51	100.0%	-0.55 [-0.74, -0.36]
Total (95% CI)			**54**			**51**	**100.0%**	**-0.55 [-0.74, -0.36]**

Heterogeneity: Not applicable
Test for overall effect: Z = 5.63 (P < 0.00001)

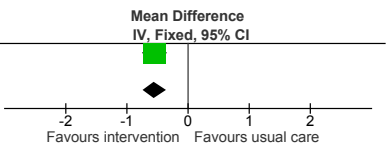


Figure 55: ADHD symptoms inattention (14 weeks PT, teacher rated CTRS-R:L, more events is better)

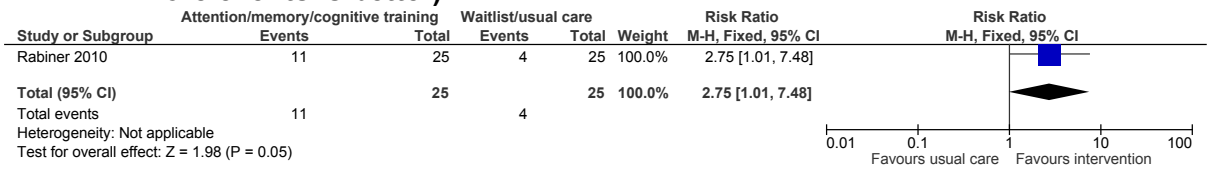


Figure 56: ADHD symptoms inattention (52 weeks FU, teacher rated CTRS-R:L, more events is better)

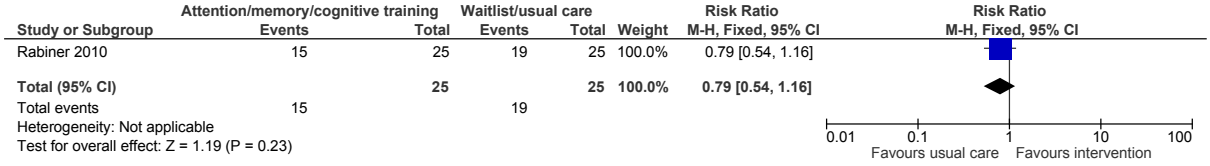


Figure 57: ADHD symptoms hyperactivity/Impulsivity (5-7 weeks PT, parent rated ARS-IV, high is poor outcome)

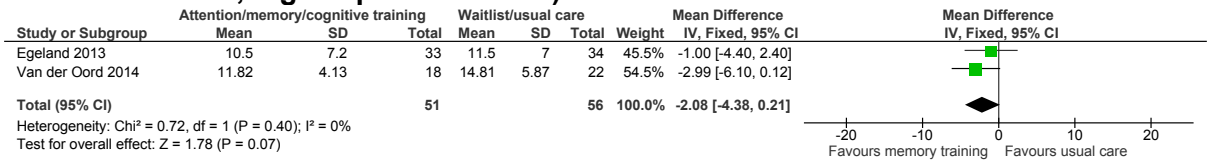


Figure 58: ADHD symptoms hyperactivity/Impulsivity (12 - 20 weeks PT, parent rated Conners 3-P, SNAP, high is poor outcome)

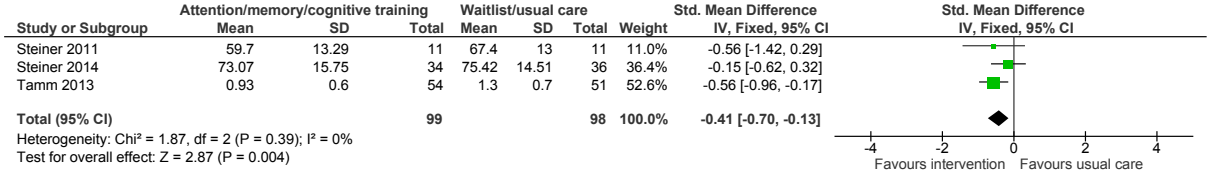


Figure 59: ADHD symptoms hyperactivity/Impulsivity (6-8 months FU, parent rated ARS-IV, Conners 3-P, high is poor outcome)

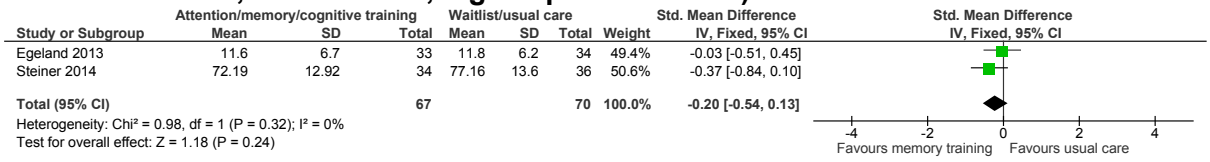


Figure 60: ADHD symptoms hyperactivity/Impulsivity (5-7 weeks PT, teacher rated ARS-IV, high is poor outcome)

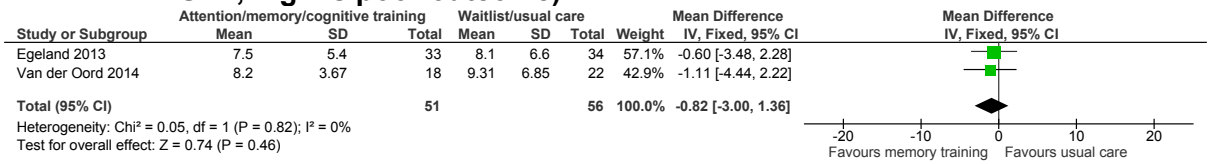


Figure 61: ADHD symptoms hyperactivity/Impulsivity (17 weeks PT, teacher rated Conners Rating Scales–Revised, 0-84, high is poor outcome)

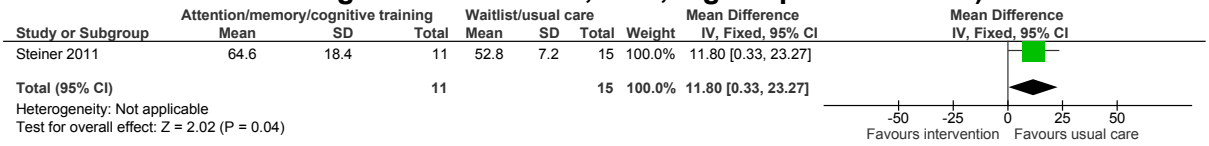


Figure 62: ADHD symptoms hyperactivity/Impulsivity (8months FU, teacher rated ARS-IV, unclear range, high is poor outcome)

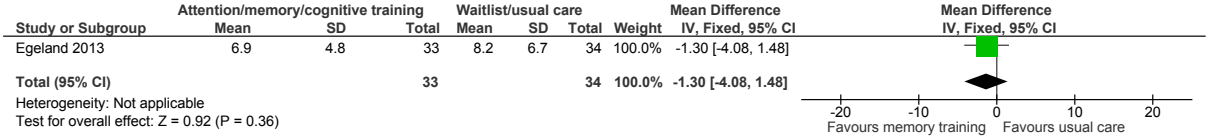


Figure 63: ADHD symptoms hyperactivity/Impulsivity (12 weeks PT, investigator rated SNAP, 0-3, high is poor outcome)

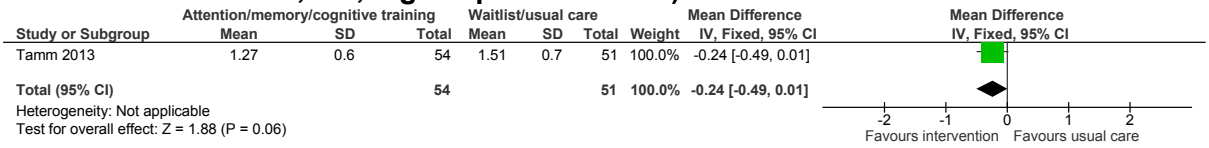


Figure 64: Discontinuation related to study intervention (12 weeks, high number of events is worse)

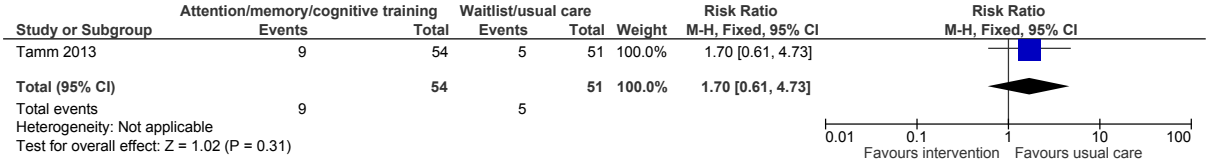


Figure 65: Function/Behaviour (5-7weeks PT, parent rated Global Executive Composite, high is poor outcome)

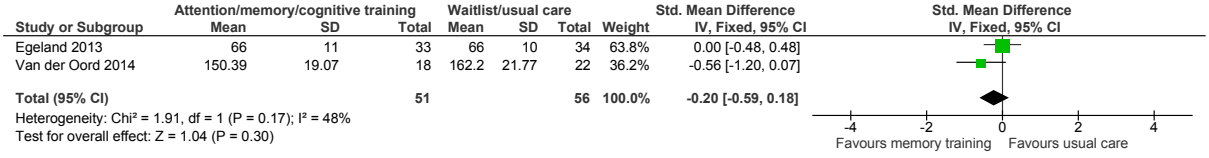


Figure 66: Function/Behaviour (12-20 weeks PT, parent rated BRIEF, global executive subscale, BASC, high is poor outcome)

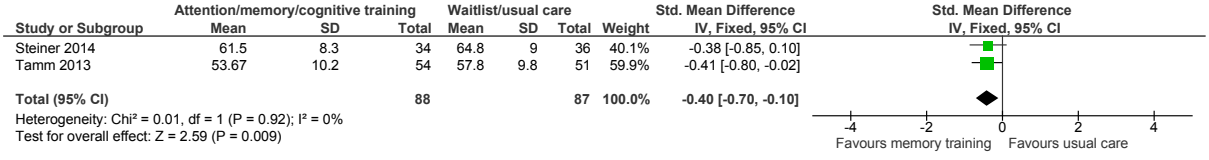


Figure 67: Function/Behaviour (6-8 months FU, parent rated BRIEF, global executive subscale, high is poor outcome)

Study or Subgroup	Attention/memory/cognitive training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Std. Mean Difference IV, Fixed, 95% CI
Egeland 2013	67	11	33	65	12	34	50.2%	0.17 [-0.31, 0.65]
Steiner 2014	60.29	7.3	34	65.48	8.36	36	49.8%	-0.65 [-1.13, -0.17]
Total (95% CI)			**67**			**70**	**100.0%**	**-0.24 [-0.58, 0.10]**

Heterogeneity: Chi² = 5.65, df = 1 (P = 0.02); I² = 82%
Test for overall effect: Z = 1.38 (P = 0.17)

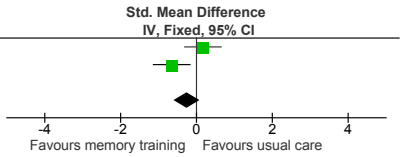


Figure 68: Function/Behaviour (5-12 weeks PT, teacher rated BASC, Global Executive Composite, high is poor outcome)

Study or Subgroup	Attention/memory/cognitive training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Std. Mean Difference IV, Fixed, 95% CI
Egeland 2013	68	14	33	69	13	34	39.1%	-0.07 [-0.55, 0.41]
Tamm 2013	61	8.4	54	58.72	11.7	51	60.9%	0.22 [-0.16, 0.61]
Total (95% CI)			**87**			**85**	**100.0%**	**0.11 [-0.19, 0.41]**

Heterogeneity: Chi² = 0.90, df = 1 (P = 0.34); I² = 0%
Test for overall effect: Z = 0.70 (P = 0.48)

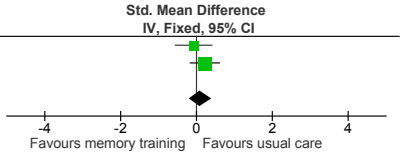


Figure 69: Function/Behaviour (8 months FU, teacher rated Global Executive Composite, 0-100, high is poor outcome)

Study or Subgroup	Attention/memory/cognitive training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Egeland 2013	67	10	33	69	13	34	100.0%	-2.00 [-7.54, 3.54]
Total (95% CI)			**33**			**34**	**100.0%**	**-2.00 [-7.54, 3.54]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.71 (P = 0.48)

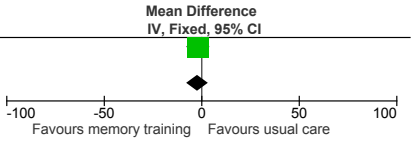


Figure 70: Function/Behaviour (5 months PT, investigator rated BOSS scale, 0-100, high is good outcome)

Study or Subgroup	Attention/memory/cognitive training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Steiner 2014	77.1	13.6	34	79.3	13.6	36	100.0%	-2.20 [-8.57, 4.17]
Total (95% CI)			**34**			**36**	**100.0%**	**-2.20 [-8.57, 4.17]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.68 (P = 0.50)

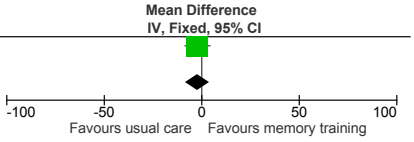


Figure 71: Function/Behaviour (6 months FU, investigator rated BOSS scale, 0-100, high is good outcome)

Study or Subgroup	Attention/memory/cognitive training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Steiner 2014	76.16	15.97	34	81.23	10.37	36	100.0%	-5.07 [-11.42, 1.28]
Total (95% CI)			**34**			**36**	**100.0%**	**-5.07 [-11.42, 1.28]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.57 (P = 0.12)

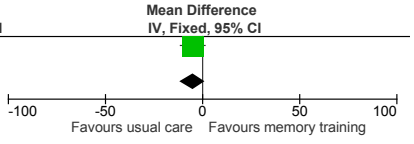


Figure 72: Academic - Literacy (5-7 weeks PT, LOGOS reading fluency % correct, 0-100, high is good outcome)

Study or Subgroup	Attention/memory/cognitive training Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Egeland 2013	96	5	33	95	5	34	100.0%	1.00 [-1.39, 3.39]
Total (95% CI)			**33**			**34**	**100.0%**	**1.00 [-1.39, 3.39]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.82 (P = 0.41)

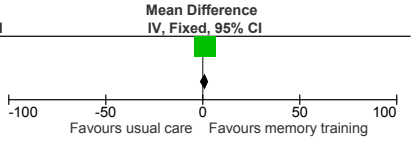


Figure 73: Academic - Literacy (8 months FU, LOGOS reading fluency % correct, 0-100, high is good outcome)

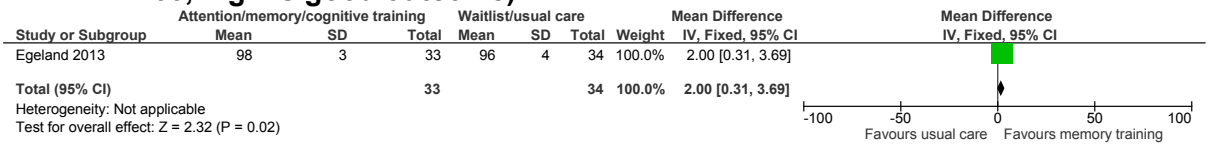


Figure 74: Academic - Numeracy (5-7 weeks PT, Key Math composite score, 0-18, high is good outcome

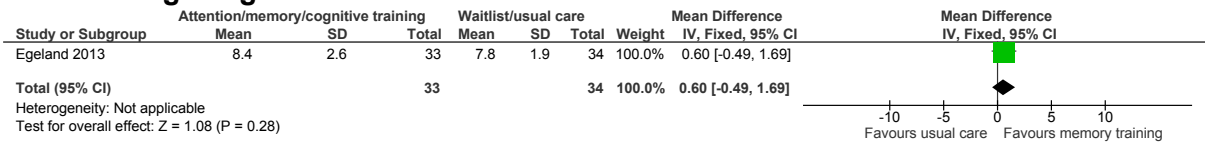
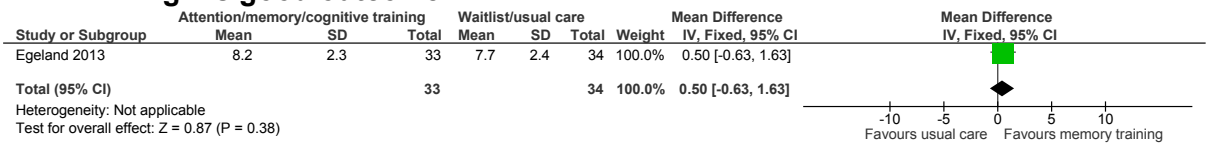


Figure 75: Academic - Numeracy (8 months FU, Key Math composite score, 0-18, high is good outcome



E.2.3 Neurofeedback versus waitlist/usual care

Figure 76: ADHD symptoms inattention (17 -20 weeks PT, parent rated Conners Rating Scales–Revised, high is poor outcome)

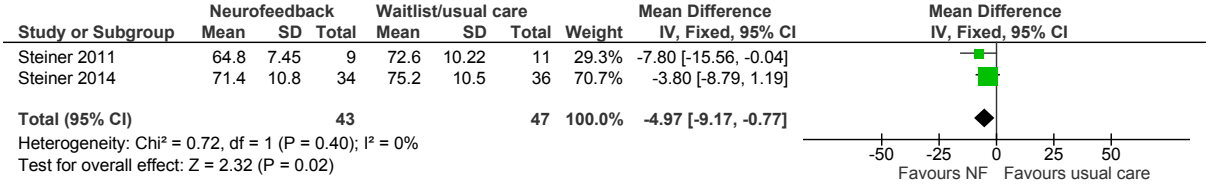


Figure 77: ADHD symptoms inattention (6 months FU, parent rated Conners 3-P, 0-84, high is poor outcome)

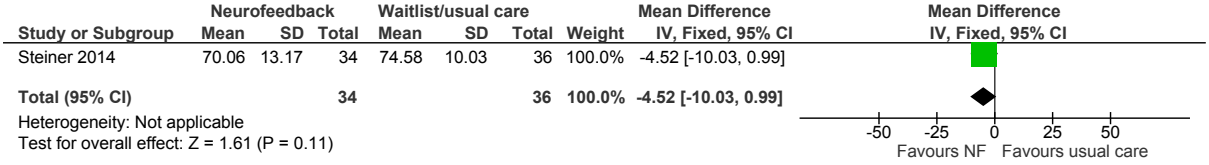


Figure 78: ADHD symptoms inattention (17-20 weeks PT, teacher rated Conners Rating Scales–Revised, high is poor outcome)

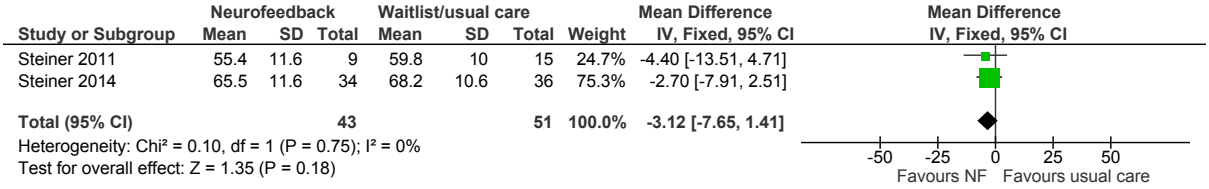


Figure 79: ADHD symptoms inattention (1 year FU, self-rated DSM-IV, 0-9, CS, high is poor outcome)

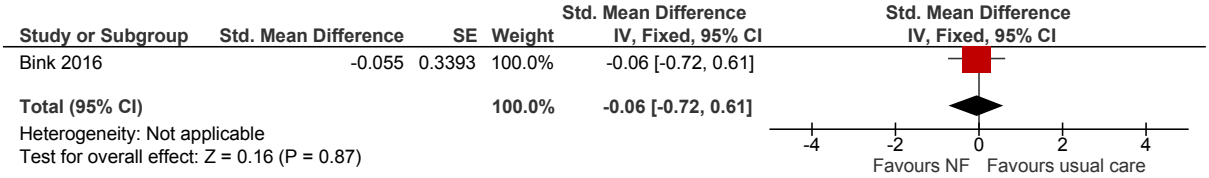


Figure 80: ADHD symptoms hyperactivity/Impulsivity (17-20 weeks PT, parent rated Conners Rating Scales–Revised, high is poor outcome)

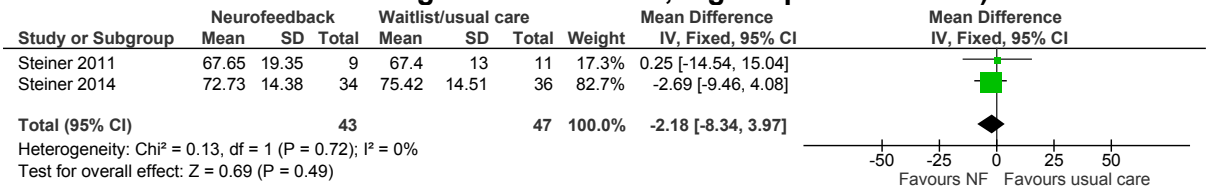


Figure 81: ADHD symptoms hyperactivity/Impulsivity (6 months FU, parent rated Conners 3-P, 0-84, high is poor outcome)

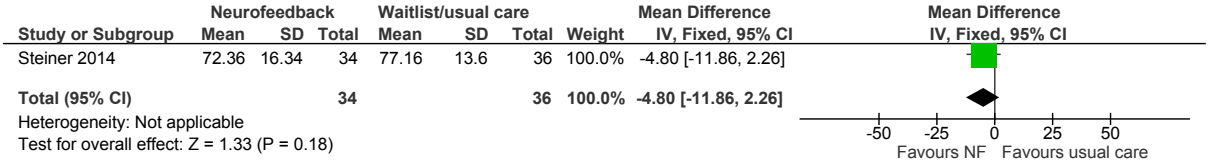


Figure 82: ADHD symptoms hyperactivity/Impulsivity (17 weeks PT, teacher rated Conners Rating Scales–Revised, 0-84, high is poor outcome)

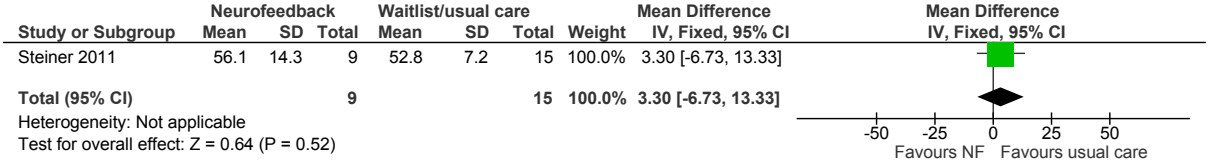


Figure 83: ADHD symptoms hyperactivity/Impulsivity (1 year FU, self-rated DSM-IV, 0-9, CS, high is poor outcome)

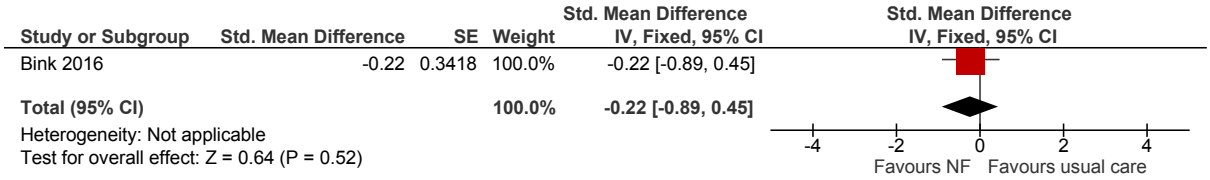


Figure 84: Function/Behaviour (5 months PT, parent rated BRIEF, global executive subscale 0-100, high is poor outcome)

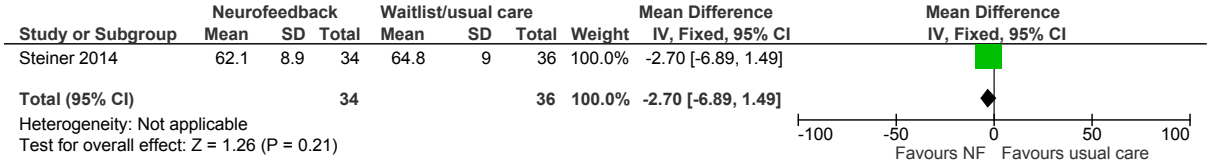


Figure 85: Function/Behaviour (6 months FU, parent rated BRIEF, global executive subscale, 0-100, high is poor outcome)

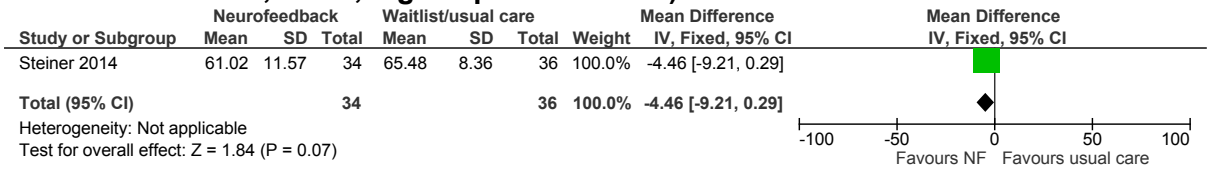


Figure 86: Function/Behaviour (5 months PT, investigator rated BOSS scale, 0-100, high is good outcome)

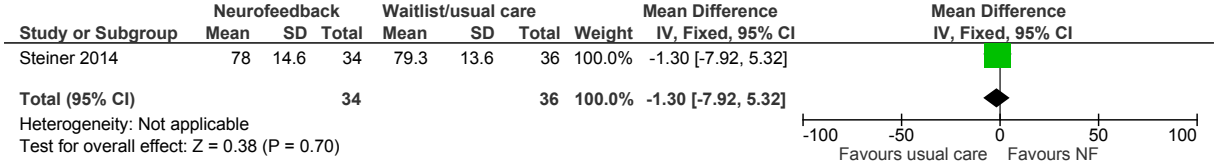
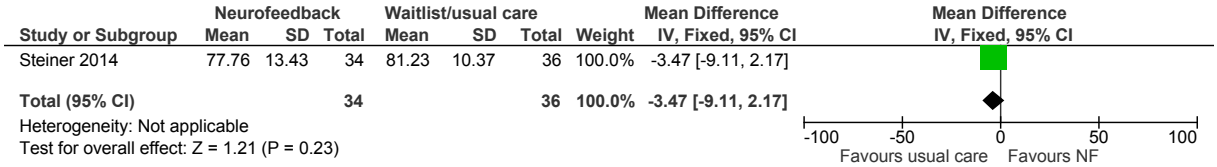


Figure 87: Function/Behaviour (6 months FU, investigator rated BOSS scale, 0-100, high is good outcome)



E.2.4 Psychoeducation versus waitlist/usual care

Figure 88: ADHD symptoms total (11 weeks FU, teacher rated Children symptom inventory, 0-27, high is poor outcome)

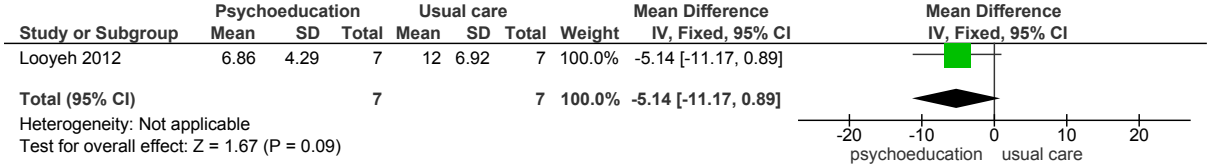


Figure 89: ADHD symptoms total (7 weeks PT, teacher rated Children symptom inventory, 0-27, high is poor outcome)

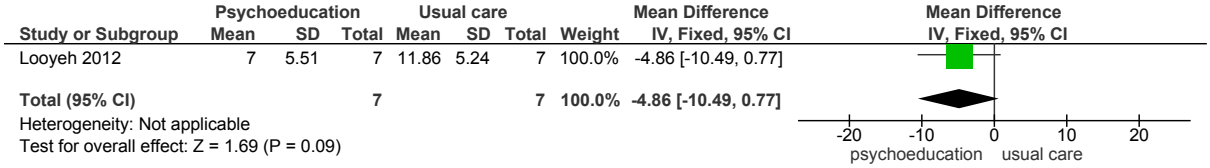


Figure 90: ADHD symptoms inattention (7 weeks PT, teacher rated Children symptom inventory, 0-27, high is poor outcome)

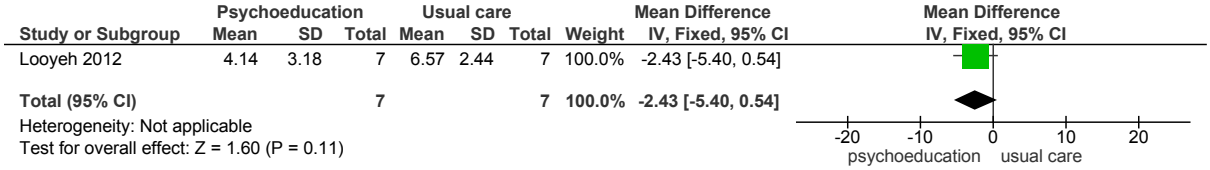


Figure 91: ADHD symptoms inattention (11 weeks FU, teacher rated Children symptom inventory, 0-27, high is poor outcome)

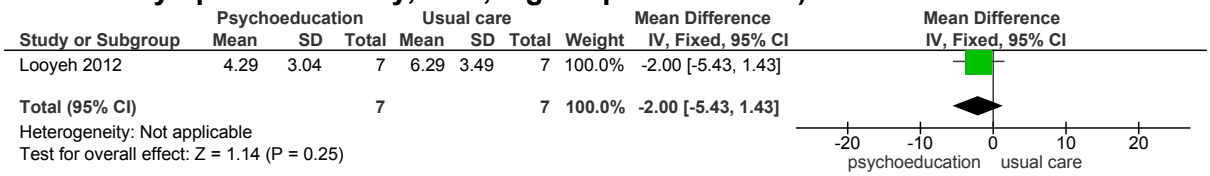


Figure 92: ADHD symptoms inattention (6 weeks PT, parent rated CPRS, 0-27, high is poor outcome)

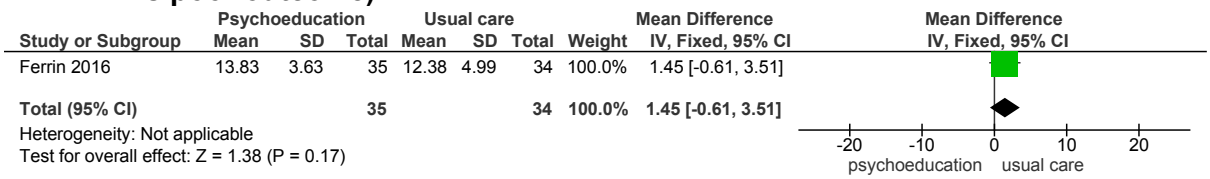


Figure 93: ADHD symptoms hyperactivity/Impulsivity (6 weeks PT, parent rated CPRS, 0-27, high is poor outcome)

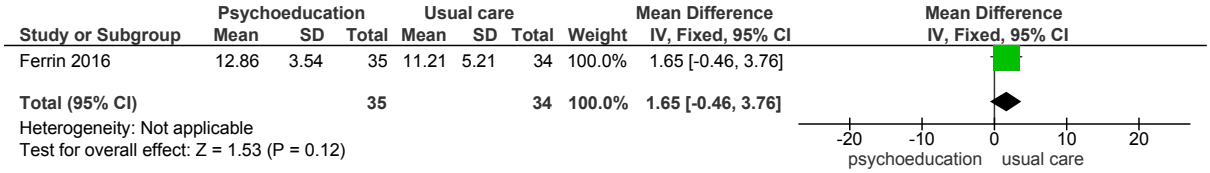


Figure 94: ADHD symptoms hyperactivity/Impulsivity (7 weeks PT, teacher rated Children symptom inventory, 0-27, high is poor outcome)

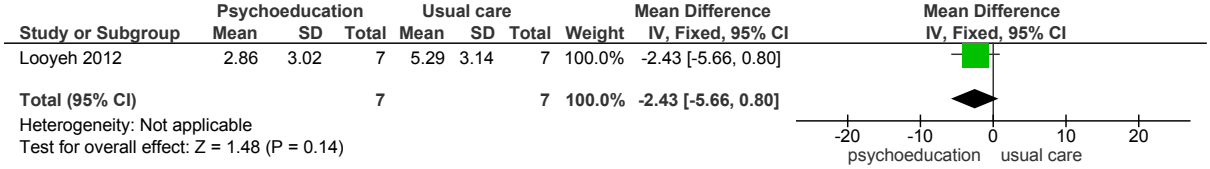


Figure 95: ADHD symptoms hyperactivity/Impulsivity (11 weeks FU, teacher rated Children symptom inventory, 0-27, high is poor outcome)

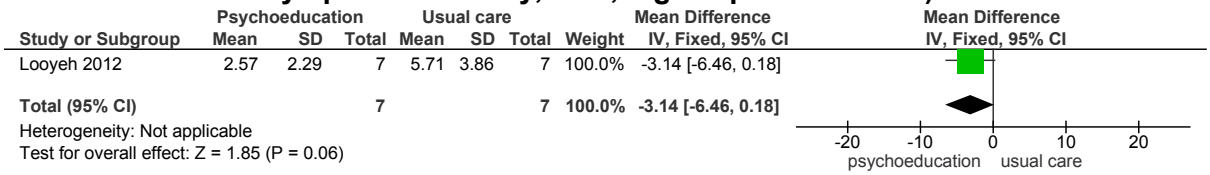


Figure 96: Function/Behaviour (6 weeks PT, parent reported SDQ, 0-40, high is poor outcome)

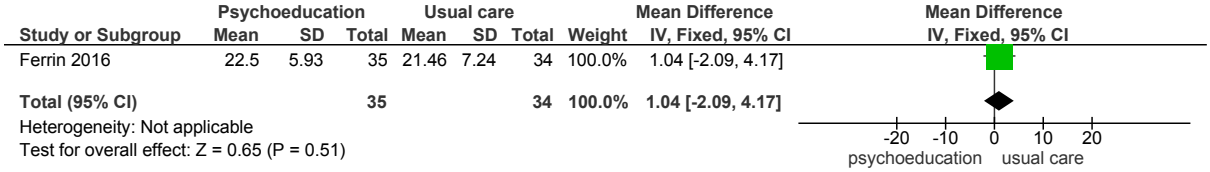


Figure 97: Function/Behaviour (6 weeks PT, teacher reported SDQ, 0-40, high is poor outcome)

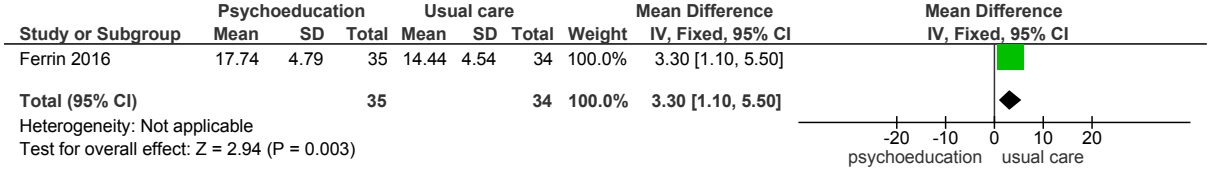


Figure 98: Function/Behaviour (6 months FU, parent reported SDQ, 0-40, high is poor outcome)

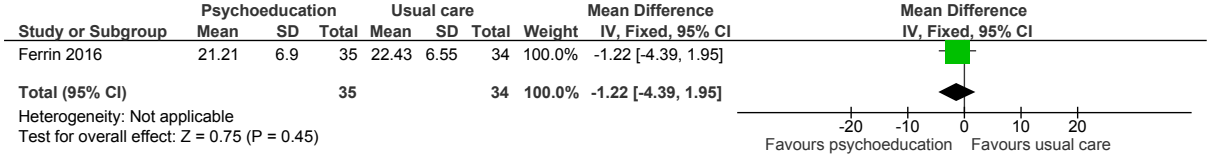
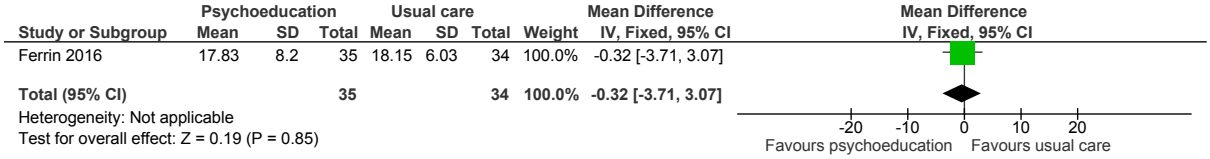


Figure 99: Function/Behaviour (6 months FU, teacher reported SDQ, 0-40, high is poor outcome)



E.2.5 Relaxation versus waitlist/usual care

Figure 100: ADHD symptoms total (4 weeks PT, parent rated Conners scale, 0-84, high is poor outcome)

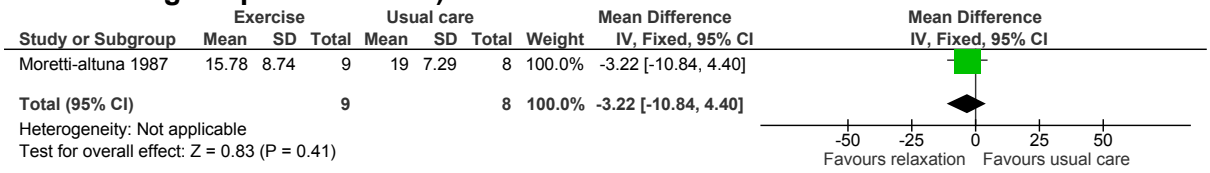
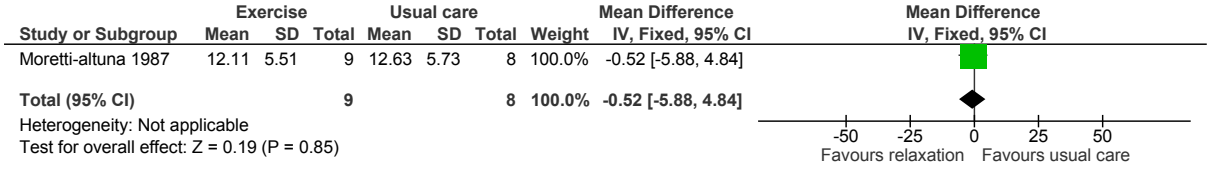


Figure 101: ADHD symptoms total (4 weeks PT, teacher rated Conners scale, 0-84, high is poor outcome)



E.2.6 Exercise versus waitlist/usual care

Figure 102: ADHD symptoms inattention (10 weeks PT, teacher rated Behaviour Rating scale, 0-54, High is good outcome)

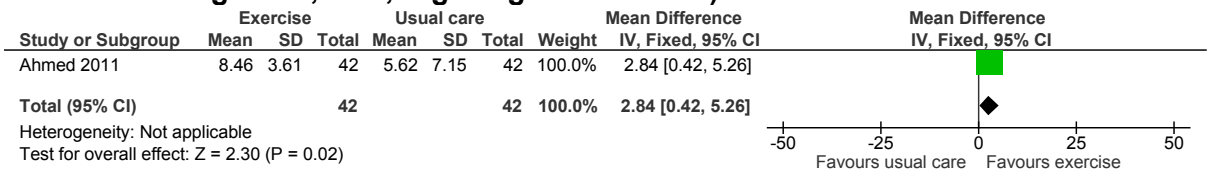


Figure 103: Function/behaviour (10 weeks PT, teacher rated Behaviour Rating scale, 0-54, High is good outcome)

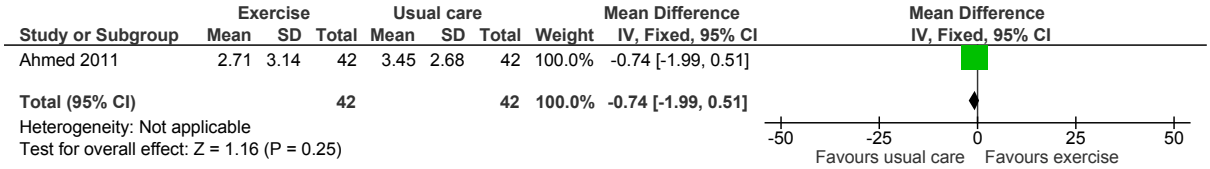
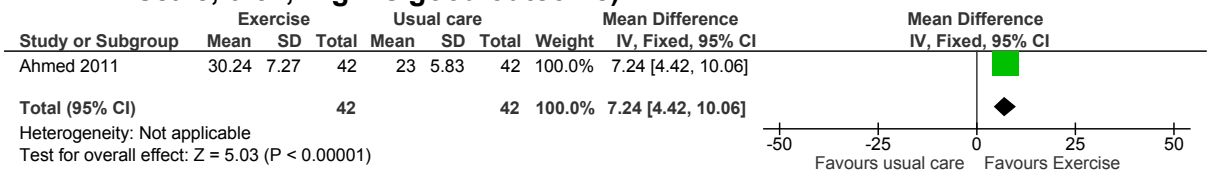


Figure 104: Academic performance (10 weeks PT, teacher rated Behaviour Rating scale, 0-54, High is good outcome)



E.2.7 Organisational/School based versus waitlist/usual care

Figure 105: ADHD symptoms total (teacher rated 35 weeks PT, Disruptive Behaviour Disorders rating scale, 0-3, high is poor outcome)

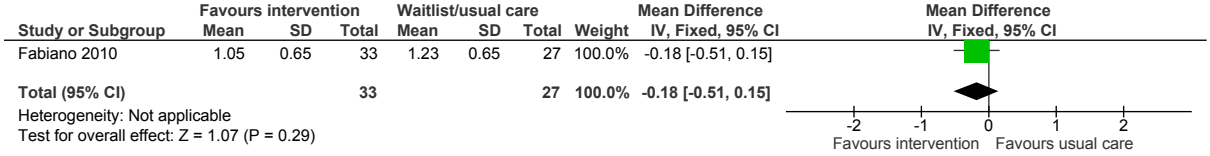


Figure 106: ADHD symptoms inattention (11-20 weeks PT, parent rated VADPRS, FBB-HKS, 0-3, high is poor outcome)

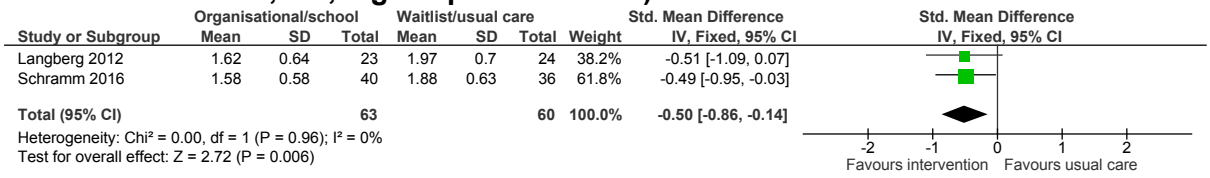


Figure 107: ADHD symptoms inattention (39 weeks PT, parent rated disruptive behaviour disorder questionnaire, 0-27, high is poor outcome)

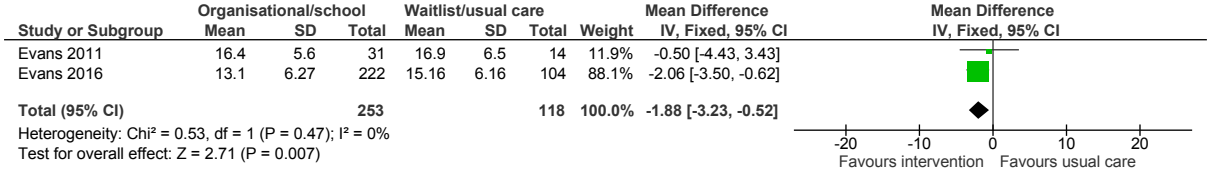


Figure 108: ADHD symptoms inattention (65 weeks FU, parent rated disruptive behaviour disorder questionnaire, 0-27, high is poor outcome)

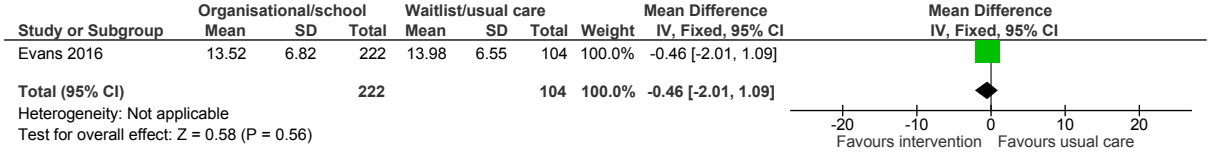


Figure 109: ADHD symptoms inattention (20-39 weeks PT, teacher rated disruptive behaviour disorder questionnaire, FBB-HKS, high is poor outcome)

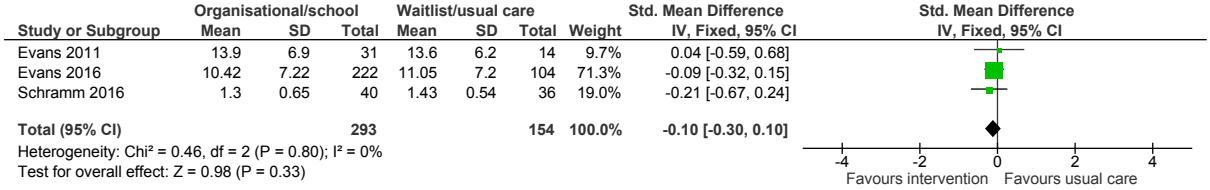


Figure 110: ADHD symptoms inattention (65 weeks FU, teacher rated disruptive behaviour disorder questionnaire, 0-27, high is poor outcome)

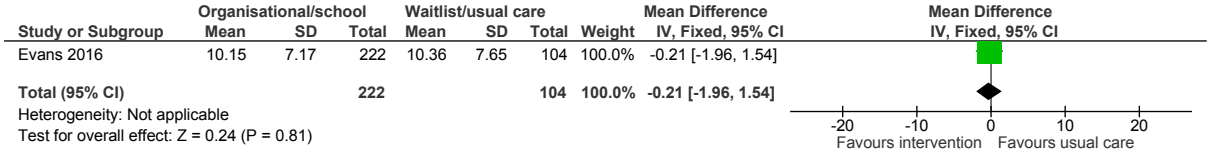


Figure 111: ADHD symptoms hyperactivity/Impulsivity (20-39 weeks PT, parent disruptive behaviour disorder questionnaire, FBB-HKS, high is poor outcome)

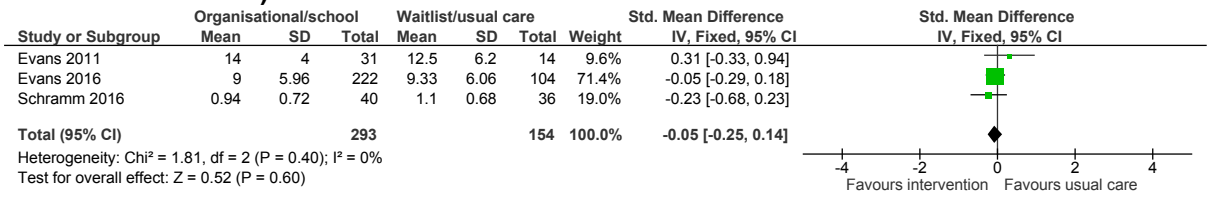


Figure 112: ADHD symptoms hyperactivity/Impulsivity (20-39 weeks PT, teacher disruptive behaviour disorder questionnaire, FBB-HKS, high is poor outcome)

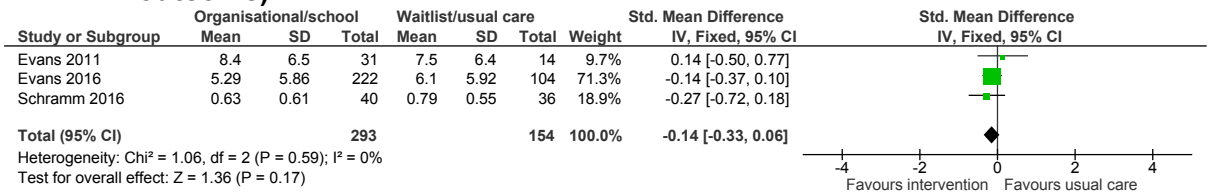


Figure 113: ADHD symptoms hyperactivity/Impulsivity (65 weeks FU, parent disruptive behaviour disorder questionnaire, 0-27, high is poor outcome)

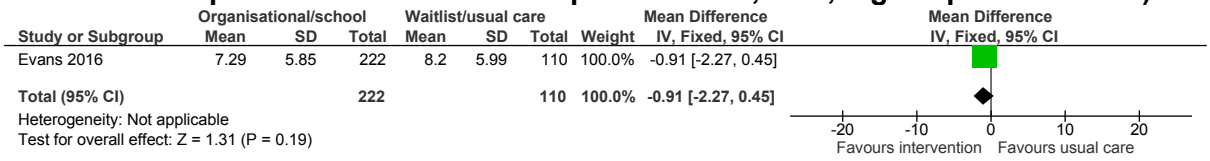


Figure 114: ADHD symptoms hyperactivity/Impulsivity (65 weeks FU, teacher disruptive behaviour disorder questionnaire, 0-27, high is poor outcome)

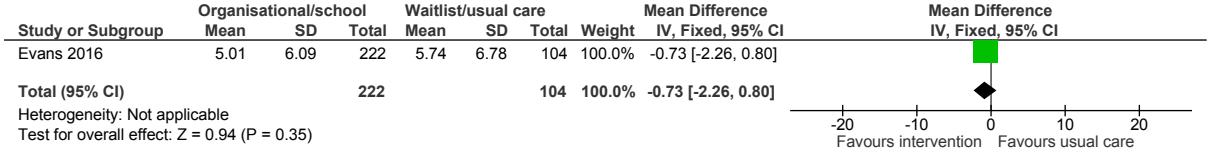


Figure 115: ADHD symptoms hyperactivity/Impulsivity (11 weeks PT, parent rated VADPRS, hyperactive/impulsive, 0-3, high is poor outcome)

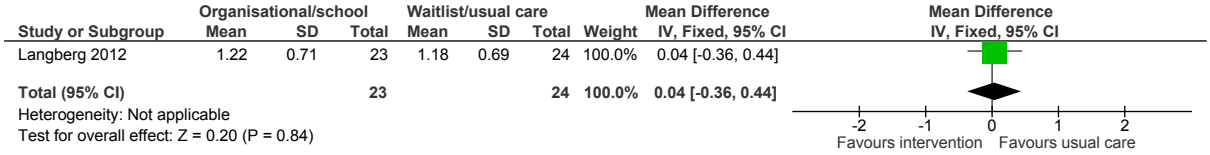


Figure 116: Function/Behaviour (20-39 weeks PT, parent disruptive behaviour disorder questionnaire, SDQ, high is poor outcome)

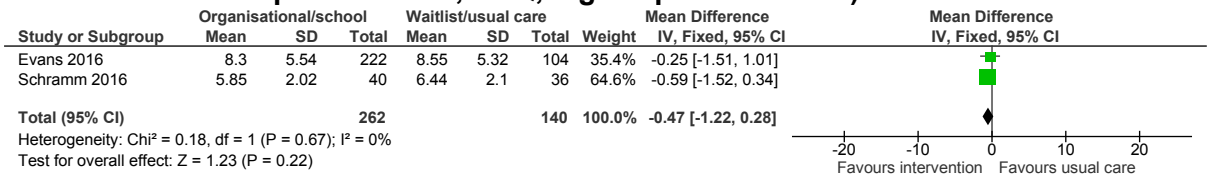


Figure 117: Function/Behaviour (65 weeks FU, parent disruptive behaviour disorder questionnaire, 0-27, high is poor outcome)

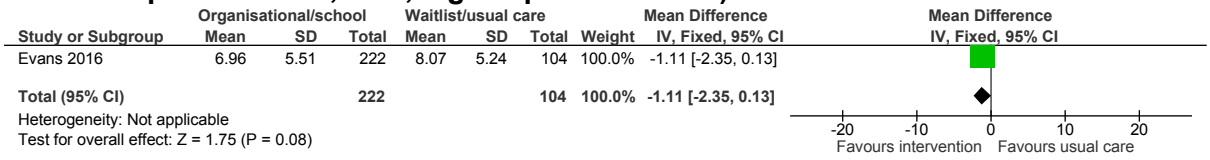


Figure 118: Function/Behaviour (20-39 weeks PT, teacher disruptive behaviour disorder questionnaire, SDQ, high is poor outcome)

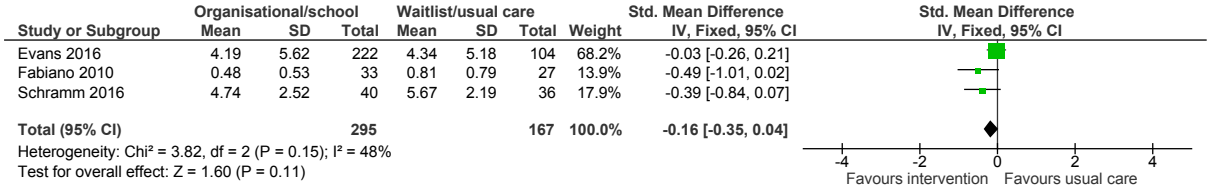


Figure 119: Function/Behaviour (65 weeks FU, teacher disruptive behaviour disorder questionnaire, 0-27, high is poor outcome)

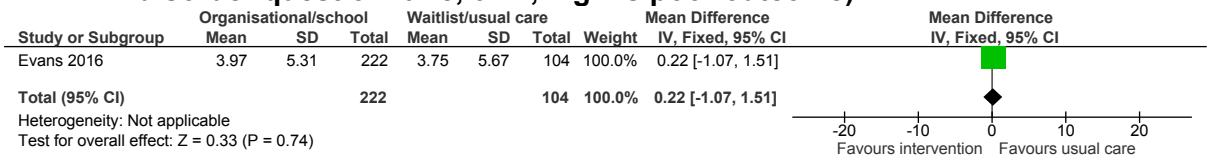


Figure 120: Academic - Literacy (35 weeks PT, Woodcock-Johnson reading subscale, 0-132, high is good outcome)

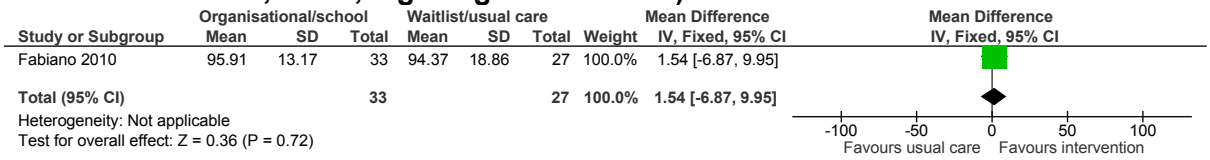


Figure 121: Academic (65 weeks FU, Teacher rated Classroom performance survey scale, unclear range, high is poor outcome)

Study or Subgroup	Organisational/school Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Evans 2016	24.71	9.18	222	24.66	9.26	104	100.0%	0.05 [-2.10, 2.20]
Total (95% CI)			**222**			**104**	**100.0%**	**0.05 [-2.10, 2.20]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.05 (P = 0.96)

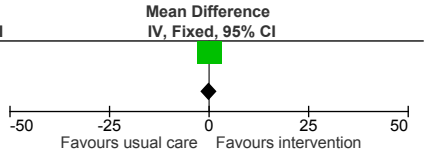


Figure 122: Academic (39 weeks PT, Teacher rated Classroom performance survey scale, unclear range, high is poor outcome)

Study or Subgroup	Organisational/school Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Evans 2016	23.5	9.14	222	24.48	8.36	104	100.0%	-0.98 [-2.99, 1.03]
Total (95% CI)			**222**			**104**	**100.0%**	**-0.98 [-2.99, 1.03]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.96 (P = 0.34)

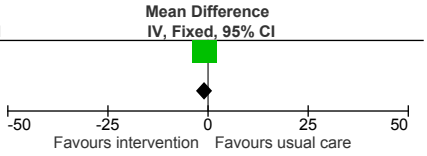


Figure 123: Academic - Numeracy (35 weeks PT, Woodcock-Johnson math subscale, 0-132, high is good outcome)

Study or Subgroup	Organisational/school Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Fabiano 2010	97.31	14.97	33	95.63	16.66	27	100.0%	1.68 [-6.42, 9.78]
Total (95% CI)			**33**			**27**	**100.0%**	**1.68 [-6.42, 9.78]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.41 (P = 0.68)

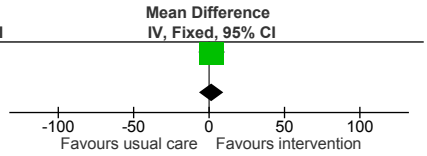


Figure 124: Academic performance (10-12 weeks PT, APRS, 19-95, High is good outcome)

Study or Subgroup	Organisational/school Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Abikoff 2013	63.04	11.25	125	54.53	9.74	33	100.0%	8.51 [4.65, 12.37]
Total (95% CI)			**125**			**33**	**100.0%**	**8.51 [4.65, 12.37]**

Heterogeneity: Not applicable
Test for overall effect: Z = 4.32 (P < 0.0001)

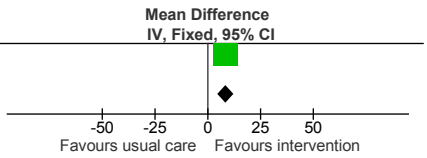


Figure 125: Academic - Numeracy (1 year PT, WJ-III math fluency, 0-98, high is good outcome)

Study or Subgroup	Organisational/school Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Iseman 2011	16.08	5.6	14	14	7.6	14	100.0%	2.08 [-2.87, 7.03]
Total (95% CI)			**14**			**14**	**100.0%**	**2.08 [-2.87, 7.03]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.82 (P = 0.41)

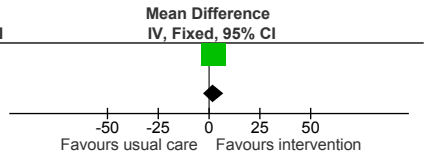


Figure 126: Academic - Numeracy (during 10 week intervention, Maths worksheets, 0-100, high is good outcome)

Study or Subgroup	Organisational/school Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Iseman 2011	42.7	21	14	37.8	21	14	100.0%	4.90 [-10.66, 20.46]
Total (95% CI)			**14**			**14**	**100.0%**	**4.90 [-10.66, 20.46]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.62 (P = 0.54)

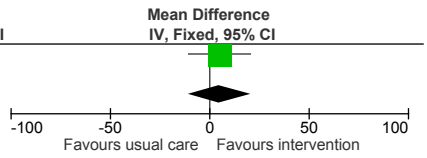


Figure 127: Academic - Numeracy (10 days PT, WIAT-II, 0-98, high is good outcome

Study or Subgroup	Organisational/school Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Iseman 2011	86.1	23.6	14	79.4	43.6	13	100.0%	6.70 [-20.03, 33.43]
Total (95% CI)			**14**			**13**	**100.0%**	**6.70 [-20.03, 33.43]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.49 (P = 0.62)

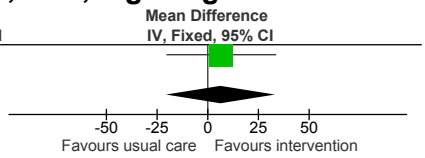
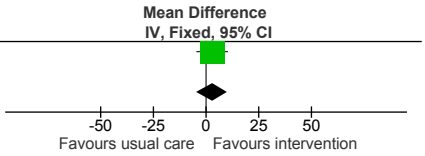


Figure 128: Academic performance (8 weeks PT, parent rated APRS, total, 19-95, High is good outcome)

Study or Subgroup	Organisational/school Mean	SD	Total	Waitlist/usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Langberg 2008	63.83	10.4	24	60.92	10.8	13	100.0%	2.91 [-4.29, 10.11]
Total (95% CI)			**24**			**13**	**100.0%**	**2.91 [-4.29, 10.11]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.79 (P = 0.43)



E.2.8 Parent/family training & organisation/school based versus waitlist/usual care

Figure 129: ADHD symptoms total (3 years FU, SNAP, 0-3, high is poor outcome)

Study or Subgroup	Family/School-based Mean	SD	Total	Usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Anon 1999 (Jensen 2007)	1.27	0.57	127	1.26	0.61	116	100.0%	0.01 [-0.14, 0.16]
Total (95% CI)			**127**			**116**	**100.0%**	**0.01 [-0.14, 0.16]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.13 (P = 0.90)

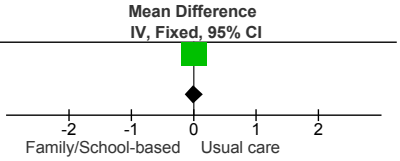


Figure 130: ADHD symptoms inattention (39-60 weeks PT, parent rated disruptive behaviour disorder, SNAP, high is poor outcome)

Study or Subgroup	PT/FT + Organisational Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Std. Mean Difference IV, Fixed, 95% CI
Anon 1999	1.4	0.68	139	1.49	0.67	130	89.3%	-0.13 [-0.37, 0.11]
Evans 2014	17.3	5.4	24	17.8	5.3	12	10.7%	-0.09 [-0.78, 0.60]
Total (95% CI)			**163**			**142**	**100.0%**	**-0.13 [-0.35, 0.10]**

Heterogeneity: Chi² = 0.01, df = 1 (P = 0.91); I² = 0%
Test for overall effect: Z = 1.11 (P = 0.27)

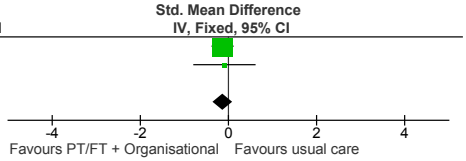


Figure 131: ADHD symptoms inattention (60 weeks PT, teacher rated SNAP, 0-3, high is poor outcome)

Study or Subgroup	Family/School-based Mean	SD	Total	Usual care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Anon 1999	1.47	0.81	119	1.48	0.52	128	100.0%	-0.01 [-0.18, 0.16]
Total (95% CI)			**119**			**128**	**100.0%**	**-0.01 [-0.18, 0.16]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.11 (P = 0.91)

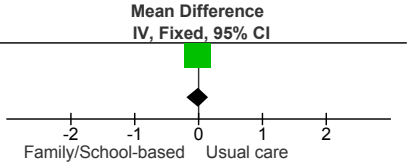


Figure 132: ADHD symptoms hyperactivity/Impulsivity (39-60 weeks PT, parents rated disruptive behaviour disorder, SNAP, high is poor outcome)

Study or Subgroup	PT/FT + Organisational Mean	SD	Total	Waitlist/Usual Care Mean	SD	Total	Weight	Std. Mean Difference IV, Fixed, 95% CI
Anon 1999	1.24	0.72	129	1.35	0.72	130	89.0%	-0.15 [-0.40, 0.09]
Evans 2014	10.6	5.4	24	11.4	5.5	12	11.0%	-0.14 [-0.84, 0.55]
Total (95% CI)			**153**			**142**	**100.0%**	**-0.15 [-0.38, 0.08]**

Heterogeneity: Chi² = 0.00, df = 1 (P = 0.98); I² = 0%
Test for overall effect: Z = 1.29 (P = 0.20)

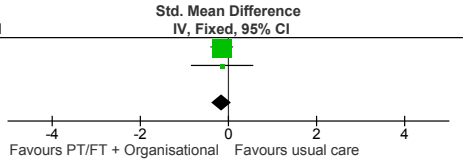


Figure 133: ADHD symptoms hyperactivity/Impulsivity (60 weeks PT, teacher rated SNAP, 0-3, high is poor outcome)

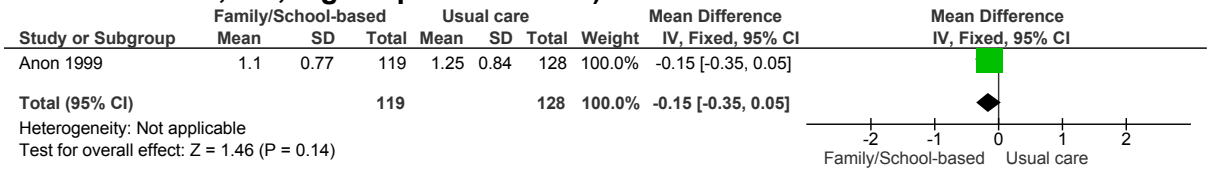


Figure 134: ADHD symptoms hyperactivity (60 weeks PT, classroom observer, unclear range, high is poor outcome)

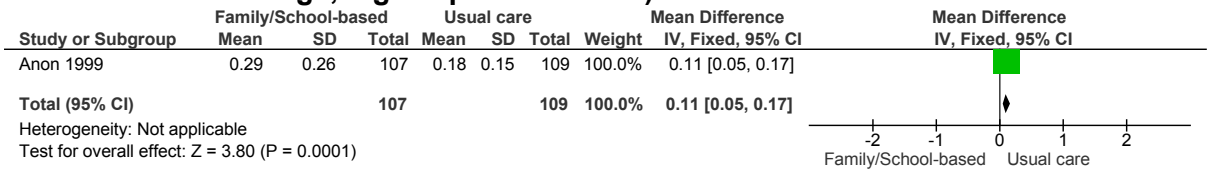


Figure 135: Function/behaviour - ODD (60 weeks PT, parent rated SNAP, 0-3, high is poor outcome)

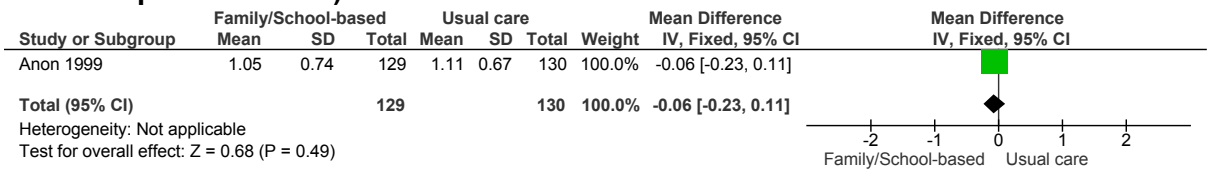


Figure 136: Function/behaviour ODD (60 weeks PT, teacher rated SNAP, 0-3, high is poor outcome)

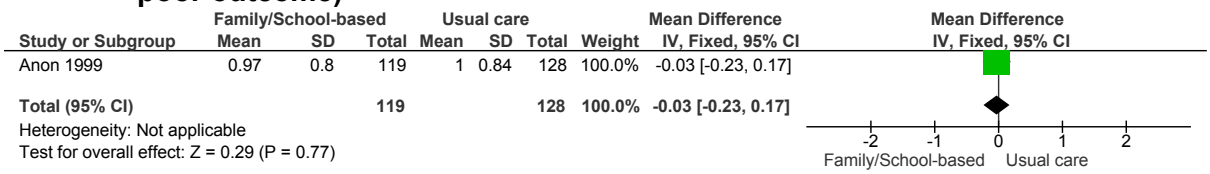


Figure 137: Function/behaviour - ODD aggression (60 weeks PT, classroom observer, unclear range, high is poor outcome)

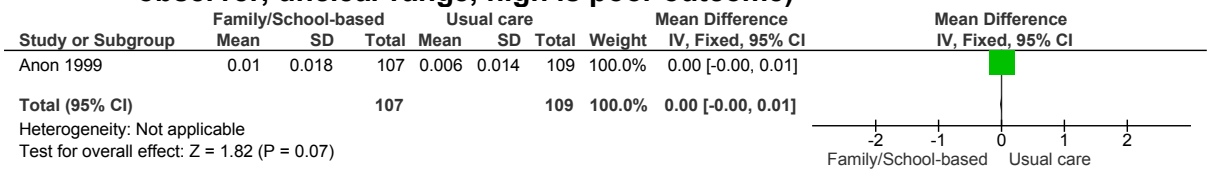


Figure 138: Social skills (60 weeks PT, parent rated Social skills rating system internalising subscale, high is poor outcome)

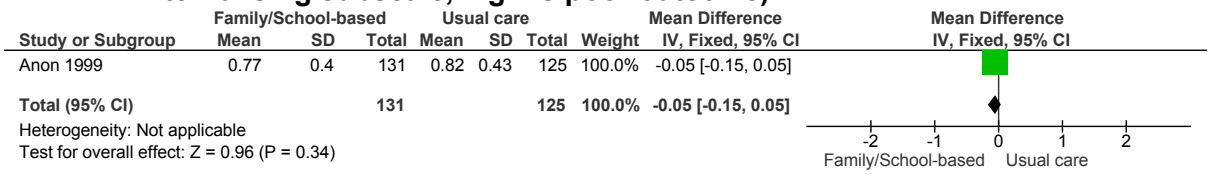


Figure 139: Social skills (60 weeks PT, teacher rated Social skills rating system internalising subscale, unclear range, high is poor outcome)

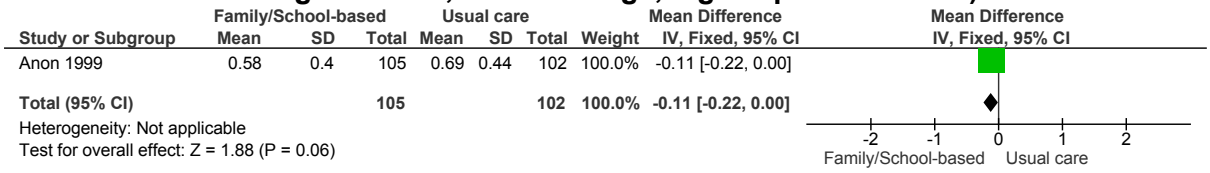


Figure 140: Academic - Literacy (3 years FU, WIAT, 0-132, high is good outcome)

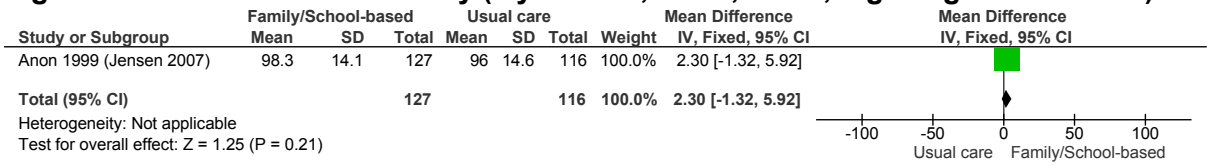


Figure 141: Academic (39 weeks PT, Teacher rated Classroom performance survey scale, unclear range, high is poor outcome)

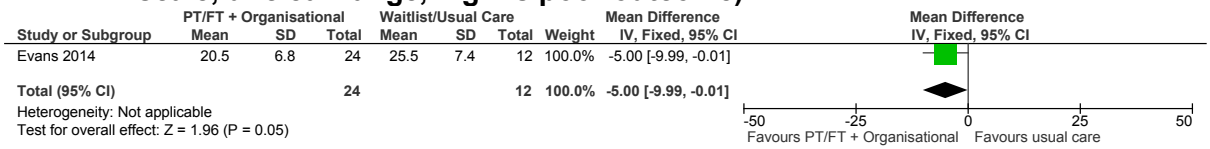


Figure 142: Academic - Literacy (60 weeks PT, Wechsler Individual Achievement Test, 69-130, high is good outcome)

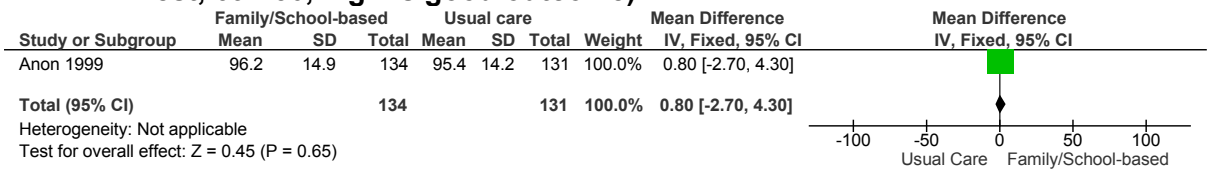
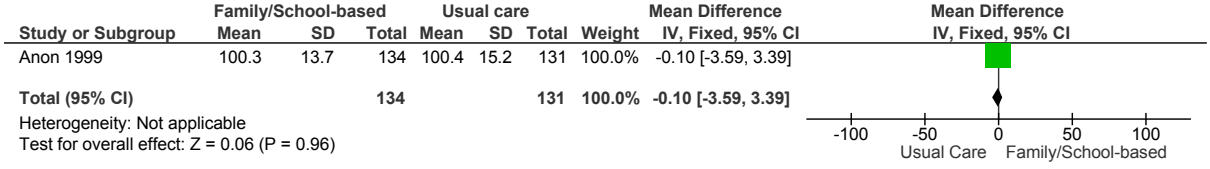


Figure 143: Academic - Numeracy (60 weeks PT, Wechsler Individual Achievement Test, 69-130, high is good outcome



E.2.9 Cognitive Training & Exercise versus waitlist/usual care

Figure 144: ADHD symptoms total (15 weeks PT, clinician rated SNAP, unclear range, high is poor outcome)

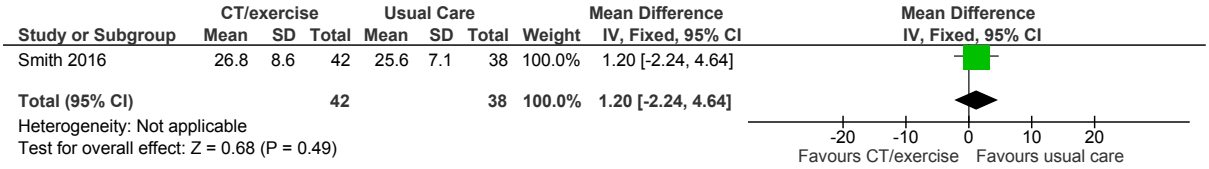


Figure 145: ADHD symptoms total (15 weeks PT, parent rated SNAP, unclear range, high is poor outcome)

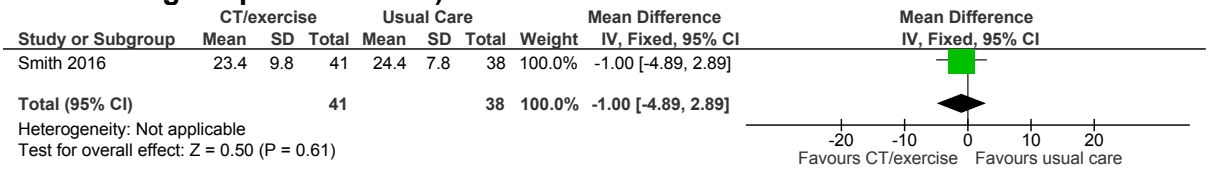
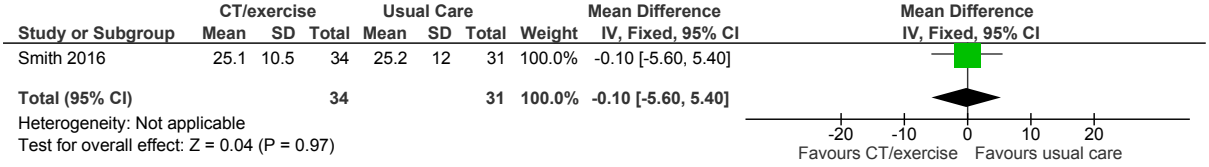


Figure 146: ADHD symptoms total (15 weeks PT, teacher rated SNAP, unclear range, high is poor outcome)



E.2.10 CBT/DBT versus Non-specific supportive therapy

Figure 147: ADHD symptoms inattention (17 weeks PT, parent rated Revised behaviour problem checklist, 0-27, high is poor outcome)

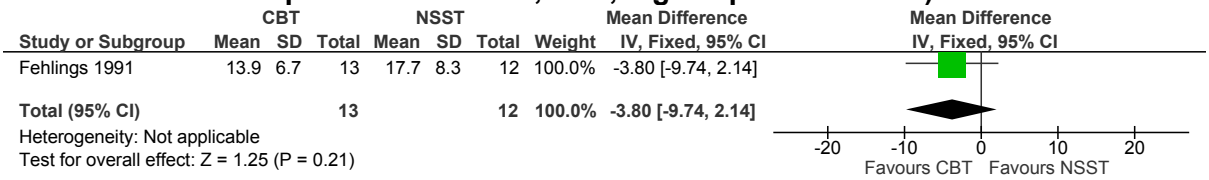


Figure 148: ADHD symptoms inattention (39 weeks FU, parent rated Revised behaviour problem checklist, 0-27, high is poor outcome)

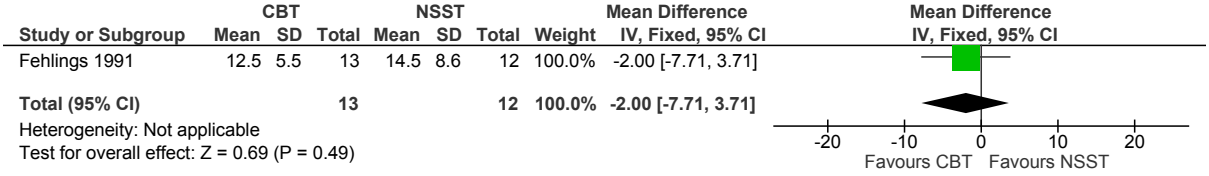


Figure 149: ADHD symptoms inattention (17 weeks PT, teacher rated Revised behaviour problem checklist, 0-27, high is poor outcome)

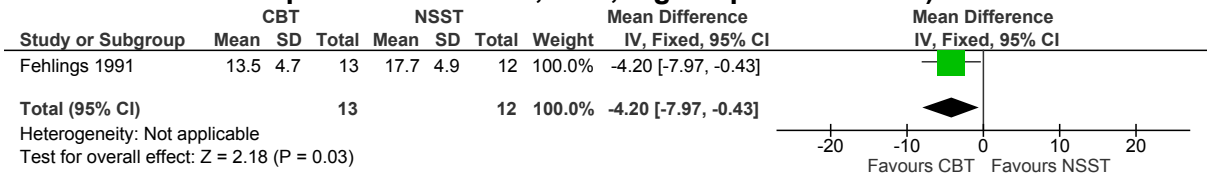


Figure 150: ADHD symptoms inattention (39 weeks FU, teacher rated Revised behaviour problem checklist, 0-27, high is poor outcome)

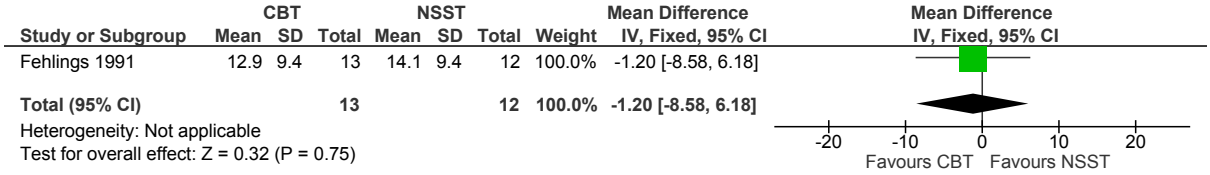


Figure 151: ADHD symptoms hyperactivity/Impulsivity (17 weeks PT, parent rated modified Werry Weiss Activity scale, 0-100, high is poor outcome)

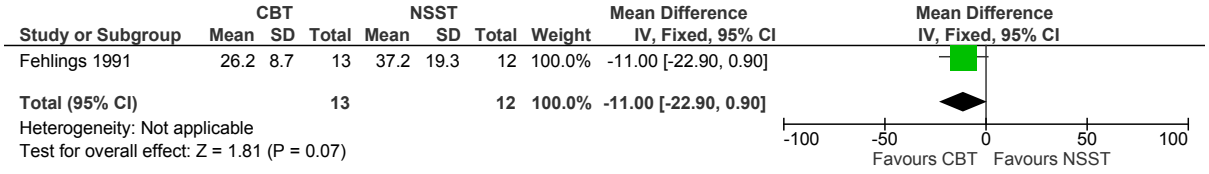
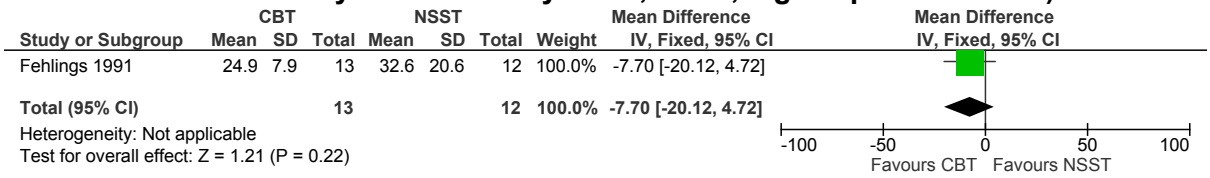


Figure 152: ADHD symptoms hyperactivity/Impulsivity (39 weeks FU, parent rated modified Werry Weiss Activity scale, 0-100, high is poor outcome)



E.2.11 Organisational/school based versus Non-specific supportive therapy

Figure 153: Function/behaviour (10 weeks PT, adolescent rated Aggression and Conduct Problems Scale, 0-27, high is poor outcome)

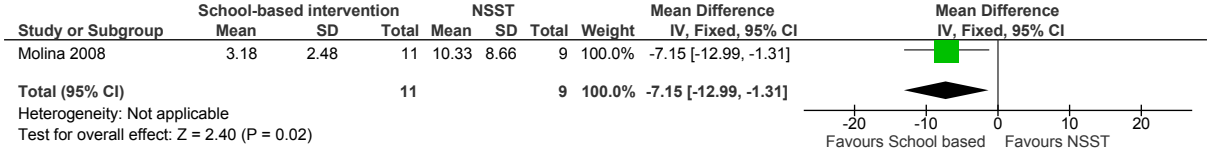
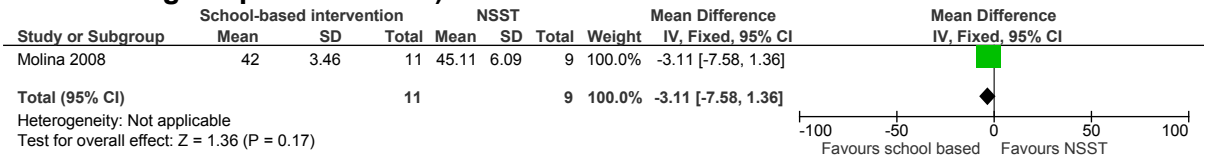


Figure 154: Emotional dysregulation (10 weeks PT, adolescent rated BASC-I, 0-100, high is poor outcome)



E.2.12 Neurofeedback versus Sham

Figure 155: ADHD symptoms total (15 weeks PT, teacher rated ADHD-RS-IV , 0-54, high is poor outcome)

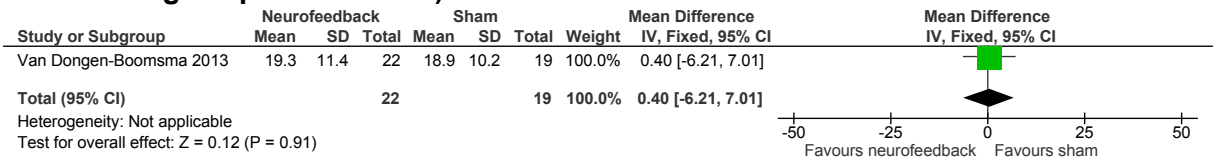


Figure 156: ADHD symptoms total (15 weeks PT, investigator rated ADHD-RS-IV , 0-54, high is poor outcome)

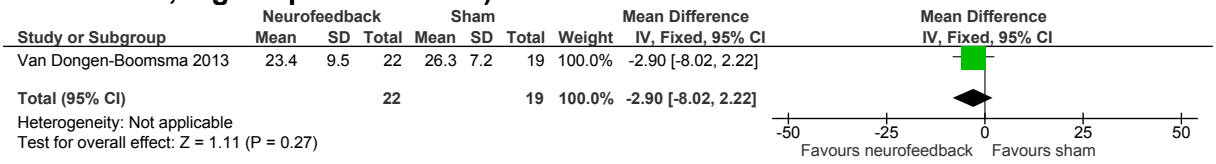


Figure 157: ADHD symptoms inattention (15 weeks PT, teacher rated ADHD-RS-IV inattention, 0-27, high is poor outcome)

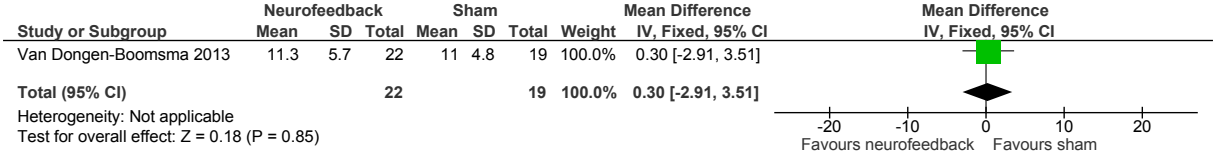


Figure 158: ADHD symptoms inattention (15-17 weeks PT, investigator rated ADHD-RS-IV inattention, ADHD DSM-IV, high is poor outcome)

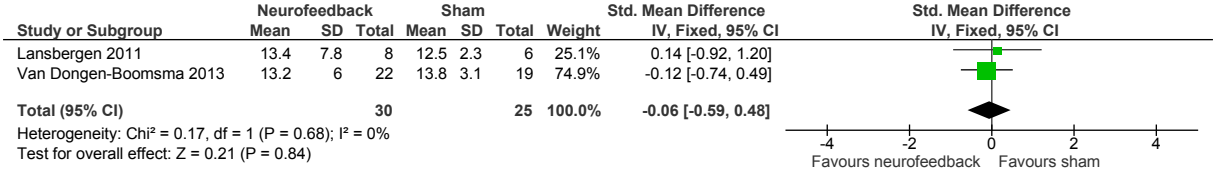


Figure 159: ADHD symptoms hyperactivity (15 weeks PT, teacher rated ADHD-RS-IV hyperactivity, 0-27, high is poor outcome)

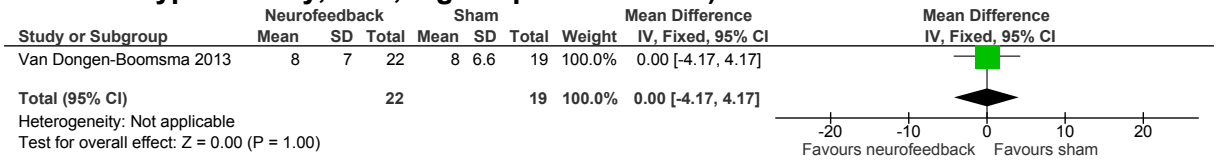


Figure 160: ADHD symptoms hyperactivity (15-17 weeks PT, investigator rated ADHD-RS-IV hyperactivity, ADHD DSM-IV, high is poor outcome)

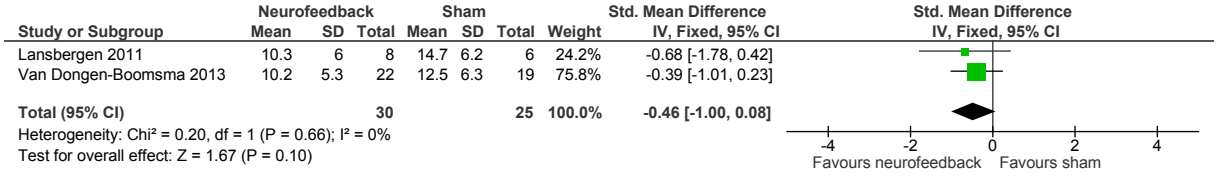


Figure 161: CGI-I ~ much improved or very much improved (43 weeks FU, investigator rated, high is good outcome)

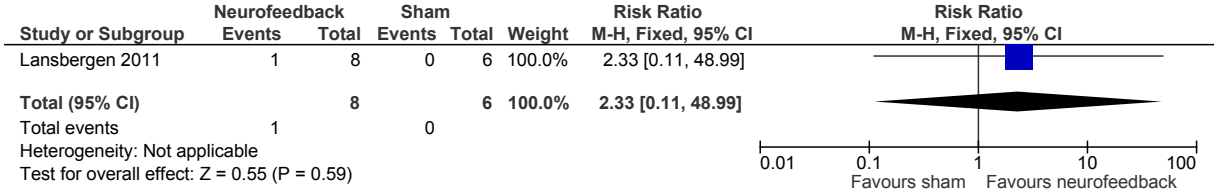
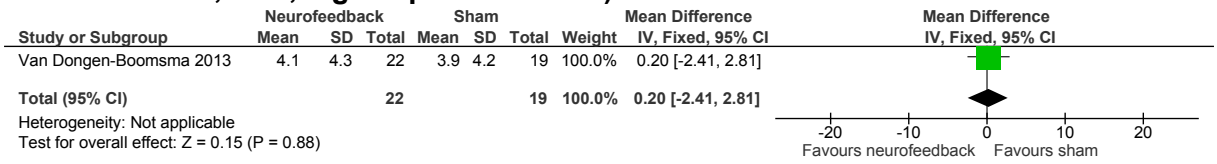


Figure 162: Serious adverse events (15 weeks PT, Pittsburgh Side Effects Rating Scale, 0-27, high is poor outcome)



E.2.13 Neurofeedback versus Exercise

Figure 163: ADHD symptoms hyperactivity, (10-12 weeks PT, parent rated, SWAN, 0-3, higher is poorer)

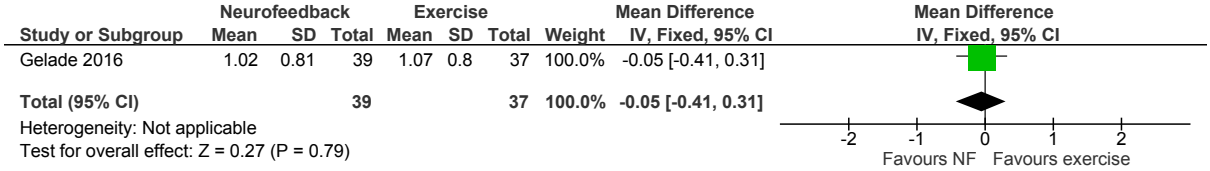


Figure 164: ADHD symptoms hyperactivity, (10-12 weeks PT, teacher rated, SWAN, 0-3, higher is poorer)

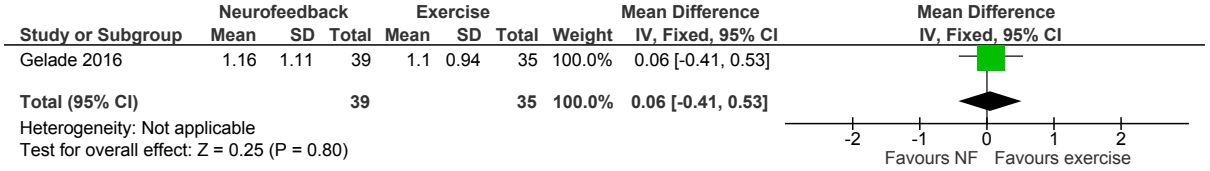


Figure 165: ADHD symptoms inattention (10-12 weeks PT, parent rated SWAN, 0-3, high is poor outcome)

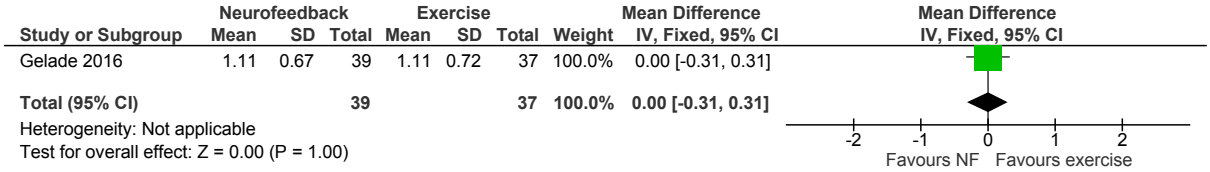


Figure 166: ADHD symptoms inattention (10-12 weeks PT, teacher rated SWAN, 0-3, high is poor outcome)

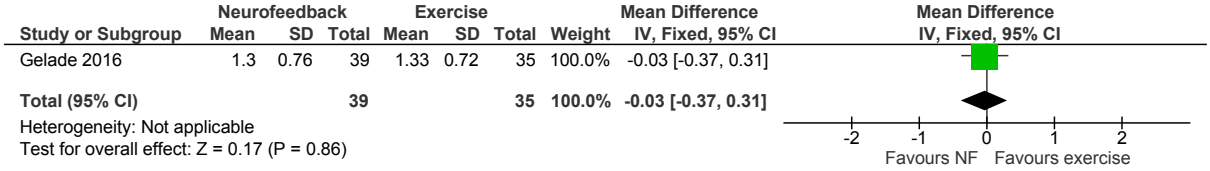


Figure 167: Function/Behaviour (10-12 weeks PT, parent reported SDQ, 0-40, high is poor outcome)

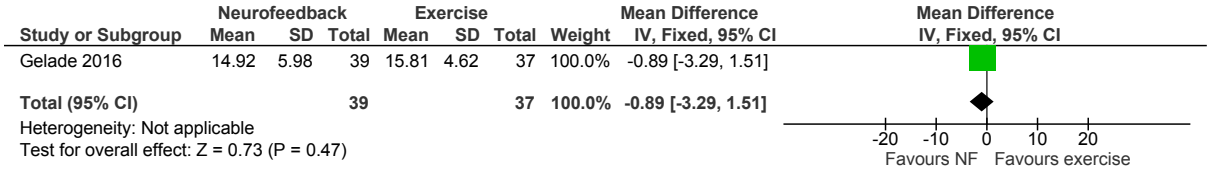
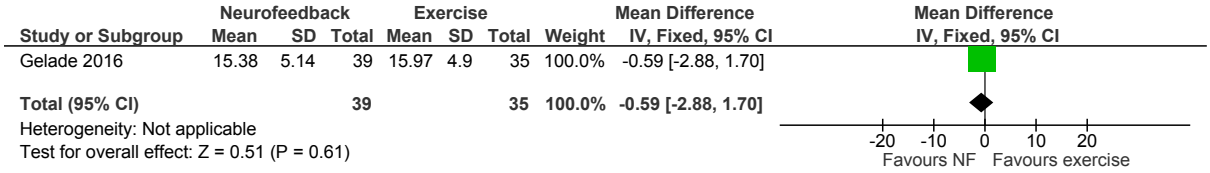


Figure 168: Function/Behaviour (10-12 weeks PT, teacher reported SDQ, 0-40, high is poor outcome)



E.2.14 Parent/family training versus relaxation

Figure 169: ADHD symptoms hyperactivity/Impulsivity (12 weeks PT, parent rated CBCL, 0-106, high is poor outcome)

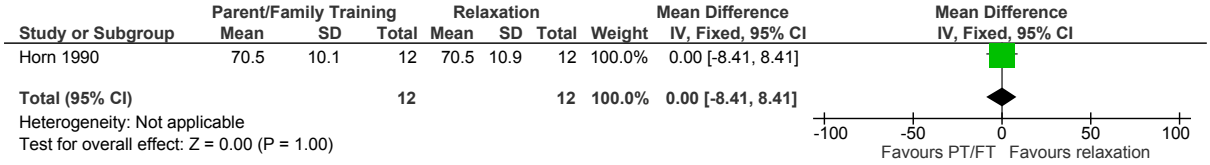


Figure 170: ADHD symptoms hyperactivity/Impulsivity (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome)

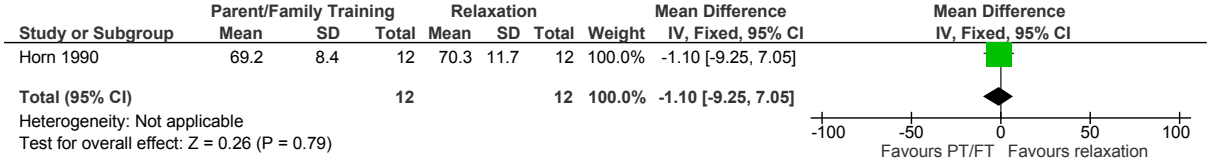


Figure 171: ADHD symptoms hyperactivity/Impulsivity (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome)

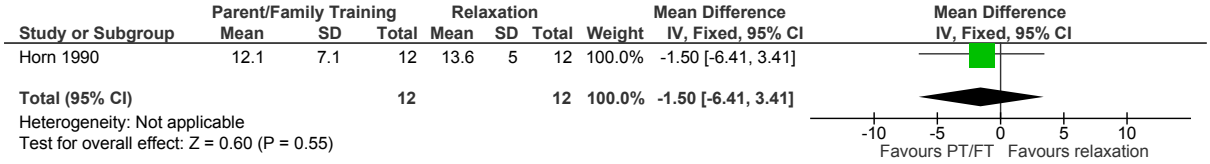


Figure 172: ADHD symptoms hyperactivity/Impulsivity (47 weeks FU, teacher rated CTRS, 0-15, high is poor outcome)

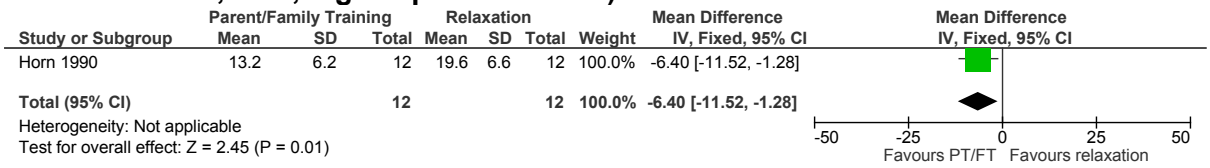


Figure 173: Function/behaviour (12 weeks PT, parent rated CBCL, 0-106, high is poor outcome)

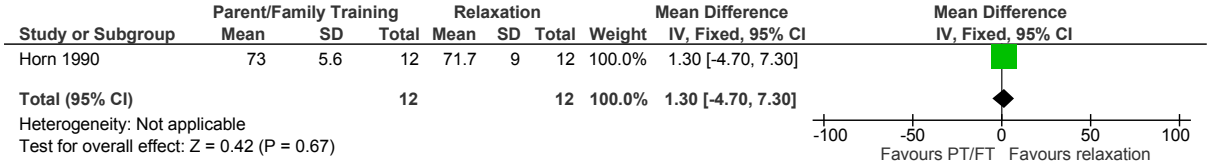


Figure 174: Function/behaviour (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome)

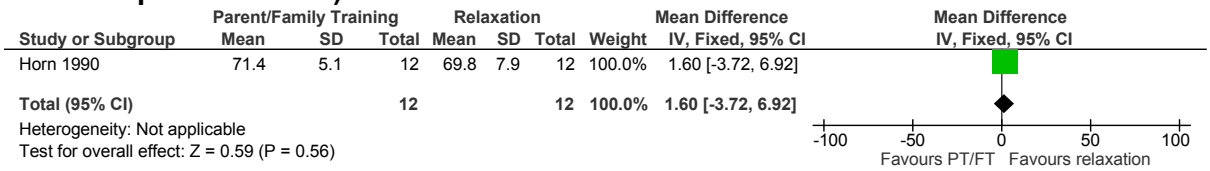


Figure 175: Function/behaviour (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome)

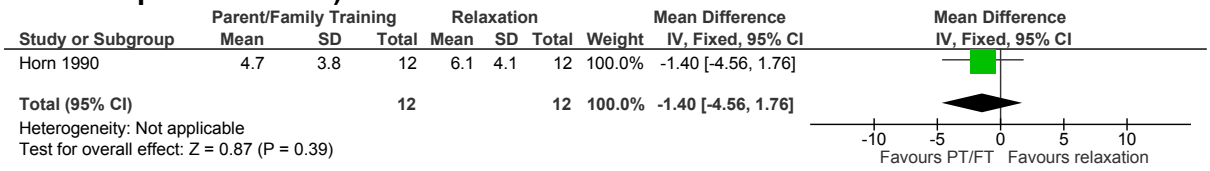


Figure 176: Function/behaviour (47 weeks FU, teacher rated CTRS, 0-15, high is poor outcome)

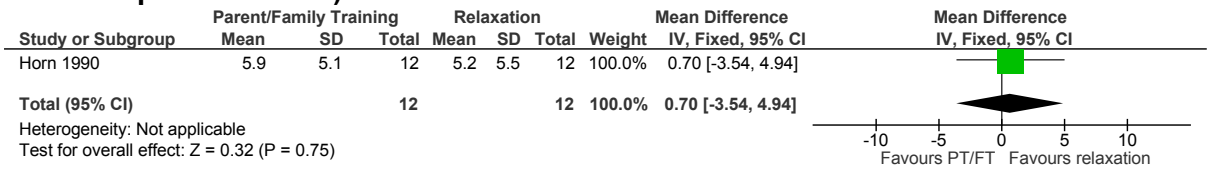


Figure 177: Academic - Literacy (12 weeks PT, WRAT-R, 55-145, high is good outcome)

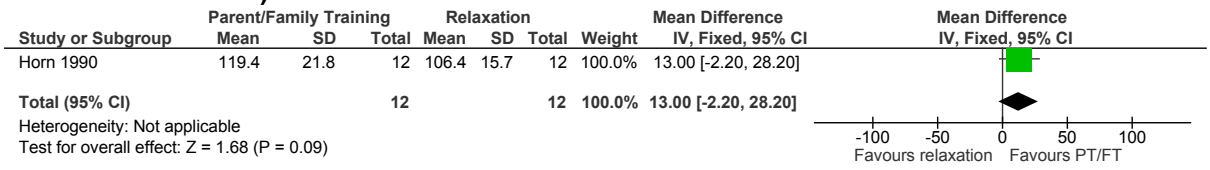


Figure 178: Academic - Literacy (47 weeks FU, WRAT-R, 55-145, high is good outcome)

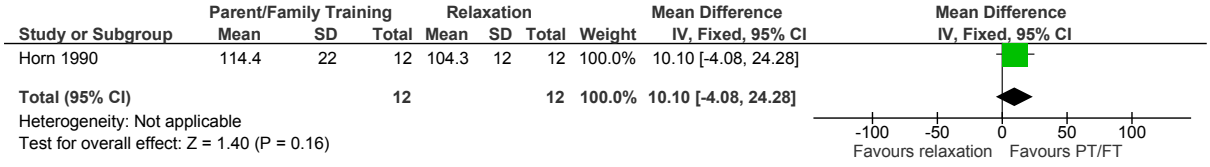


Figure 179: Academic - Numeracy (12 weeks PT, WRAT-R, 0-145, high is good outcome)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Relaxation Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Horn 1990	103.3	3.8	12	95.2	9	12	100.0%	8.10 [2.57, 13.63]
Total (95% CI)			**12**			**12**	**100.0%**	**8.10 [2.57, 13.63]**

Heterogeneity: Not applicable
Test for overall effect: Z = 2.87 (P = 0.004)

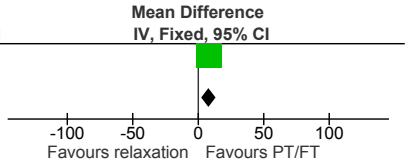
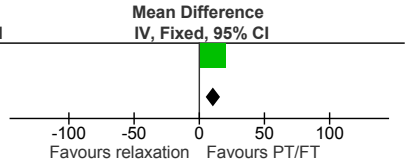


Figure 180: Academic - Numeracy (47 weeks FU, WRAT-R, 0-145, high is good outcome)

Study or Subgroup	Parent/Family Training Mean	SD	Total	Relaxation Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Horn 1990	99.3	5.1	12	88.6	8	12	100.0%	10.70 [5.33, 16.07]
Total (95% CI)			**12**			**12**	**100.0%**	**10.70 [5.33, 16.07]**

Heterogeneity: Not applicable
Test for overall effect: Z = 3.91 (P < 0.0001)



E.2.15 Parent/family training versus psychoeducation

Figure 181: Academic (26 weeks FU, teacher rated APRS questionnaire, 0-5, high is good outcome)

Study or Subgroup	Parent/Family training Mean	SD	Total	Psychoeducation Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Power 2012	3.51	0.64	92	3.36	0.76	96	100.0%	0.15 [-0.05, 0.35]
Total (95% CI)			**92**			**96**	**100.0%**	**0.15 [-0.05, 0.35]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.47 (P = 0.14)

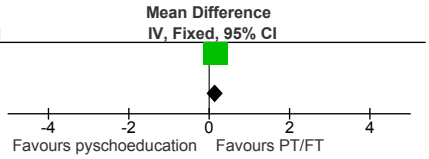
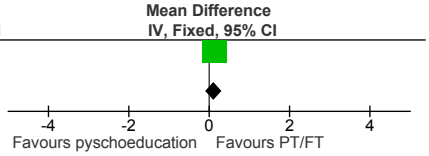


Figure 182: Academic (12 weeks PT, teacher rated APRS questionnaire, 0-5, high is good outcome)

Study or Subgroup	Parent/Family training Mean	SD	Total	Psychoeducation Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Power 2012	3.32	0.65	92	3.2	0.68	96	100.0%	0.12 [-0.07, 0.31]
Total (95% CI)			**92**			**96**	**100.0%**	**0.12 [-0.07, 0.31]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.24 (P = 0.22)



E.2.16 Neurofeedback versus attention/memory/cognitive training

Figure 183: ADHD symptoms total (3-4 weeks PT, parent rated German ADHD rating scale, 0-3, high is poor outcome)

Study or Subgroup	Neurofeedback Mean	SD	Total	Attention/memory/cognitive training Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Gevensleben 2009	-0.39	0.37	59	-0.14	0.44	35	100.0%	-0.25 [-0.42, -0.08]
Total (95% CI)			**59**			**35**	**100.0%**	**-0.25 [-0.42, -0.08]**

Heterogeneity: Not applicable
Test for overall effect: Z = 2.82 (P = 0.005)

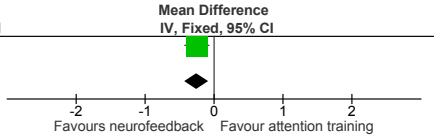


Figure 184: ADHD symptoms total (26 weeks FU, parent rated German ADHD rating scale, 0-3, high is poor outcome)

Study or Subgroup	Neurofeedback Mean	SD	Total	Attention/memory/cognitive training Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Gevensleben 2009	1.08	0.51	38	1.24	0.66	23	100.0%	-0.16 [-0.47, 0.15]
Total (95% CI)			**38**			**23**	**100.0%**	**-0.16 [-0.47, 0.15]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.00 (P = 0.32)

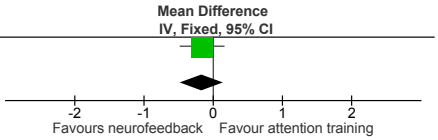


Figure 185: ADHD symptoms total (3-4 weeks PT, teacher rated German ADHD rating scale, 0-3, high is poor outcome)

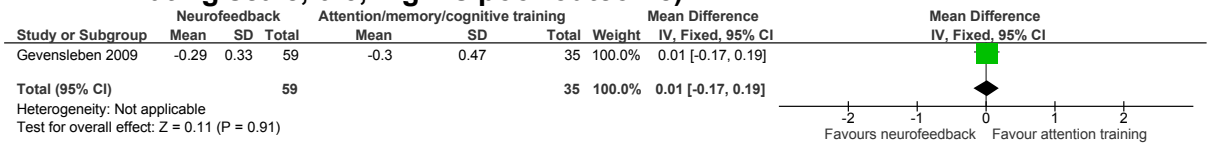


Figure 186: ADHD symptoms inattention (3-4 weeks PT, parent rated German ADHD rating scale, 0-3, high is poor outcome)

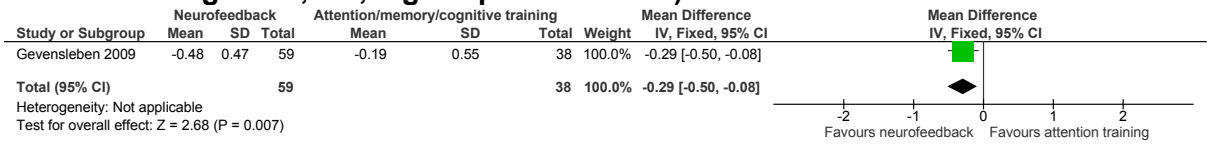


Figure 187: ADHD symptoms inattention (17-20 weeks PT, parent rated Conners Rating Scales–Revised, high is poor outcome)

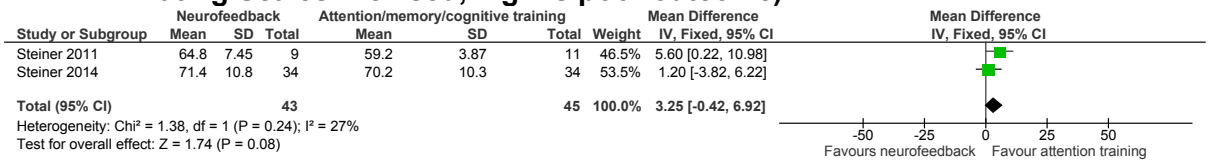


Figure 188: ADHD symptoms inattention (24 weeks FU, parent rated Conners 3-P, 0-84, high is poor outcome)

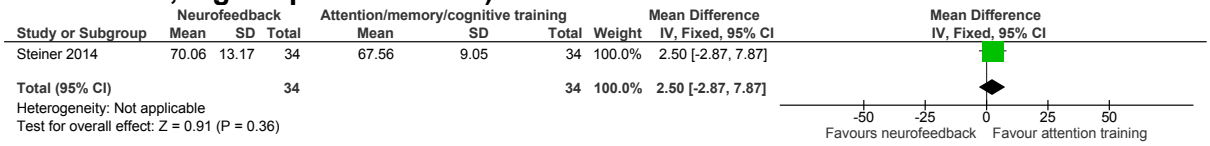


Figure 189: ADHD symptoms inattention (26 weeks FU, parent rated German ADHD rating scale, 0-3, high is poor outcome)

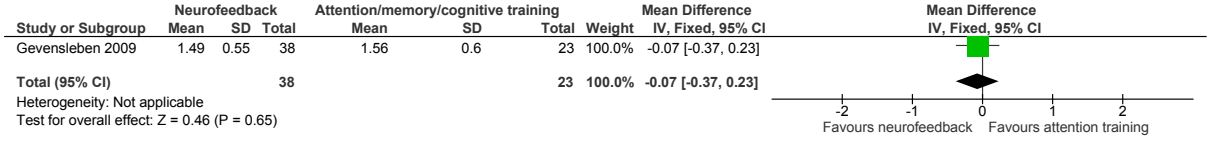


Figure 190: ADHD symptoms inattention (3-4 weeks PT, teacher rated German ADHD rating scale, Conners 3-T, 0-3, high is poor outcome)

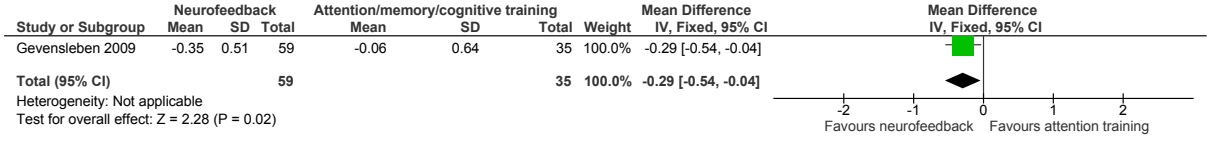


Figure 191: ADHD symptoms inattention (17-20 weeks PT, teacher rated, Conners 3-T, high is poor outcome)

Study or Subgroup	Neurofeedback Mean	SD	Total	Attention/memory/cognitive training Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Steiner 2011	55.4	11.6	9	55.7	10.2	11	20.6%	-0.30 [-9.98, 9.38]
Steiner 2014	65.5	11.6	34	67.6	9	34	79.4%	-2.10 [-7.04, 2.84]
Total (95% CI)			**43**			**45**	**100.0%**	**-1.73 [-6.13, 2.67]**

Heterogeneity: Chi² = 0.11, df = 1 (P = 0.75); I² = 0%
Test for overall effect: Z = 0.77 (P = 0.44)

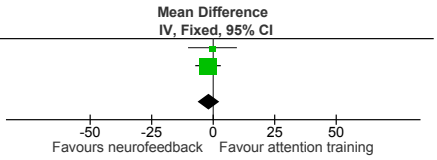


Figure 192: ADHD symptoms hyperactivity/Impulsivity (3-4 weeks PT, parent rated German ADHD scale, 0-3, high is poor outcome)

Study or Subgroup	Neurofeedback Mean	SD	Total	Attention/memory/cognitive training Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Gevensleben 2009	-0.31	0.44	59	-0.12	0.42	35	100.0%	-0.19 [-0.37, -0.01]
Total (95% CI)			**59**			**35**	**100.0%**	**-0.19 [-0.37, -0.01]**

Heterogeneity: Not applicable
Test for overall effect: Z = 2.08 (P = 0.04)

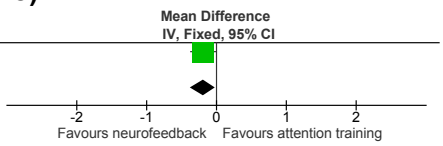


Figure 193: ADHD symptoms hyperactivity/Impulsivity (17-20 weeks PT, parent rated Conners Rating Scales–Revised, high is poor outcome)

Study or Subgroup	Neurofeedback Mean	SD	Total	Attention/memory/cognitive training Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Steiner 2011	67.65	19.35	9	59.7	13.29	11	18.8%	7.95 [-6.93, 22.83]
Steiner 2014	72.73	14.38	34	73.07	15.75	34	81.2%	-0.34 [-7.51, 6.83]
Total (95% CI)			**43**			**45**	**100.0%**	**1.22 [-5.24, 7.68]**

Heterogeneity: Chi² = 0.97, df = 1 (P = 0.33); I² = 0%
Test for overall effect: Z = 0.37 (P = 0.71)

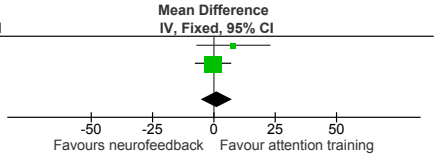


Figure 194: ADHD symptoms hyperactivity/Impulsivity (24 weeks FU, parent rated Conners 3-P, 0-84, high is poor outcome)

Study or Subgroup	Neurofeedback Mean	SD	Total	Attention/memory/cognitive training Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Steiner 2014	72.36	16.34	34	72.19	12.92	34	100.0%	0.17 [-6.83, 7.17]
Total (95% CI)			**34**			**34**	**100.0%**	**0.17 [-6.83, 7.17]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.05 (P = 0.96)

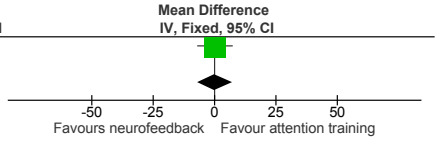


Figure 195: ADHD symptoms hyperactivity/Impulsivity (26 weeks FU, parent rated German ADHD rating scale, 0-3, high is poor outcome)

Study or Subgroup	Neurofeedback Mean	SD	Total	Attention/memory/cognitive training Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Gevensleben 2009	0.76	0.68	38	1	0.78	23	100.0%	-0.24 [-0.63, 0.15]
Total (95% CI)			**38**			**23**	**100.0%**	**-0.24 [-0.63, 0.15]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.22 (P = 0.22)

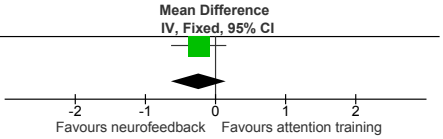


Figure 196: ADHD symptoms hyperactivity/Impulsivity (3-4 weeks PT, teacher rated German ADHD rating scale, 0-3, high is poor outcome)

Study or Subgroup	Neurofeedback Mean	SD	Total	Attention/memory/cognitive training Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Gevensleben 2009	-0.21	0.42	59	-0.01	0.59	35	100.0%	-0.20 [-0.42, 0.02]
Total (95% CI)			**59**			**35**	**100.0%**	**-0.20 [-0.42, 0.02]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.76 (P = 0.08)

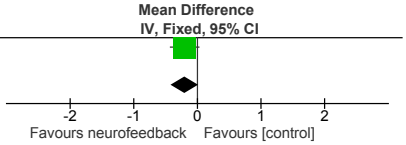


Figure 197: ADHD symptoms hyperactivity/Impulsivity (17 weeks PT, teacher rated Conners 3-T rating scale, 0-84, high is poor outcome)

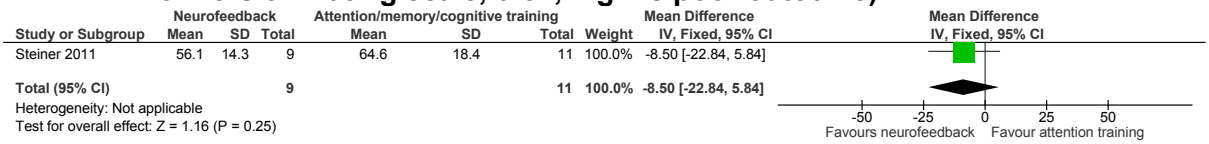


Figure 198: Function/Behaviour (3-4 weeks PT, parent rated Oppositional defiant/conduct disorders scale, 0-3, high is poor outcome)

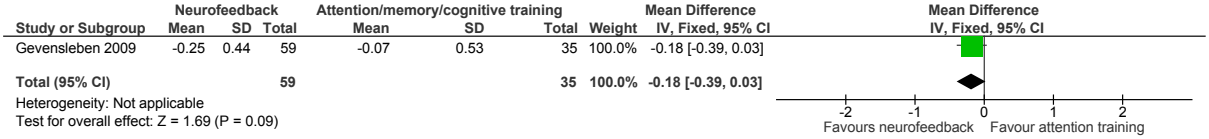


Figure 199: Function/Behaviour (5 months PT, parent rated BRIEF, global executive subscale 0-100, high is poor outcome)

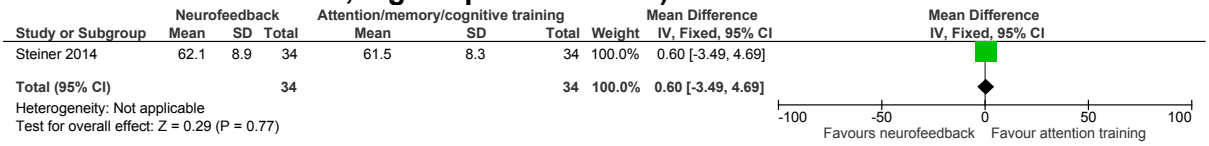


Figure 200: Function/Behaviour (24 weeks FU, parent rated BRIEF, global executive subscale 0-100, high is poor outcome)

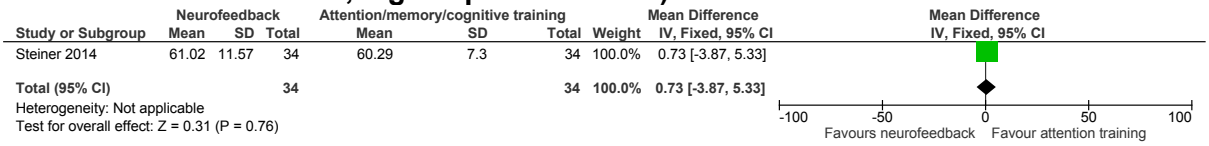


Figure 201: Function/Behaviour (26 weeks FU, parent rated German ADHD scale, 0-3, high is poor outcome)

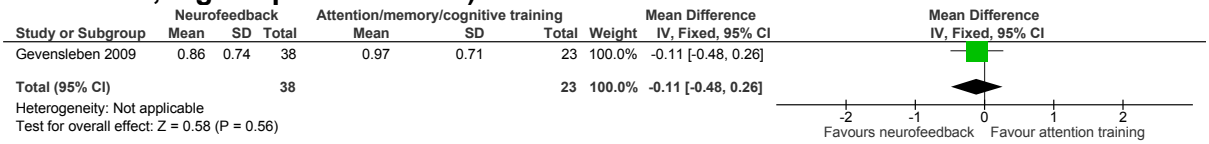


Figure 202: Function/Behaviour (3-4 weeks PT, teacher rated German rating scale for oppositional defiant disorders, 0-3, high is poor outcome)

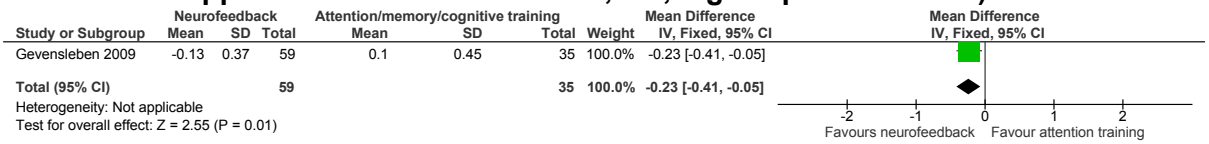


Figure 203: Function/Behaviour (5 months PT, investigator rated BOSS scale, 0-100, high is good outcome)

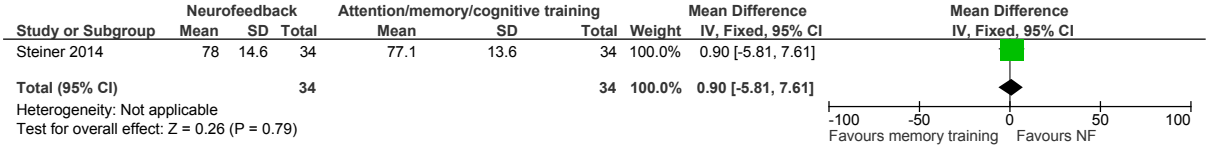


Figure 204: Function/Behaviour (6 months FU, investigator rated BOSS scale, 0-100, high is good outcome)

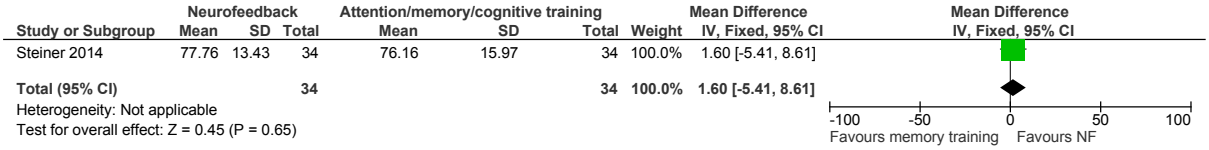


Figure 205: Emotional dysregulation (3-4 weeks PT, parents rated SDQ questionnaire, 0-10, high is poor outcome)

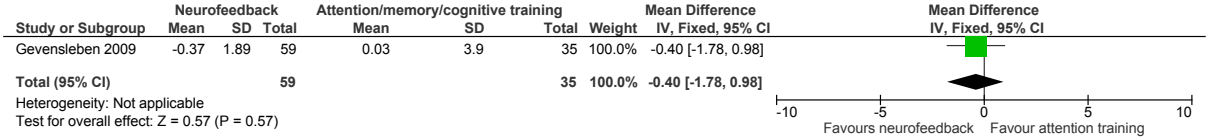
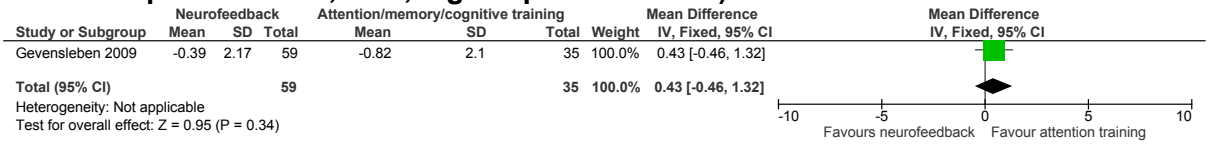


Figure 206: Emotional dysregulation (3-4 weeks PT, teacher rated SDQ questionnaire, 0-10, high is poor outcome)



E.2.17 Neurofeedback versus psychoeducation

Figure 207: ADHD symptoms inattention (17 weeks PT, parent rated Conners-3P, 0-15, high is poor outcome)

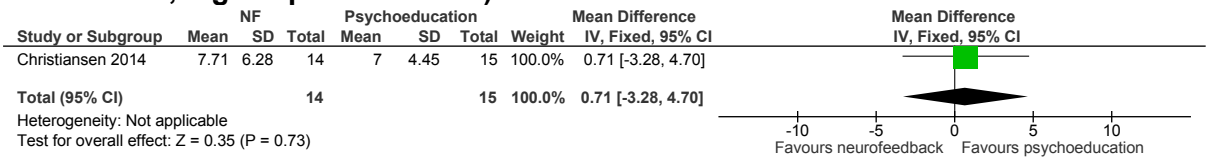
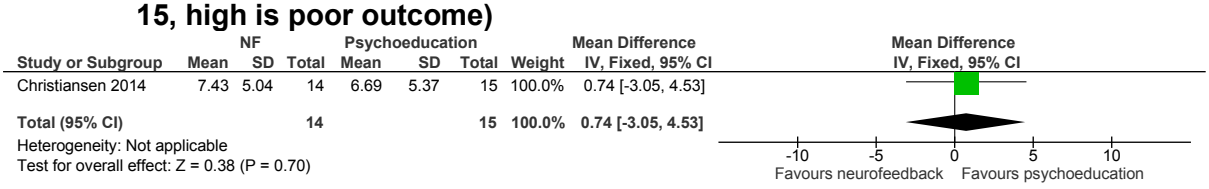


Figure 208: ADHD symptoms inattention (17 weeks PT, teacher rated Conners-3P, 0-15, high is poor outcome)



E.2.18 Parent/family training & relaxation versus parent/family training

Figure 209: ADHD symptoms hyperactivity/Impulsivity (12 weeks PT, parent rated CBCL, 0-106, high is poor outcome)

Study or Subgroup	PT/FT & Relaxation Mean	SD	Total	Parent/Family Training Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Horn 1990	64.5	7.1	11	70.5	10.1	12	100.0%	-6.00 [-13.09, 1.09]
Total (95% CI)			**11**			**12**	**100.0%**	**-6.00 [-13.09, 1.09]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.66 (P = 0.10)

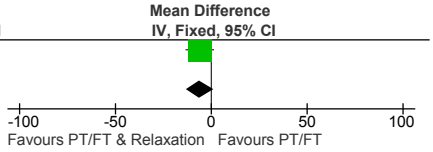


Figure 210: ADHD symptoms hyperactivity/Impulsivity (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome)

Study or Subgroup	PT/FT & Relaxation Mean	SD	Total	Parent/Family Training Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Horn 1990	63.7	4.9	11	69.2	8.4	12	100.0%	-5.50 [-11.07, 0.07]
Total (95% CI)			**11**			**12**	**100.0%**	**-5.50 [-11.07, 0.07]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.94 (P = 0.05)

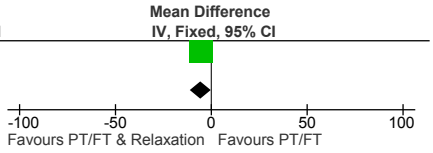


Figure 211: ADHD symptoms hyperactivity/Impulsivity (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome)

Study or Subgroup	PT/FT & Relaxation Mean	SD	Total	Parent/Family Training Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Horn 1990	14.7	4.8	11	12.1	7.1	12	100.0%	2.60 [-2.32, 7.52]
Total (95% CI)			**11**			**12**	**100.0%**	**2.60 [-2.32, 7.52]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.04 (P = 0.30)

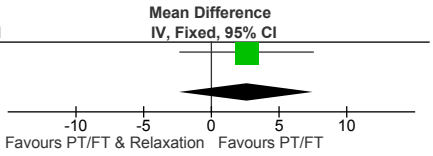


Figure 212: ADHD symptoms hyperactivity/Impulsivity (47 weeks FU, teacher rated CTRS, unclear range, high is poor outcome)

Study or Subgroup	PT/FT & Relaxation Mean	SD	Total	Parent/Family Training Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Horn 1990	16.2	7.6	11	13.2	6.2	12	100.0%	3.00 [-2.70, 8.70]
Total (95% CI)			**11**			**12**	**100.0%**	**3.00 [-2.70, 8.70]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.03 (P = 0.30)

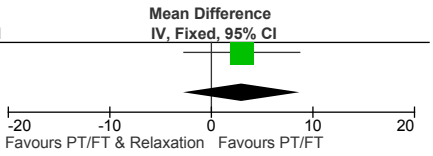


Figure 213: Function/behaviour (12 weeks PT, parent rated CBCL, 0-106, high is poor outcome)

Study or Subgroup	PT/FT & Relaxation Mean	SD	Total	Parent/Family Training Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Horn 1990	68.5	8.4	11	73	5.6	12	100.0%	-4.50 [-10.39, 1.39]
Total (95% CI)			**11**			**12**	**100.0%**	**-4.50 [-10.39, 1.39]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.50 (P = 0.13)

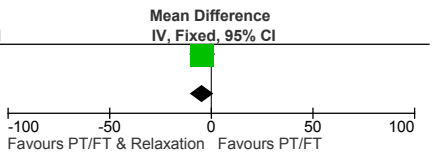


Figure 214: Function/behaviour (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome)

Study or Subgroup	PT/FT & Relaxation Mean	SD	Total	Parent/Family Training Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Horn 1990	65.6	5.9	11	71.4	5.1	12	100.0%	-5.80 [-10.33, -1.27]
Total (95% CI)			**11**			**12**	**100.0%**	**-5.80 [-10.33, -1.27]**

Heterogeneity: Not applicable
Test for overall effect: Z = 2.51 (P = 0.01)

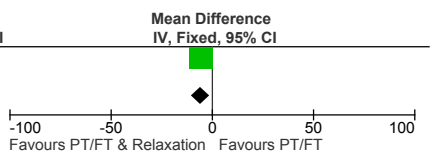


Figure 215: Function/behaviour (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome)

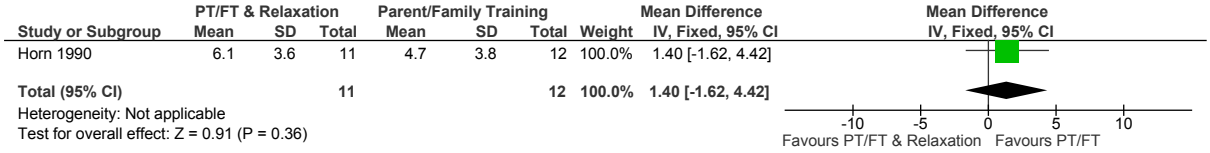


Figure 216: Function/behaviour (47 weeks FU, teacher rated CTRS, 0-15, high is poor outcome)

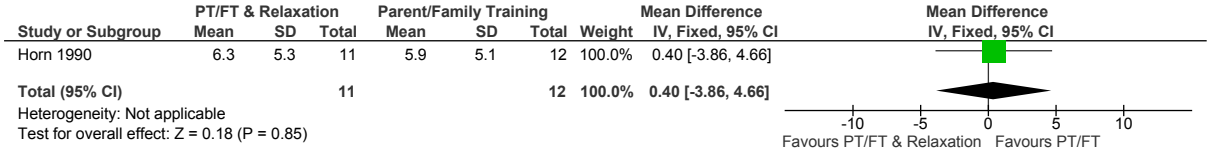


Figure 217: Academic - Literacy (12 weeks PT, WRAT-R, 55-145, high is good outcome)

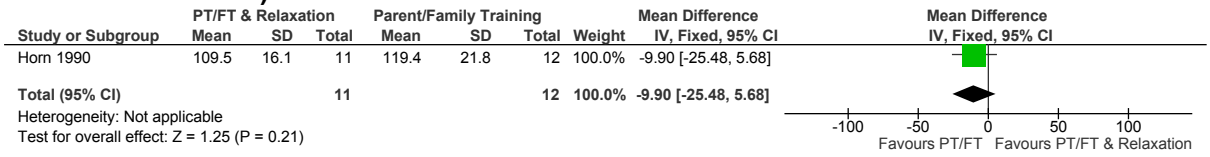


Figure 218: Academic - Literacy (47 weeks FU, WRAT-R, 55-145, high is good outcome)

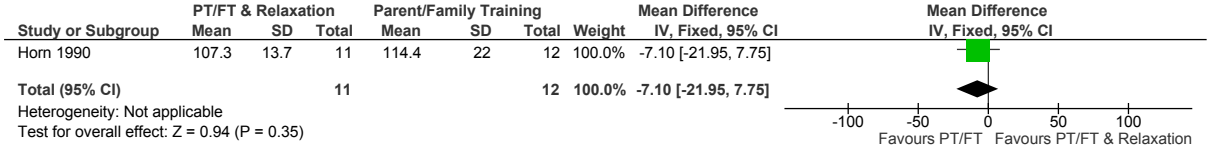


Figure 219: Academic - Numeracy (12 weeks PT, WRAT-R, 0-145, high is good outcome)

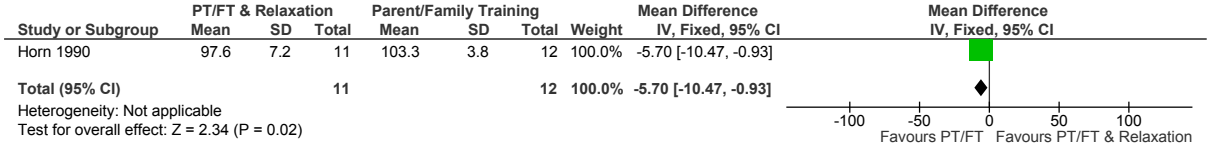
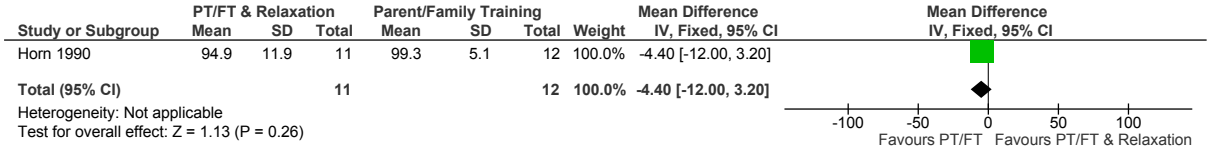


Figure 220: Academic - Numeracy (47 weeks FU, WRAT-R, 0-145, high is good outcome)



E.2.19 Parent/family training & relaxation versus relaxation

Figure 221: ADHD symptoms hyperactivity/Impulsivity (12 weeks PT, parent rated CBCL, 0-106, high is poor outcome)

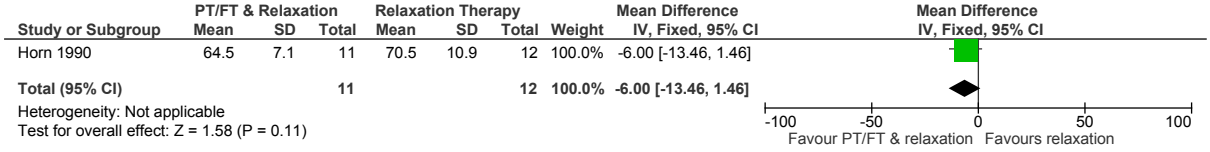


Figure 222: ADHD symptoms hyperactivity/Impulsivity (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome)

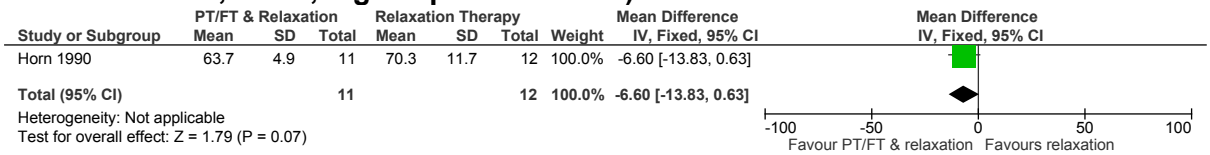


Figure 223: ADHD symptoms hyperactivity/Impulsivity (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome)

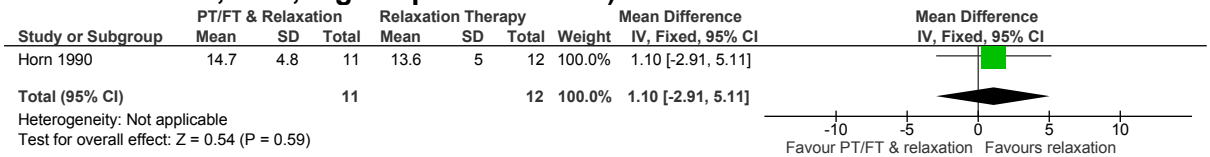


Figure 224: ADHD symptoms hyperactivity/Impulsivity (47 weeks FU, teacher rated CTRS, unclear range, high is poor outcome)

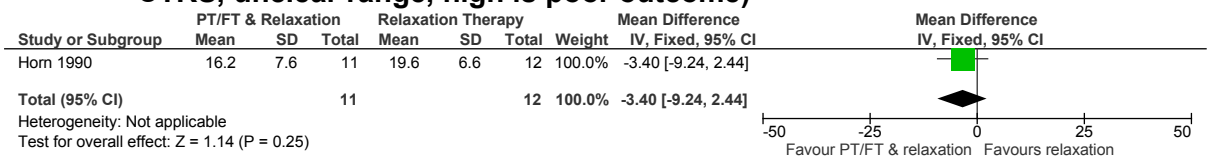


Figure 225: Function/behaviour (12 weeks PT, parent rated CBCL, 0-106, high is poor outcome)

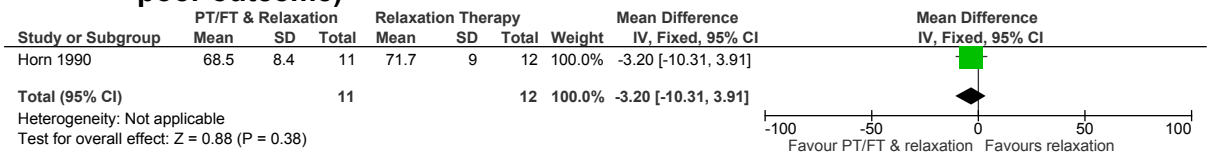


Figure 226: Function/behaviour (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome)

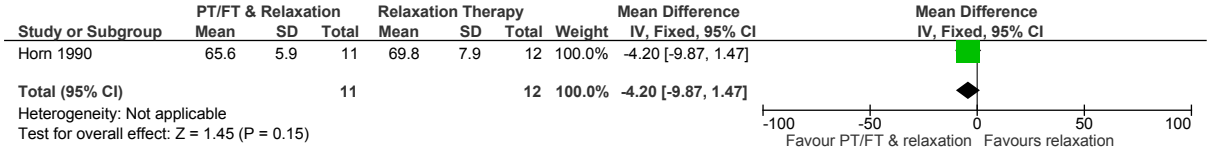


Figure 227: Function/behaviour (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome)

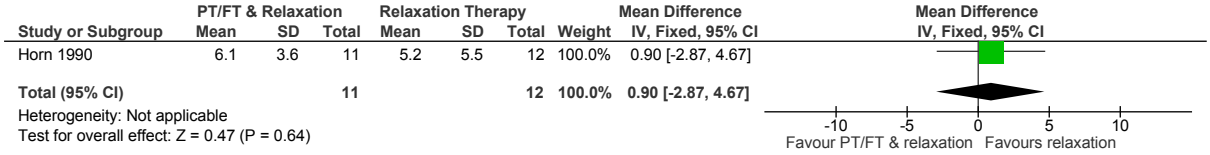


Figure 228: Function/behaviour (47 weeks FU, teacher rated CTRS, 0-15, high is poor outcome)

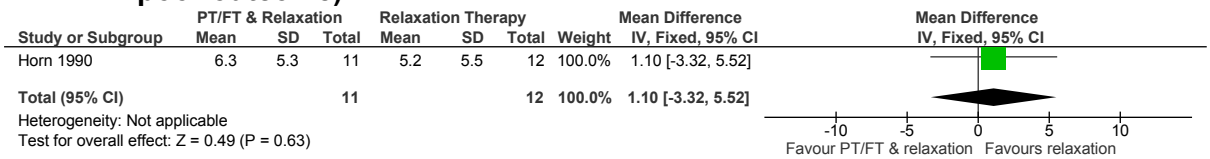


Figure 229: Academic - Literacy (47 weeks FU, WRAT-R, 55-145, high is good outcome)

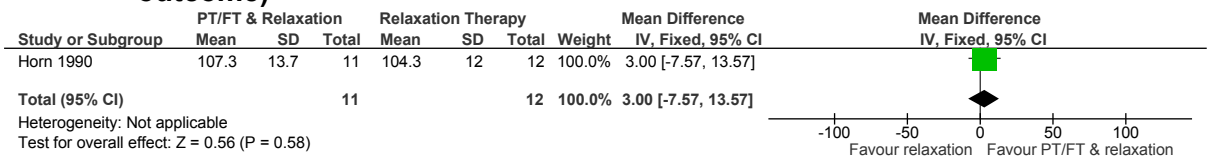


Figure 230: Academic - Literacy (12 weeks PT, WRAT-R, 55-145, high is good outcome)

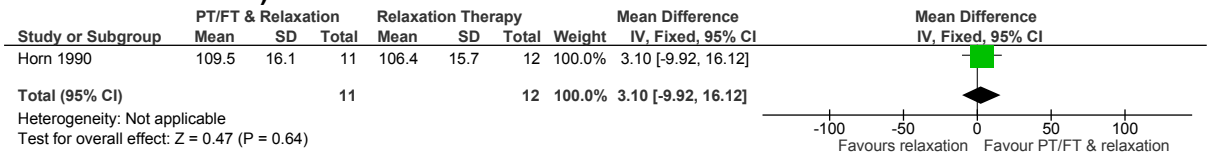


Figure 231: Academic - Numeracy (47 weeks FU, WRAT-R, 0-145, high is good outcome)

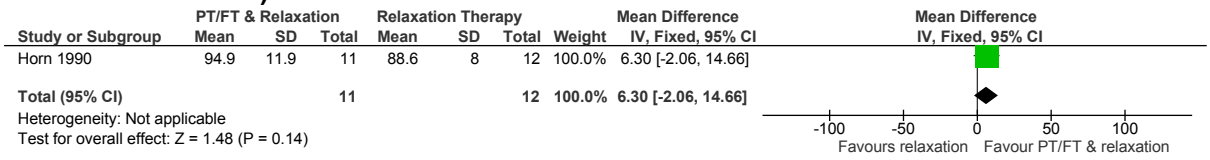
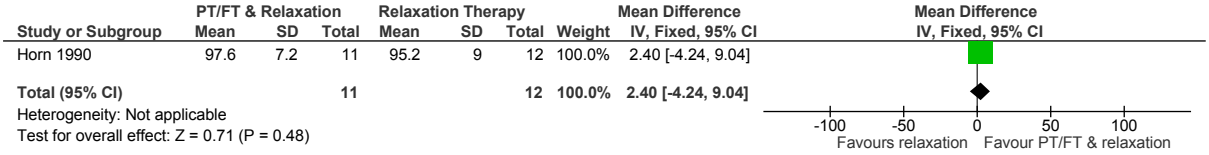


Figure 232: Academic - Numeracy (12 weeks PT, WRAT-R, 0-145, high is good outcome)



E.2.20 Attention/memory/cognitive training & BPT versus attention/memory/cognitive training

Figure 233: ADHD symptoms inattention (5 weeks PT, mother rated ADHD-RS, 0-27, high is poor outcome)

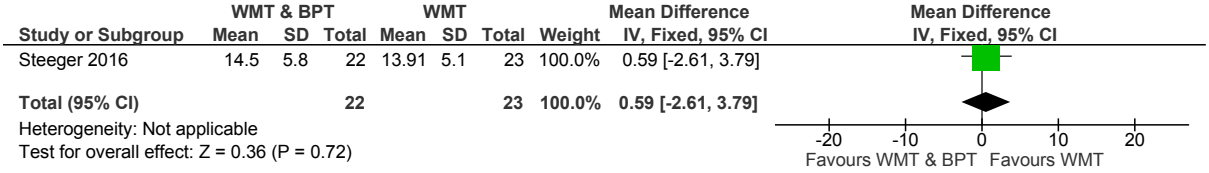


Figure 234: ADHD symptoms inattention (5 weeks PT, teacher rated ADHD-RS, 0-27, high is poor outcome)

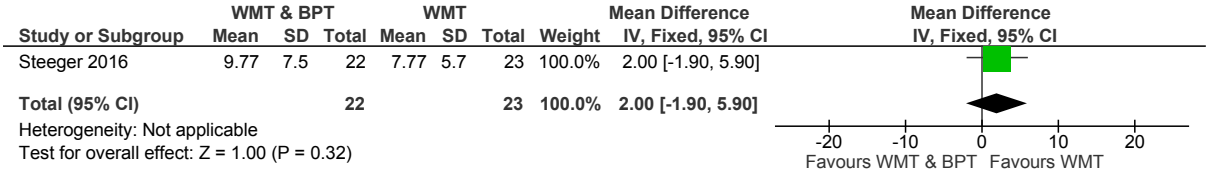


Figure 235: ADHD symptoms hyperactivity/Impulsivity (5 weeks PT, mother rated ADHD-RS, 0-27, high is poor)

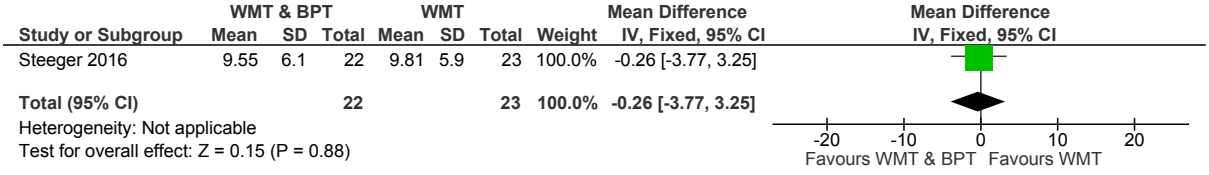


Figure 236: ADHD symptoms hyperactivity/Impulsivity (5 weeks PT, teacher rated ADHD-RS, 0-27, high is poor)

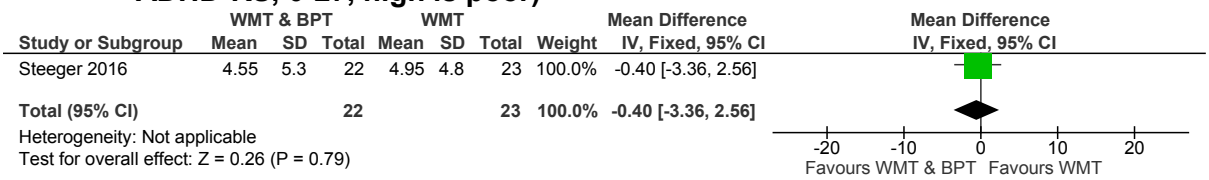


Figure 237: Function/Behaviour (5 weeks PT, mother rated, BRIEF, Global Executive Composite, unclear range, high is poor outcome)

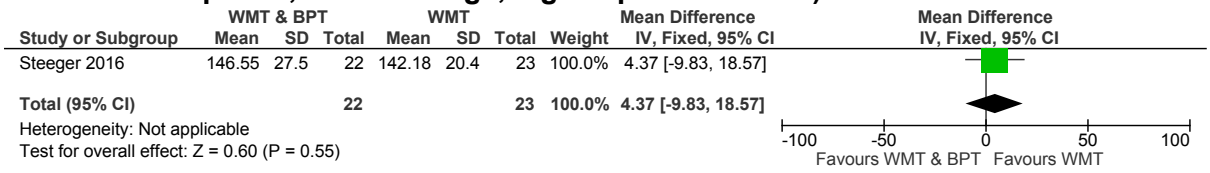
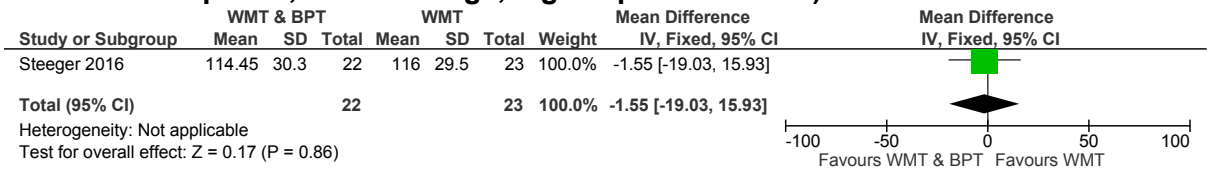


Figure 238: Function/Behaviour (5 weeks PT, teacher rated, BRIEF, Global Executive Composite, unclear range, high is poor outcome)



E.3 Adults over the age of 18

E.3.1 Neurofeedback versus waitlist/usual care

Figure 239: ADHD symptoms inattention [8-20 weeks PT, self-rated ADHD RS, 0-3, CS, high is poor outcome]

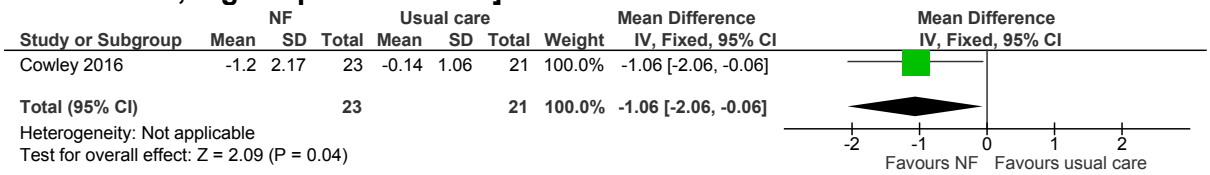
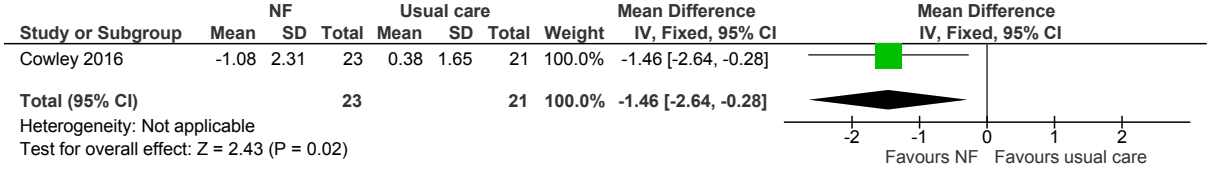


Figure 240: ADHD symptoms hyperactivity [8-20 weeks PT, self-rated ADHD RS, 0-3, CS, high is poor outcome]



E.3.2 CBT/DBT versus waitlist/usual care

Figure 241: Quality of life [FU, self-rated, 21 weeks, AAQoL, 0-100, higher is better]

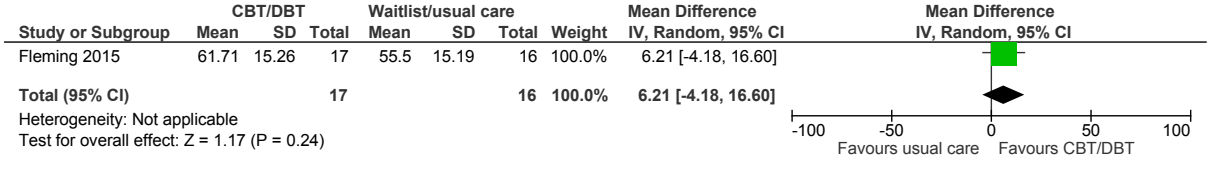


Figure 242: Quality of life [PT, 8-10 weeks, AAQoL, Q-LES-Q general, higher is better]

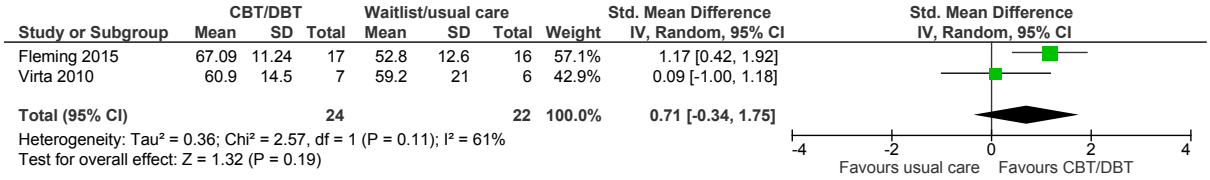


Figure 243: ADHD symptoms total [6-10 weeks PT, self-rated CAARS, CSS, high is poor outcome]

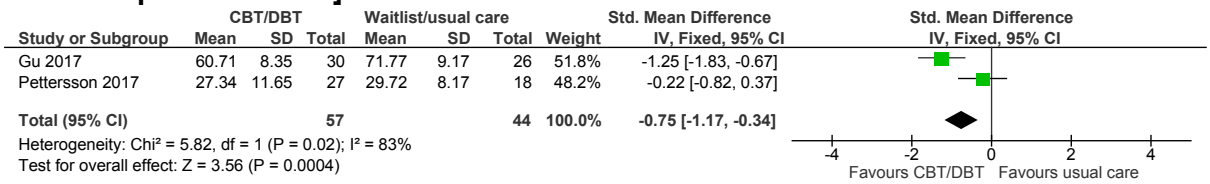


Figure 244: ADHD symptoms total [3 months FU, self-rated CAARS, unclear range, high is poor outcome]

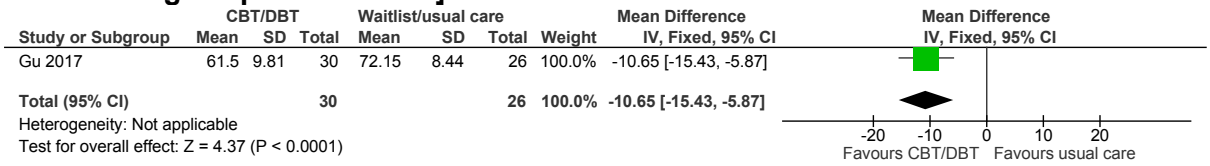


Figure 245: ADHD symptoms total [12 weeks PT, investigator rated CAARS, high is poor outcome]

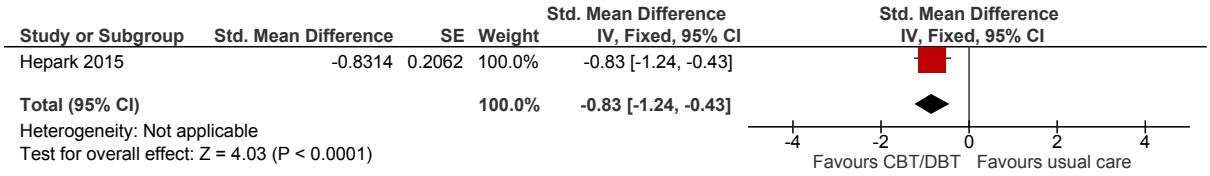


Figure 246: ADHD symptoms total [12 weeks PT, self-rated CAARS, high is poor outcome]

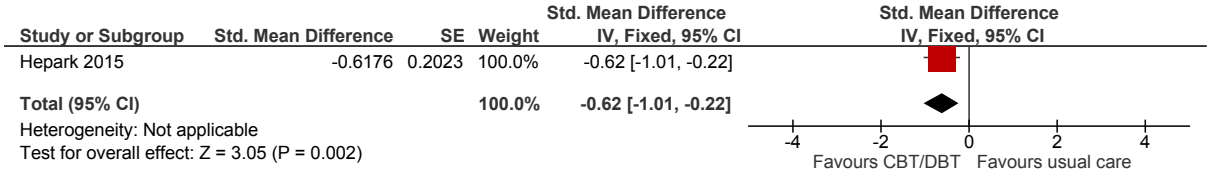


Figure 247: ADHD symptoms inattention [PT self-rated, 6-8 weeks, BAARS-IV, CAARS, high is poor]

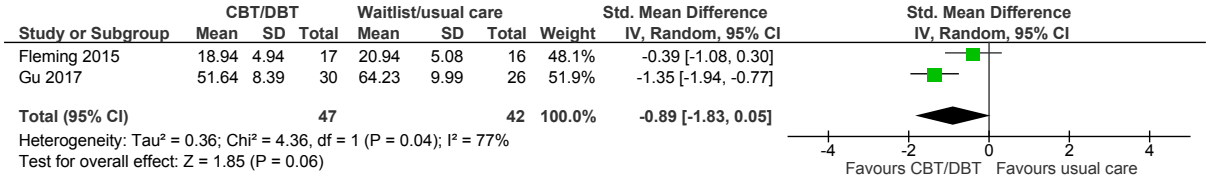


Figure 248: ADHD symptoms inattention [FU self-rated, 12 - 21 weeks, BAARS-IV, CAARS, high is poor]

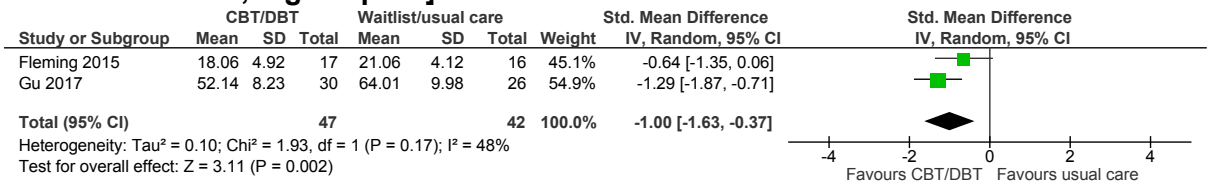


Figure 249: ADHD symptoms inattention [12 weeks PT, self-rated CAARS, 0 - 36, high is poor outcome]

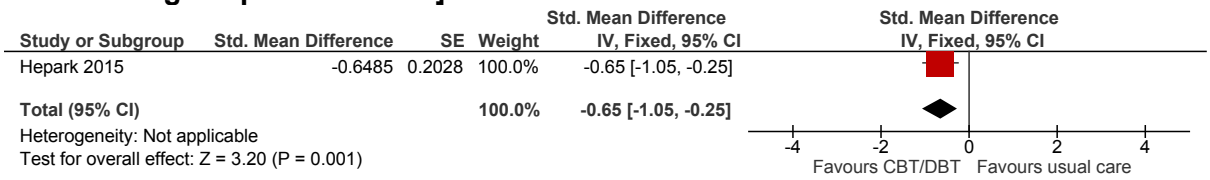


Figure 250: ADHD symptoms inattention [12 weeks PT, investigator rated CAARS, 0 - 36, high is poor outcome]

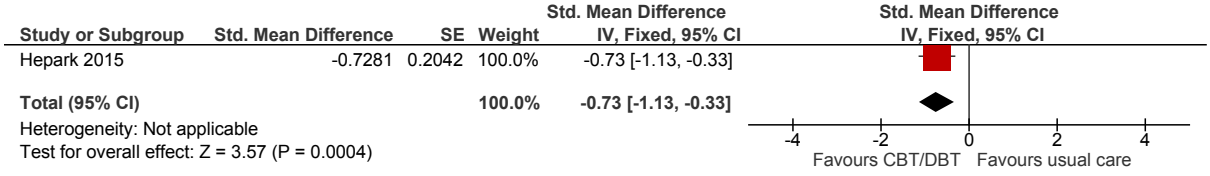


Figure 251: ADHD symptoms hyperactivity [6 weeks PT, self-rated CAARS, unclear range, high is poor outcome]

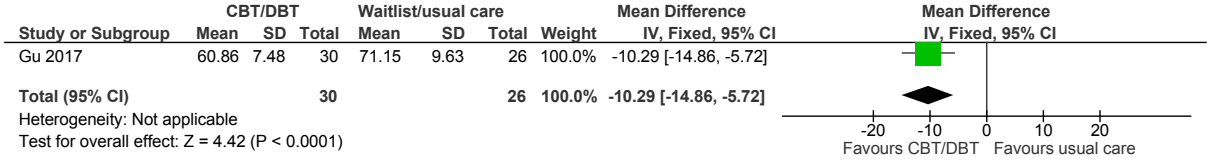


Figure 252: ADHD symptoms hyperactivity [3 months FU, self-rated CAARS, unclear range, high is poor outcome]

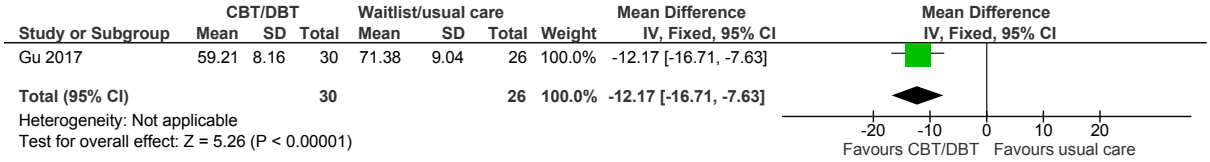


Figure 253: ADHD symptoms hyperactivity [12 weeks PT, investigator rated CAARS, 0 - 36, high is poor outcome]

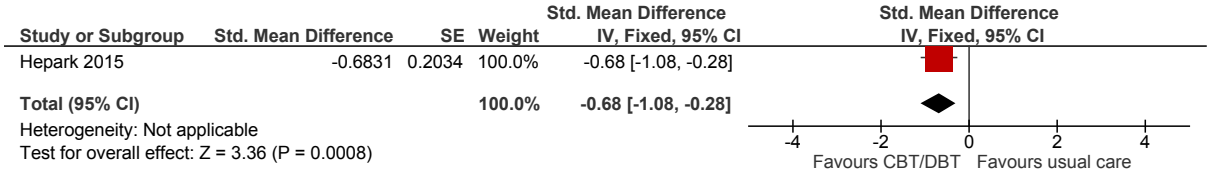


Figure 254: ADHD symptoms hyperactivity [12 weeks PT, self-rated CAARS, 0 - 36, high is poor outcome]

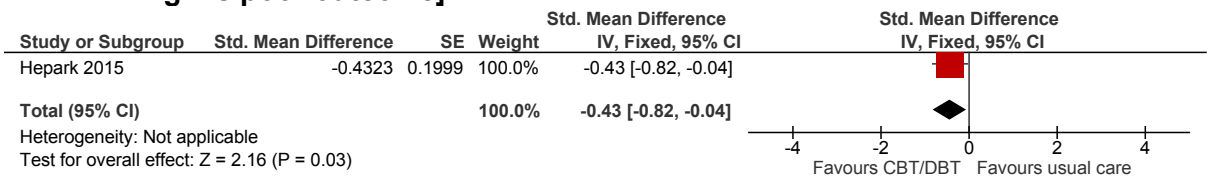


Figure 255: Improvement of ADHD symptoms [FU, 21 weeks, BAARS-IV Inattention]

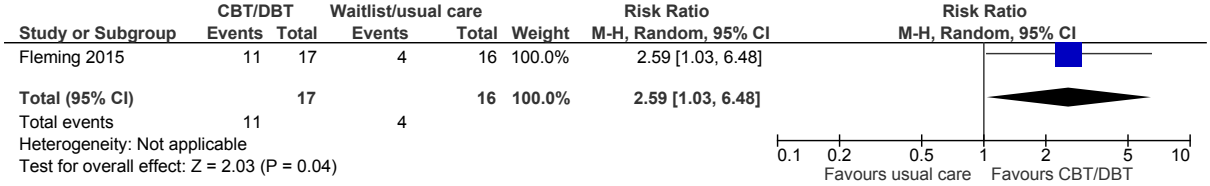


Figure 256: Improvement of ADHD symptoms [PT, 8 weeks, BAARS-IV Inattention, Current ADHD Symptom Scale Self-Report Form]

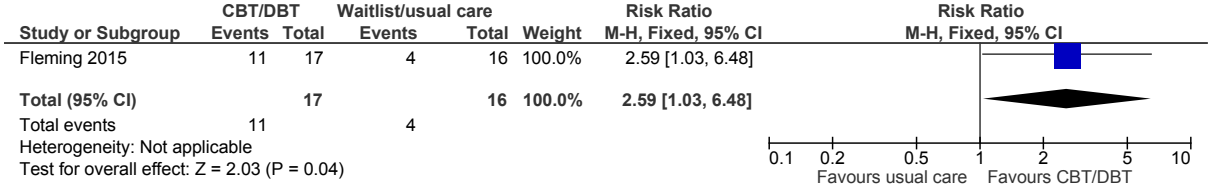


Figure 257: Improvement of ADHD symptoms [PT, 10 weeks, BADDS, SCL-16, ASR, high is good outcome]

Study or Subgroup	CBT/DBT Events	CBT/DBT Total	Waitlist/usual care Events	Waitlist/usual care Total	Weight	Risk Ratio M-H, Random, 95% CI
Virta 2010	6	10	2	10	100.0%	3.00 [0.79, 11.44]
Total (95% CI)		**10**		**10**	**100.0%**	**3.00 [0.79, 11.44]**
Total events	6		2			

Heterogeneity: Not applicable
Test for overall effect: Z = 1.61 (P = 0.11)

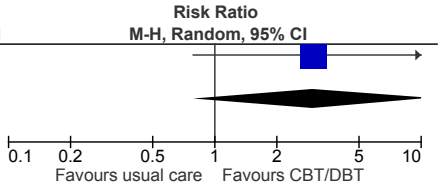


Figure 258: Improvement of ADHD symptoms [PT, 10 weeks, CG-I, high is good outcome]

Study or Subgroup	CBT/DBT Events	CBT/DBT Total	Waitlist/usual care Events	Waitlist/usual care Total	Weight	Risk Ratio M-H, Random, 95% CI
Virta 2010	7	10	3	10	100.0%	2.33 [0.83, 6.54]
Total (95% CI)		**10**		**10**	**100.0%**	**2.33 [0.83, 6.54]**
Total events	7		3			

Heterogeneity: Not applicable
Test for overall effect: Z = 1.61 (P = 0.11)

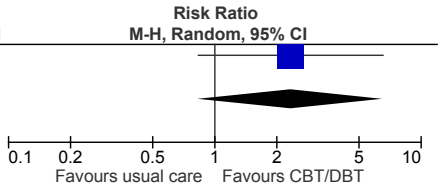


Figure 259: Function/behaviour [12 weeks PT, self-rated BRIEF-ASR, 0 - 54, high is poor outcome]

Study or Subgroup	Std. Mean Difference	SE	Weight	Std. Mean Difference IV, Fixed, 95% CI
Hepark 2015	-0.8622	0.2068	100.0%	-0.86 [-1.27, -0.46]
Total (95% CI)			**100.0%**	**-0.86 [-1.27, -0.46]**

Heterogeneity: Not applicable
Test for overall effect: Z = 4.17 (P < 0.0001)

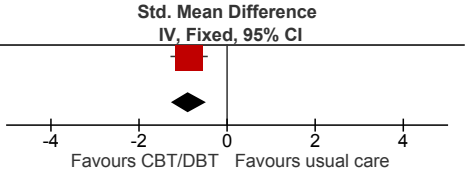


Figure 260: Emotional dysregulation [PT self-rated, 6-10 weeks, BDI, BDI-2, higher is poorer]

Study or Subgroup	CBT/DBT Mean	CBT/DBT SD	CBT/DBT Total	Waitlist/usual care Mean	Waitlist/usual care SD	Waitlist/usual care Total	Weight	Std. Mean Difference IV, Random, 95% CI
Fleming 2015	7.47	5.94	17	11.19	10.27	16	25.6%	-0.44 [-1.13, 0.26]
Gu 2017	7.07	2.71	30	9.42	3.44	26	40.4%	-0.75 [-1.30, -0.21]
Pettersson 2017	13.19	12.87	27	15.11	10.26	18	34.0%	-0.16 [-0.76, 0.44]
Total (95% CI)			**74**			**60**	**100.0%**	**-0.47 [-0.83, -0.11]**

Heterogeneity: Tau² = 0.01; Chi² = 2.10, df = 2 (P = 0.35); I² = 5%
Test for overall effect: Z = 2.58 (P = 0.010)

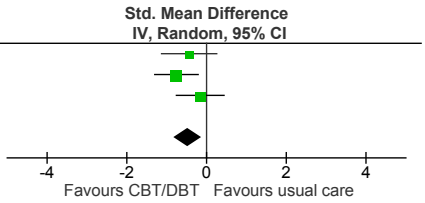


Figure 261: Emotional dysregulation [FU self-rated, 12- 21weeks, BDI, BDI-2, higher is poorer]

Study or Subgroup	CBT/DBT Mean	CBT/DBT SD	CBT/DBT Total	Waitlist/usual care Mean	Waitlist/usual care SD	Waitlist/usual care Total	Weight	Std. Mean Difference IV, Random, 95% CI
Fleming 2015	10.76	9.12	17	10.75	9.14	16	41.5%	0.00 [-0.68, 0.68]
Gu 2017	7.14	2.46	30	8.62	3.11	26	58.5%	-0.52 [-1.06, 0.01]
Total (95% CI)			**47**			**42**	**100.0%**	**-0.31 [-0.81, 0.20]**

Heterogeneity: Tau² = 0.04; Chi² = 1.41, df = 1 (P = 0.23); I² = 29%
Test for overall effect: Z = 1.18 (P = 0.24)

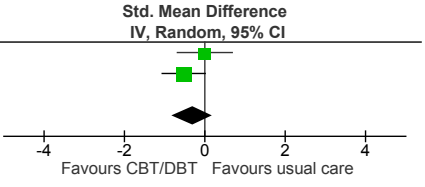


Figure 262: Emotional dysregulation [12 weeks PT, self-rated BDI, 0-63, higher is poorer]

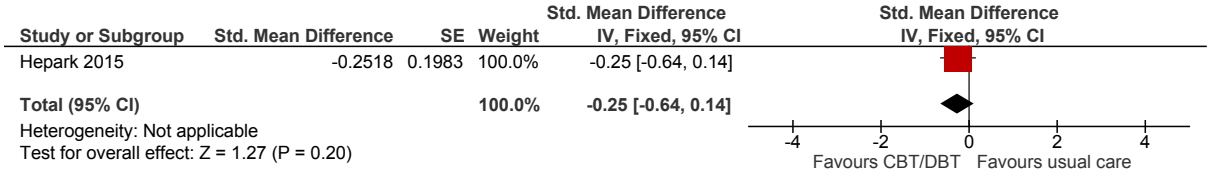


Figure 263: Academic outcome [PT, 8 weeks, GPA, 0-4, higher is better]

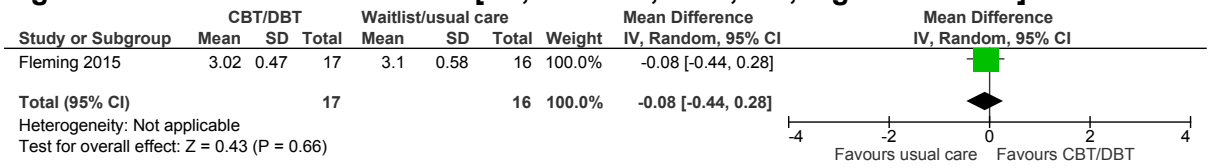
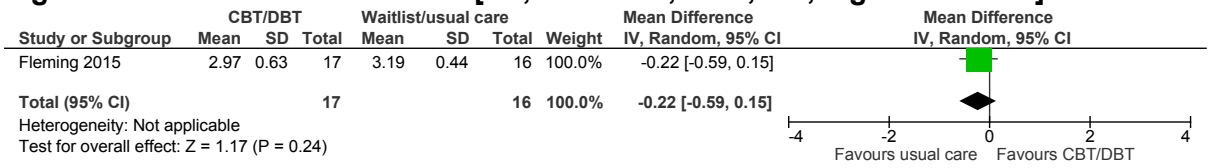


Figure 264: Academic outcome [FU, 21 weeks, GPA, 0-4, higher is better]



E.3.3 Attention/memory/cognitive training versus waitlist/usual care

Figure 265: Quality of life [PT, 10 weeks, Q-LES-Q general, 0-100, higher is better]

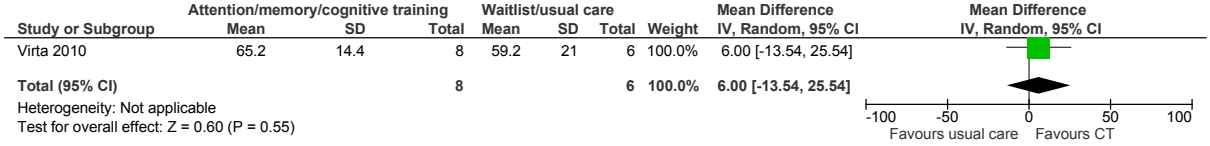


Figure 266: Improvement of ADHD symptoms [PT, 10 weeks, BADDS, SCL-16, ASR, higher is better]

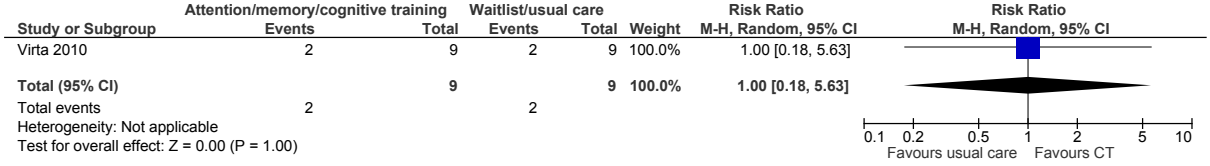
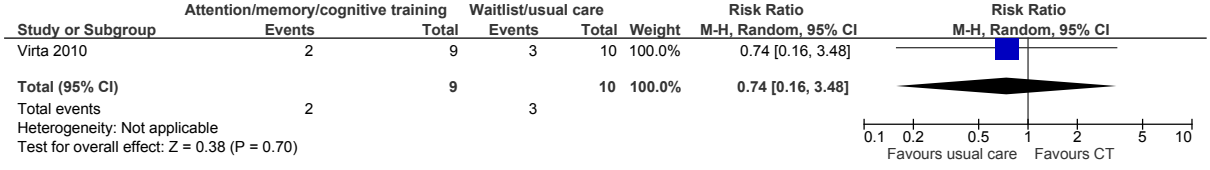


Figure 267: Improvement of ADHD symptoms [PT, 10 weeks, CG-I, higher is better]



E.3.4 CBT/DBT versus non-specific supportive therapy

Figure 268: ADHD symptoms total [PT, 13 weeks, self-reported, CAARS, 0-36, higher is poorer]

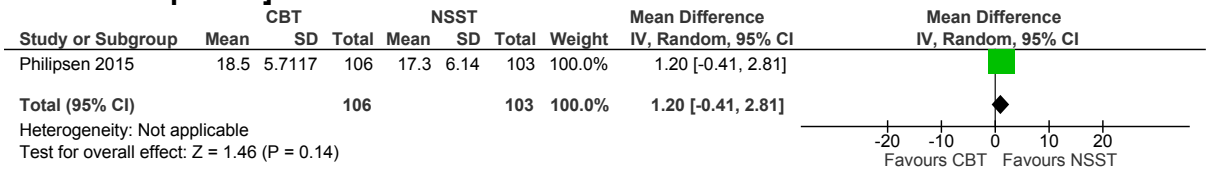


Figure 269: ADHD symptoms total [12 weeks PT, self-rated, Brown attention deficit disorder scale, high is poor outcome]

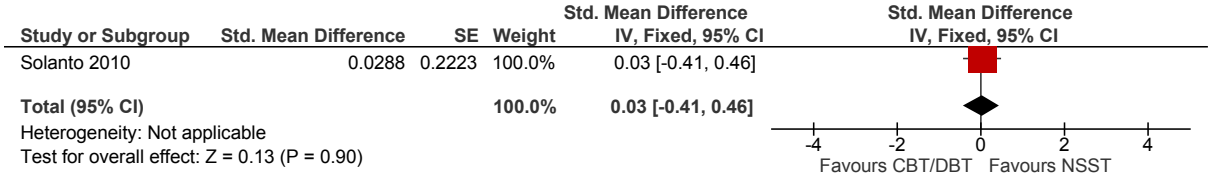


Figure 270: ADHD symptoms total [52 weeks FU, self-rated CAARS, 0 - 36, high is poor outcome]

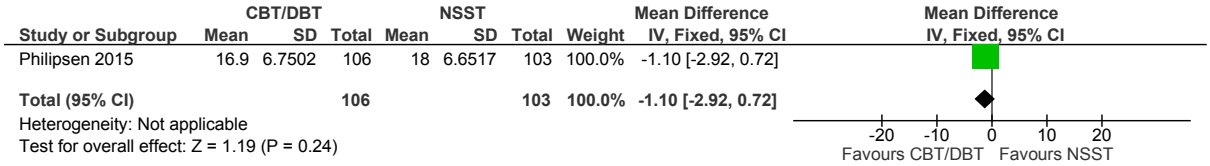


Figure 271: ADHD symptoms total [13 weeks PT, observer rated CAARS, 0 - 36, high is poor outcome]

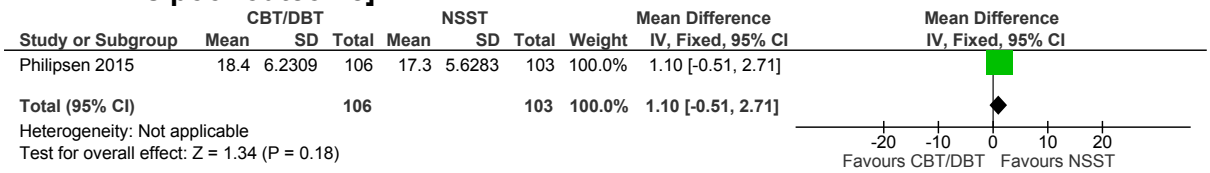


Figure 272: ADHD symptoms total [52 weeks FU, observer rated CAARS, 0 - 36, high is poor outcome]

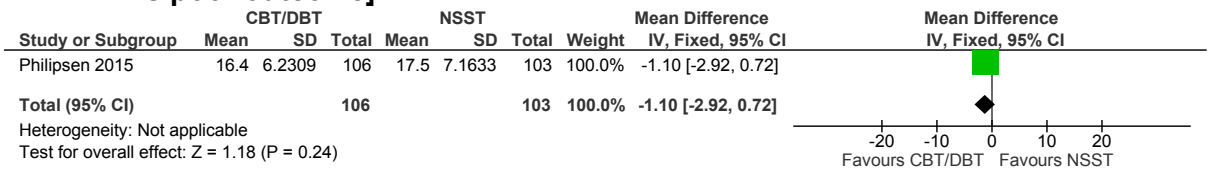


Figure 273: ADHD symptoms inattention [PT, 12 weeks, self-rated CAARS, higher is poorer]

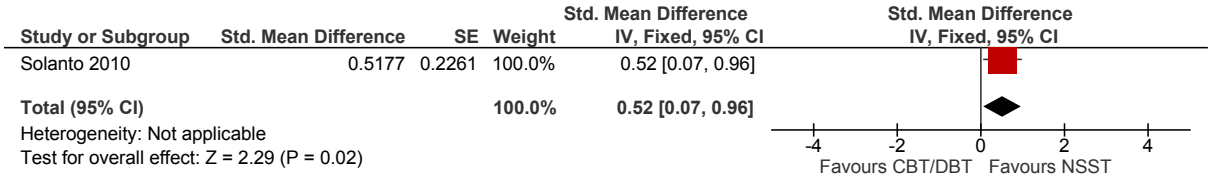


Figure 274: ADHD symptoms inattention [PT, 13 weeks, investigator rated CAARS, 0-36, higher is poorer]

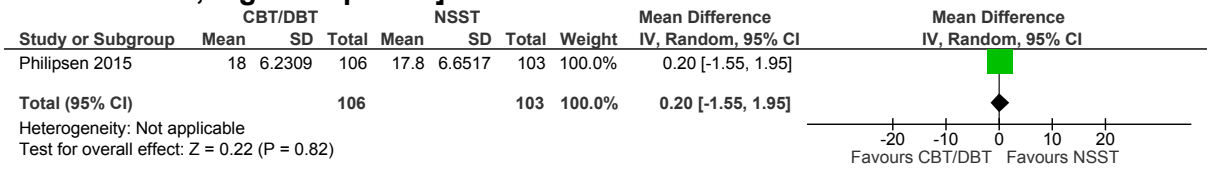


Figure 275: ADHD symptoms inattention [52 weeks FU, observer rated CAARS, 0 - 36, high is poor outcome]

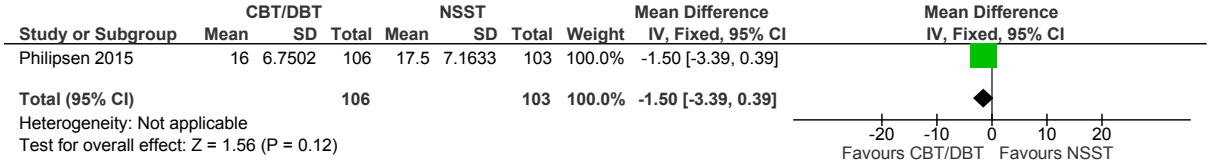


Figure 276: ADHD symptoms hyperactivity [13 weeks PT, observer rated CAARS, 0 - 36, high is poor outcome]

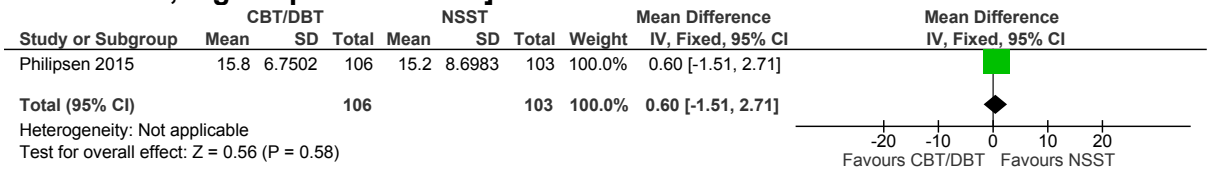


Figure 277: ADHD symptoms hyperactivity [52 weeks FU, observer rated CAARS, 0 - 36, high is poor outcome]

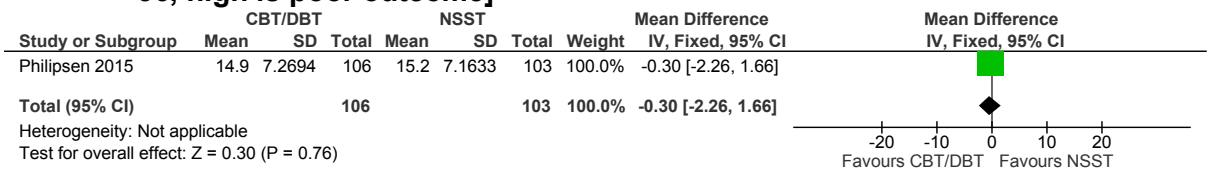


Figure 278: Improvement of ADHD symptoms [PT, 17 weeks, BAARS-IV Inattention, Current ADHD Symptom Scale Self-Report Form]

Study or Subgroup	CBT/DBT Events	CBT/DBT Total	NSST Events	NSST Total	Weight	Risk Ratio M-H, Fixed, 95% CI
Hirvikoski 2011	8	19	0	19	100.0%	17.00 [1.05, 275.12]
Total (95% CI)		**19**		**19**	**100.0%**	**17.00 [1.05, 275.12]**
Total events	8		0			

Heterogeneity: Not applicable
Test for overall effect: Z = 1.99 (P = 0.05)

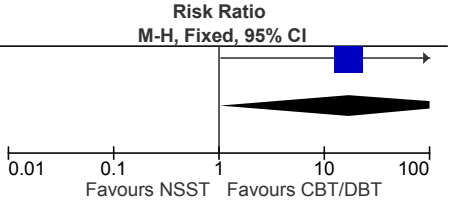


Figure 279: Serious adverse events PT [17 weeks]

Study or Subgroup	CBT/DBT Events	CBT/DBT Total	NSST Events	NSST Total	Weight	Risk Difference M-H, Random, 95% CI
Hirvikoski 2011	0	19	0	19	100.0%	0.00 [-0.10, 0.10]
Total (95% CI)		**19**		**19**	**100.0%**	**0.00 [-0.10, 0.10]**
Total events	0		0			

Heterogeneity: Not applicable
Test for overall effect: Z = 0.00 (P = 1.00)

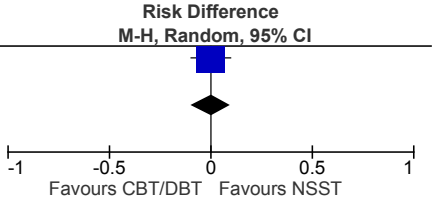


Figure 280: Function/behaviour [PT, 12 weeks, self-rated BRIEF, higher is poorer]

Study or Subgroup	Std. Mean Difference	SE	Weight	Std. Mean Difference IV, Fixed, 95% CI
Solanto 2010	0.3848	0.2244	100.0%	0.38 [-0.06, 0.82]
Total (95% CI)			**100.0%**	**0.38 [-0.06, 0.82]**

Heterogeneity: Not applicable
Test for overall effect: Z = 1.71 (P = 0.09)

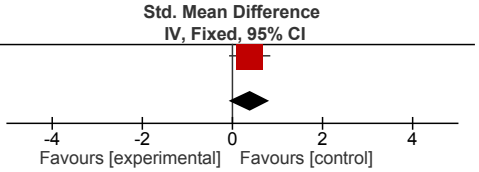


Figure 281: Emotional dysregulation [12 weeks PT, self-rated BDI, 0-63, higher is poorer]

Study or Subgroup	Std. Mean Difference	SE	Weight	Std. Mean Difference IV, Fixed, 95% CI
Solanto 2010	-0.0799	0.2223	100.0%	-0.08 [-0.52, 0.36]
Total (95% CI)			**100.0%**	**-0.08 [-0.52, 0.36]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.36 (P = 0.72)

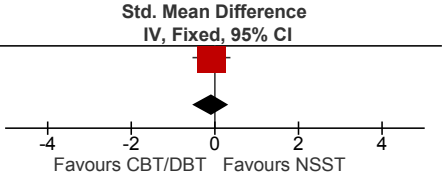


Figure 282: Emotional dysregulation [13 weeks PT, self-rated BDI, 0-63, higher is poorer]

Study or Subgroup	CBT/DBT Mean	CBT/DBT SD	CBT/DBT Total	NSST Mean	NSST SD	NSST Total	Weight	Mean Difference IV, Fixed, 95% CI
Philipsen 2015	10.7	6.7502	106	10.8	6.6517	103	100.0%	-0.10 [-1.92, 1.72]
Total (95% CI)			**106**			**103**	**100.0%**	**-0.10 [-1.92, 1.72]**

Heterogeneity: Not applicable
Test for overall effect: Z = 0.11 (P = 0.91)

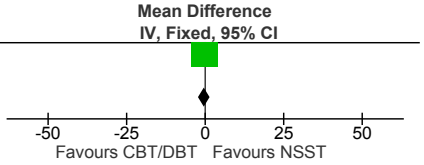
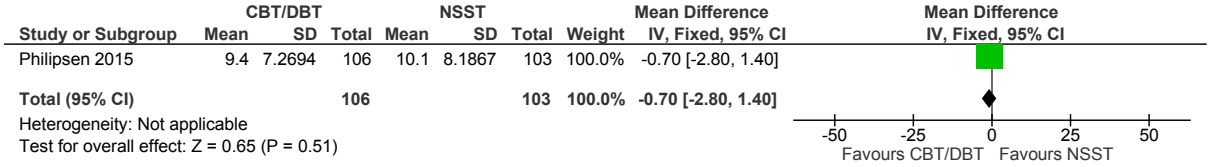


Figure 283: Emotional dysregulation [52 weeks FU, self-rated BDI, 0-63, higher is poorer]



E.3.5 Attention/memory/cognitive training versus non-specific supportive therapy

Figure 284: ADHD symptoms total [PT, self-rated 8 weeks, ASRS(0-54), CAARS, higher is worse]

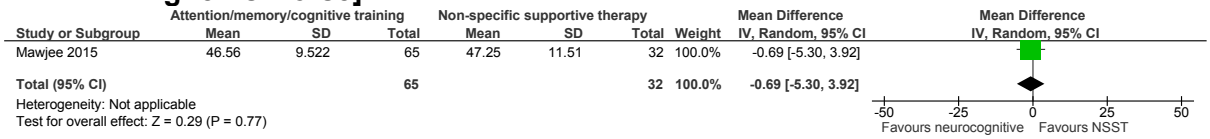


Figure 285: Functioning/Behaviour [PT, 8 weeks, self-report Barkley Deficits in Executive Functioning scale short form, unclear range, higher is worse]

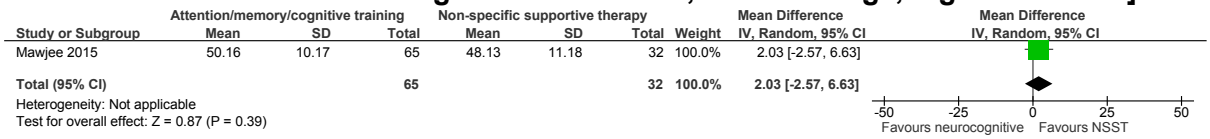


Figure 286: Literacy [PT, 8 weeks, The Test of Word Reading Efficiency-II, unclear range, higher is better]

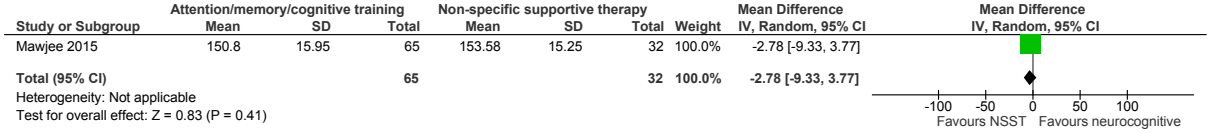
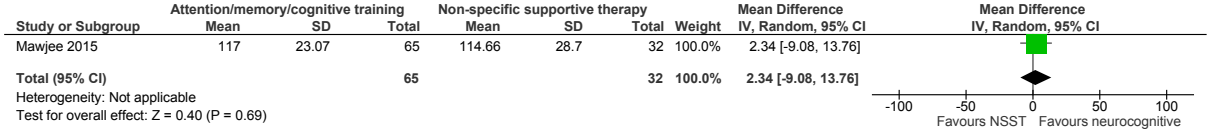


Figure 287: Numeracy [PT, 8 weeks, The Woodcock Johnson-III, unclear range, higher is better]



E.3.6 CBT/DBT versus attention/memory/cognitive training

Figure 288: Quality of life [PT, self-rated, 10 weeks, Q-LES-Q general, unclear range, higher is better]

	CBT			Attention/memory/cognitive training				Mean Difference	Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Virta 2010	60.9	14.5	7	65.2	14.4	8	100.0%	-4.30 [-18.96, 10.36]	
Total (95% CI)			**7**			**8**	**100.0%**	**-4.30 [-18.96, 10.36]**	

Heterogeneity: Not applicable
Test for overall effect: Z = 0.57 (P = 0.57)

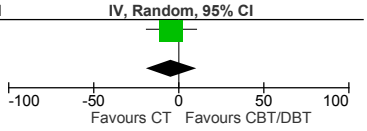
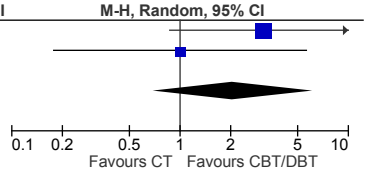


Figure 289: Improvement of ADHD symptoms [PT, 10 weeks, BADDS, SCL-16, ASR,CGI]

	CBT		Attention/memory/cognitive training			Risk Ratio	Risk Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI
Virta 2010	7	10	2	9	63.1%	3.15 [0.87, 11.42]	
Virta 2010	2	9	2	9	36.9%	1.00 [0.18, 5.63]	
Total (95% CI)		**19**		**18**	**100.0%**	**2.06 [0.70, 6.11]**	
Total events	9		4				

Heterogeneity: Tau² = 0.05; Chi² = 1.09, df = 1 (P = 0.30); I² = 8%
Test for overall effect: Z = 1.31 (P = 0.19)



Appendix F: GRADE tables for non-pharmacological efficacy

Under 5

Table 44: Clinical evidence profile: Parent/Family training versus Waitlist/Usual Care for ADHD in under 5 year olds

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Parent/Family training	Waitlist/Usual Care	Relative (95% CI)	Absolute		
ADHD symptoms total, Parent (PT, 8-15 weeks, Conners, PACS, higher is poorer) (follow-up 8-15 weeks; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	147	47	-	SMD 1.13 lower (1.49 to 0.78 lower)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms total, Parent (FU, 15 weeks, PACS, unclear range, higher is poorer) (follow-up 15 weeks; Better indicated by lower values)												
1	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	17	13	-	MD 6.43 lower (10.65 to 2.21 lower)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms total, Teacher (PT, 8 weeks, Conners (0-84), higher is poorer) (follow-up 8 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	130	34	-	MD 2.36 lower (6.56 lower to 1.84 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms total, Clinician (PT, 8 weeks, ADHD-Rating Scale-IV, unclear range, higher is poorer) (follow-up 8 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	130	34	-	MD 5.23 lower (6.46 to 3.99 lower)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms inattention, Parent (PT, 8-20 weeks, Conners, DBRS, higher is poorer) (follow-up 8-20 weeks; Better indicated by lower values)												

3	randomised trials	serious[1]	Serious[4]	no serious indirectness	serious[3]	none	186	73	-	SMD 1.07 lower (1.43 to 0.72 lower)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms inattention, Clinician (PT, 8 weeks, ADHD-Rating Scale-IV, unclear range, higher is poorer) (follow-up 8 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	130	34	-	MD 2.19 lower (3.78 to 2.04 lower)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms inattention, Teacher (PT, 8 weeks, Conners (0-84), higher is poorer) (follow-up 8 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	130	34	-	MD 3.10 lower (7.59 lower to 1.39 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms hyperactivity, Parent (PT, 8-20 weeks, Conners, DBRS, higher is poorer) (follow-up 8-20 weeks; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	150	46	-	SMD 1.11 lower (1.55 to 0.66 lower)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms hyperactivity, Teacher (PT, 8 weeks, Conners (0-84), higher is poorer) (follow-up 8 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	130	34	-	MD 2.31 lower (6.74 lower to 2.12 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms hyperactivity, Clinician (PT, 8 weeks, ADHD-Rating Scale-IV, unclear range, higher is poorer) (follow-up 8 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	130	34	-	MD 2.32 lower (3.04 to 1.6 lower)	⊕⊕⊕O MODERATE	CRITICAL
Function/behaviour, Parent (PT, 15-20 weeks, ECBI, DBRS, higher is poorer) (follow-up 15-20 weeks; Better indicated by lower values)												
2	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	56	39	-	SMD 1.23 lower (2.33 to 0.13 lower)	⊕OOO VERY LOW	IMPORTANT

[1] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
[2] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
[3] Downgraded by 1 increment if the confidence interval crossed 1 MID.
[4]Downgraded for heterogeneity, unexplained by subgroup analysis

Children and young people (5-18 years old)

Table 45: Clinical evidence profile: Parent/Family training versus Waitlist/Usual Care for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Parent/Family Training	Waitlist/Usual Care	Relative (95% CI)	Absolute		
ADHD symptoms total (7 - 10 weeks PT, parental account of childhood symptoms, SNAP, DBD, high is poor outcome) (follow-up 7-10 weeks; Better indicated by lower values)												
3	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	123	112	-	SMD 0.68 lower (0.94 to 0.42 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms total (10 weeks PT, teacher rated SNAP, DBD, high is poor outcome) (follow-up 10 weeks; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	99	93	-	SMD 0.06 lower (0.34 lower to 0.22 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms total (3-6 months FU, parent rated ADHD-C Rating Scale, DBD, high is poor outcome) (follow-up 3-6 months; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	90	83	-	SMD 0.66 lower (0.96 to 0.35 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms total (5 months PT, Conners parent rating scale, 0-84, high is poor outcome) (follow-up 5 months; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	47	47	-	MD 0.30 higher (2.53 lower to 3.13 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms total (6 months FU, teacher rated DBD, 0-3, high is poor outcome) (follow-up 6 months; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	67	61	-	MD 0.02 higher (0.23 lower to 0.27 higher)	⊕⊕⊕O MODERATE	CRITICAL

ADHD symptoms inattention, Teacher (PT, 20 weeks, Conners (0-84), higher is poorer) (follow-up 20 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	48	48	-	MD 2.20 higher (3.2 lower to 7.6 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Inattention, Parent (PT, 20 weeks, Conners (0-84), higher is poorer) (follow-up 20 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	48	48	-	MD 1.60 lower (6.57 lower to 3.37 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Inattention, Parent (PT, 7-20 weeks, DBD, DuPaul, Conners, DBRS, higher is poorer) (follow-up 7-20 weeks; Better indicated by lower values)												
6	randomised trials	serious[2]	serious[4]	no serious indirectness	serious[2]	none	310	167	-	SMD 0.50 lower (0.82 to 0.19 lower)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms Inattention, Teacher (PT, 8-20 weeks, Conners, higher is poorer) (follow-up 8-20 weeks; Better indicated by lower values)												
3	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	186	92	-	SMD 0.39 lower (0.65 to 0.13 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Inattention (12 weeks PT, parent & teacher rated Children symptom inventory, 0-27, high is poor outcome) (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	36	30	-	MD 2.10 lower (3.23 to 0.97 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Inattention (3-5 month FU, parent & teacher rated Children symptom inventory, 0-27, high is poor outcome) (follow-up 3-5 months; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	29	25	-	MD 1.20 lower (2.37 to 0.03 lower)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms Inattention (5-7 months FU, teacher rated Children symptom inventory, DBD, high is poor outcome) (follow-up 5-7 months; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	165	67	-	SMD 0.02 lower (0.31 lower to 0.27 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms Inattention (3-7 months FU, parent rated DBD rating scale, ADHD-IA, child symptom inventory, high is poor outcome) (follow-up 3-7 months; Better indicated by												

lower values)												
4	randomised trials	serious[1]	serious[4]	no serious indirectness	serious[2]	none	268	127	-	SMD 0.44 lower (0.84 to 0.04 lower)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms Hyperactivity, Teacher (PT, 20 weeks, Conners (0-84), higher is poorer) (follow-up 20 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	48	48	-	MD 4.00 lower (8.18 lower to 0.18 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Hyperactivity, Parent (PT, 20 weeks, Conners (0-84), higher is poorer) (follow-up 20 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	48	48	-	MD 5.70 lower (9.58 to 1.82 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Hyperactivity, Parent (PT, 7-20 weeks, DBD, Du Paul, Conners, DBRS, higher is poorer) (follow-up 7-20 weeks; Better indicated by lower values)												
5	randomised trials	serious[1]	Serious[4]	no serious indirectness	serious[2]	none	163	120	-	SMD 0.40 lower (0.76 to 0.04 lower)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms Hyperactivity, Teacher (PT, 8-20 weeks, Conners, higher is poorer) (follow-up 8-20 weeks; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	41	43	-	SMD 0.32 lower (0.77 lower to 0.14 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (3-6 months FU, parent rated DBD rating scale, ADHD-HI, high is poor outcome) (follow-up 3-6 months; Better indicated by lower values)												
3	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	121	80	-	SMD 0.34 lower (0.63 to 0.05 lower)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (6 months FU, teacher rated disruptive behaviour disorder rating scale, 0-3, high is poor outcome) (follow-up 6 months; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	18	18	-	MD 0.72 higher (0.17 to 1.27 higher)	⊕⊕OO LOW	CRITICAL
CGI-I ~ much improved or very much improved (10 weeks PT, investigator rated, 1-7) (follow-up 10 weeks)												

1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[5]	none	9/32 (28.1%)	18.8%	RR 1.5 (0.6 to 3.72)	94 more per 1000 (from 75 fewer to 511 more)	⊕OOO VERY LOW	CRITICAL
Function/behaviour, Parent (PT, 20 weeks, Conners (0-84), higher is poorer) (follow-up 20 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	48	48	-	MD 2.80 lower (7.27 lower to 1.67 higher)	⊕⊕OO LOW	IMPORTANT
Function/behaviour, Teacher (PT, 8-20 weeks, Conners, SNAP, CBQ, AAPC, higher is poorer) (follow-up 8-20 weeks; Better indicated by lower values)												
3	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	147	141	-	SMD 0.21 lower (0.44 lower to 0.02 higher)	⊕⊕⊕O MODERATE	IMPORTANT
Function/Behaviour (8 weeks PT, self-reported CBQ-20, 0-7, high is poor outcome) (follow-up 8 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	18	18	-	MD 0.34 higher (0.09 lower to 0.77 higher)	⊕⊕OO LOW	IMPORTANT
Function/behaviour, Parent (PT, 8-20 weeks, ECBI, Conners, DBD, SNAP, CBQ, AAPC, higher is poorer) (follow-up 8-20 weeks; Better indicated by lower values)												
7	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	242	196	-	SMD 0.39 lower (0.58 to 0.19 lower)	⊕⊕OO LOW	IMPORTANT
Function/Behaviour (1-6 months FU, parent reported DBD, ECBI, SDQ, CBQ-20, AAPC, high is poor outcome) (follow-up 1-6 months; Better indicated by lower values)												
5	randomised trials	very serious[3]	Serious[4]	no serious indirectness	no serious imprecision	none	211	164	-	SMD 0.30 lower (0.68 to 0.08 lower)	⊕OOO VERY LOW	IMPORTANT
Function/Behaviour (6 months FU, teacher rated AAPC, 0-3, high is poor outcome) (follow-up 6 months; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	67	61	-	MD 0.10 higher (0.14 lower to 0.34 higher)	⊕⊕⊕O MODERATE	IMPORTANT
Function/Behaviour (6 months FU, self-reported CBQ-20, 0-7, high is poor outcome) (follow-up 6 months; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	18	18	-	MD 0.66 lower (1.22 to 0.1 lower)	⊕⊕OO LOW	IMPORTANT

Academic - Literacy (8 weeks PT, reading/language arts (RLA) accuracy %, high is good outcome) (follow-up 8 weeks; Better indicated by higher values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	39	36	-	MD 8.83 higher (4.53 to 13.13 higher)	⊕OOO VERY LOW	IMPORTANT
Academic - Numeracy (8 weeks PT, math accuracy %, high is good outcome) (follow-up 8 weeks; Better indicated by higher values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	39	36	-	MD 8.04 higher (4.7 to 11.38 higher)	⊕⊕OO LOW	IMPORTANT

[1] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
[2] Downgraded by 1 increment if the confidence interval crossed 1 MID.
[3] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
[4] Downgraded by 1 or 2 increments because the point estimate and or the confidence intervals varied widely across studies, unexplained by subgroup analysis.
[5] Downgrade by 2 increments if the confidence interval crossed both MIDs.

Table 46: Clinical evidence profile: Attention/memory/cognitive training versus waitlist/usual care for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Attention/memory/cognitive training**	**Waitlist/usual care**	**Relative (95% CI)**	**Absolute**		
ADHD symptoms total (12 weeks PT parent rated, CBCL, unclear range high is poor outcome) (follow-up 12; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	30	30	-	MD 27.60 lower (30.67 to 24.53 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms total (5-7weeks PT, parent rated ARS-IV, 25-49, high is poor outcome) (follow-up 5-7 weeks; Better indicated by lower values)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	33	34	-	MD 2.40 lower (8.1 lower to 3.3	⊕⊕OO LOW	CRITICAL

										higher)		
ADHD symptoms total (5-7weeks PT, teacher rated ARS-IV, unclear range, high is poor outcome) (follow-up 5-7 weeks; Better indicated by lower values)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	33	34	-	MD 2.00 lower (7.68 lower to 3.68 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms total (8 months FU, parent rated ARS-IV, 25-49, high is poor outcome) (follow-up 8 months; Better indicated by lower values)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	33	34	-	MD 1.10 lower (6.49 lower to 4.29 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms total (8 months FU, teacher rated ARS-IV, unclear range, high is poor outcome) (follow-up 8 months; Better indicated by lower values)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	33	34	-	MD 2.50 lower (7.82 lower to 2.82 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Inattention (5-7 weeks PT, parent rated ARS-IV, high is poor outcome) (follow-up 5-7 weeks; Better indicated by lower values)												
2	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	51	56	-	MD 2.31 lower (4.54 to 0.09 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Inattention (12-20 weeks PT, parent rated Conners Rating Scales–Revised, SNAP, high is poor outcome) (follow-up 12-20 weeks; Better indicated by lower values)												
3	randomised trials	serious[2]	Serious[5]	no serious indirectness	no serious imprecision	none	99	98	-	SMD 1.14 lower (1.91 to 0.38 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Inattention (6-8 months FU, parent rated ARS-IV, Conners-3P, high is poor outcome) (follow-up 6-8 months; Better indicated by lower values)												
2	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	67	70	-	SMD 0.47 lower (0.81 to 0.13 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Inattention (5-7 weeks PT, teacher rated ARS-IV, high is poor outcome) (follow-up 5-7 weeks; Better indicated by lower values)												
2	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	51	56	-	MD 1.11 lower (3.54	⊕⊕OO LOW	CRITICAL

										lower to 1.33 higher)		
ADHD symptoms Inattention (12-20 weeks PT, teacher rated Conners Rating Scales–Revised, SNAP, high is poor outcome) (follow-up 12-20 weeks; Better indicated by lower values)												
3	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	99	102	-	SMD 0.06 higher (0.22 lower to 0.34 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms Inattention (8 months FU, teacher rated ARS-IV, 12-24, high is poor outcome) (follow-up 8 months; Better indicated by lower values)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	33	34	-	MD 1.30 lower (4.34 lower to 1.74 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Inattention (12 weeks PT, investigator rated SNAP, 0-3, high is poor outcome) (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	54	51	-	MD 0.55 lower (0.74 to 0.36 lower)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms Inattention (14 weeks PT, teacher rated CTRS-R:L, more events is better) (follow-up 14 weeks)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	11/25 (44%)	16%	RR 2.75 (1.01 to 7.48)	280 more per 1000 (from 2 more to 1000 more)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Inattention (52 weeks FU, teacher rated CTRS-R:L, more events is better) (follow-up 52 weeks)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	15/25 (60%)	76%	RR 0.79 (0.54 to 1.16)	160 fewer per 1000 (from 350 fewer to 122 more)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (5-7 weeks PT, parent rated ARS-IV, high is poor outcome) (follow-up 5-7 weeks; Better indicated by lower values)												
2	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	51	56	-	MD 2.08 lower (4.38 lower to 0.21 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (12 - 20 weeks PT, parent rated Conners 3-P, SNAP, high is poor outcome) (follow-up 12-20 weeks; Better indicated by lower values)												

3	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	99	98	-	SMD 0.41 lower (0.7 to 0.13 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (6-8 months FU, parent rated ARS-IV, Conners 3-P, high is poor outcome) (follow-up 6-8 months; Better indicated by lower values)												
2	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	67	70	-	SMD 0.2 lower (0.54 lower to 0.13 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (5-7 weeks PT, teacher rated ARS-IV, high is poor outcome) (follow-up 5-7 weeks; Better indicated by lower values)												
2	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	51	56	-	MD 0.82 lower (3.00 lower to 1.36 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (17 weeks PT, teacher rated Conners Rating Scales–Revised, 0-84, high is poor outcome) (follow-up 17 weeks; Better indicated by lower values)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	11	15	-	MD 11.80 higher (0.33 to 23.27 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (8months FU, teacher rated ARS-IV, unclear range, high is poor outcome) (follow-up 8 months; Better indicated by lower values)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	33	34	-	MD 1.30 lower (4.08 lower to 1.48 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (12 weeks PT, investigator rated SNAP, 0-3, high is poor outcome) (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	54	51	-	MD 0.24 lower (0.49 lower to 0.01 higher)	⊕⊕OO LOW	
Discontinuation related to study intervention (12 weeks) (follow-up 12 weeks)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	very serious[4]	none	9/54 (16.7%)	9.8%	RR 1.7 (0.61 to	69 more per 1000 (from 38	⊕OOO VERY LOW	CRITICAL

									4.73)	fewer to 366 more)		
Function/Behaviour (5-7weeks PT, parent rated Global Executive Composite, high is poor outcome) (follow-up 5-7 weeks; Better indicated by lower values)												
2	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	51	56	-	SMD 0.2 lower (0.59 lower to 0.18 higher)	⊕⊕OO LOW	IMPORTANT
Function/Behaviour (12-20 weeks PT, parent rated BRIEF, global executive subscale, BASC, high is poor outcome) (follow-up 12-20 weeks; Better indicated by lower values)												
2	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	88	87	-	SMD 0.40 lower (0.7 to 0.1 lower)	⊕⊕OO LOW	IMPORTANT
Function/Behaviour (6-8 months FU, parent rated BRIEF, global executive subscale, high is poor outcome) (follow-up 6-8 months; Better indicated by lower values)												
2	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	67	70	-	SMD 0.24 lower (0.58 lower to 0.1 higher)	⊕⊕OO LOW	IMPORTANT
Function/Behaviour (5-12 weeks PT, teacher rated BASC, Global Executive Composite, high is poor outcome) (follow-up 5-12 weeks; Better indicated by lower values)												
2	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	87	85	-	SMD 0.11 higher (0.19 lower to 0.41 higher)	⊕⊕⊕O MODERATE	IMPORTANT
Function/Behaviour (8 months FU, teacher rated Global Executive Composite, 0-100, high is poor outcome) (follow-up 8 months; Better indicated by lower values)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	33	34	-	MD 2.00 lower (7.54 lower to 3.54 higher)	⊕⊕OO LOW	IMPORTANT
Function/Behaviour (5 months PT, investigator rated BOSS scale, 0-100, high is good outcome) (follow-up 5 months; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	34	36	-	MD 2.20 lower (8.57 lower to 4.17 higher)	⊕OOO VERY LOW	IMPORTANT
Function/Behaviour (6 months FU, investigator rated BOSS scale, 0-100, high is good outcome) (follow-up 6 months; Better indicated by lower values)												

1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	34	36	-	MD 5.07 lower (11.42 lower to 1.28 higher)	⊕OOO VERY LOW	IMPORTANT
Academic - Literacy (5-7 weeks PT, LOGOS reading fluency % correct, 0-100, high is good outcome) (follow-up 5-7 weeks; Better indicated by higher values)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	33	34	-	MD 1.00 higher (1.39 lower to 3.39 higher)	⊕⊕OO LOW	IMPORTANT
Academic - Literacy (8 months PT, LOGOS reading fluency % correct, 0-100, high is good outcome) (follow-up 8 months; Better indicated by higher values)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	33	34	-	MD 2.00 higher (0.31 to 3.69 higher)	⊕⊕OO LOW	IMPORTANT
Academic - Numeracy (5-7 weeks PT, Key Math composite score, 0-18, high is good outcome (follow-up 5-7 weeks; Better indicated by lower values)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	33	34	-	MD 0.60 higher (0.49 lower to 1.69 higher)	⊕⊕OO LOW	IMPORTANT
Academic - Numeracy (8 months FU, Key Math composite score, 0-18, high is good outcome (follow-up 8 months; Better indicated by lower values)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	33	34	-	MD 0.50 higher (0.63 lower to 1.63 higher)	⊕⊕OO LOW	IMPORTANT

[1] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
[2] Downgraded by 1 increment if the confidence interval crossed 1 MID.
[3] Downgraded by 2 increments if the confidence interval crossed both MIDs.
[4] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
[5]Downgraded for heterogeneity, unexplained by subgroup analysis.

Table 47: Clinical evidence profile: Neurofeedback versus waitlist/usual care for ADHD in children and young people

Quality assessment						No of patients		Effect	Quality	Importance

No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Neurofeedback**	**Waitlist/usual care**	**Relative (95% CI)**	**Absolute**		
ADHD symptoms Inattention (17-20 weeks PT, parent rated Conners Rating Scales–Revised, high is poor outcome) (follow-up 17-20 weeks; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	43	47	-	MD 4.97 lower (9.17 to 0.77 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Inattention (6 months FU, parent rated Conners 3-P, 0-84, high is poor outcome) (follow-up 6 months; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	34	36	-	MD 4.52 lower (10.03 lower to 0.99 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Inattention (17-20 weeks PT, teacher rated Conners Rating Scales–Revised, high is poor outcome) (follow-up 17-20 weeks; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	43	51	-	MD 3.12 lower (7.65 lower to 1.41 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Inattention (1 year FU, self-rated DSM-IV, 0-9, CS, high is poor outcome) (follow-up 1 years; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	very serious[4]	none	59	31	-	SMD 0.055 lower (0.72 lower to 0.61 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (17-20 weeks PT, parent rated Conners Rating Scales–Revised, high is poor outcome) (follow-up 17-20 weeks; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	43	47	-	MD 2.18 lower (8.34 lower to 3.97 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (6 months FU, parent rated Conners 3-P, 0-84, high is poor outcome) (follow-up 6 months; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	34	36	-	MD 4.80 lower (11.86 lower to 2.26 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (17 weeks PT, teacher rated Conners Rating Scales–Revised, 0-84, high is poor outcome) (follow-up 17 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[4]	none	9	15	-	MD 3.30 higher (6.73 lower to 13.33 higher)	⊕OOO VERY	CRITICAL

											LOW	
ADHD symptoms Hyperactivity/Impulsivity (1 year FU, self-rated DSM-IV, 0-9, CS, high is poor outcome) (follow-up 1 patient-years; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	59	31	-	SMD 0.22 lower (0.89 lower to 0.45 higher)	⊕OOO VERY LOW	CRITICAL
Function/Behaviour (5 months PT, parent rated BRIEF, global executive subscale 0-100, high is poor outcome) (follow-up 5 months; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	34	36	-	MD 2.70 lower (6.89 lower to 1.49 higher)	⊕⊕OO LOW	IMPORTANT
Function/Behaviour (6 months FU, parent rated BRIEF, global executive subscale, 0-100, high is poor outcome) (follow-up 6 months; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	34	36	-	MD 4.46 lower (9.21 lower to 0.29 higher)	⊕⊕OO LOW	IMPORTANT
Function/Behaviour (5 months PT, investigator rated BOSS scale, 0-100, high is good outcome) (follow-up 5 months; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	34	36	-	MD 1.30 lower (7.92 lower to 5.32 higher)	⊕OOO VERY LOW	IMPORTANT
Function/Behaviour (6 months FU, investigator rated BOSS scale, 0-100, high is good outcome) (follow-up 6 months; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	34	36	-	MD 3.47 lower (9.11 lower to 2.17 higher)	⊕⊕OO LOW	IMPORTANT

[1] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
[2] Downgraded by 1 increment if the confidence interval crossed 1 MID.
[3] Downgraded by 2 increments if the confidence interval crossed both MIDs.
[4] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.

Table 48: Clinical evidence profile: Psychoeducation versus waitlist/usual care for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Psychoeducation**	**Waitlist/usual Care**	**Relative (95% CI)**	**Absolute**		

ADHD symptoms total (11 weeks FU, teacher rated Children symptom inventory, 0-27, high is poor outcome) (follow-up 11 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	7	7	-	MD 5.14 lower (11.17 lower to 0.89 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms total (7 weeks PT, teacher rated Children symptom inventory, 0-27, high is poor outcome) (follow-up 7 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	7	7	-	MD 4.86 lower (10.49 lower to 0.77 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms Inattention (7 weeks PT, teacher rated Children symptom inventory, 0-27, high is poor outcome) (follow-up 7 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	7	7	-	SMD 2.43 lower (5.4 lower to 0.54 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms Inattention (11 weeks FU, teacher rated Children symptom inventory, 0-27, high is poor outcome) (follow-up 11 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	7	7	-	SMD 2.00 lower (5.43 lower to 1.43 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms Inattention (6 weeks PT, parent rated CPRS, 0-27, high is poor outcome) (follow-up 6 weeks; Better indicated by lower values)												
1	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	35	34	-	MD 1.45 higher (0.61 lower to 3.51 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (6 weeks PT, parent rated CPRS, 0-27, high is poor outcome) (follow-up 6 weeks; Better indicated by lower values)												
1	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	35	34	-	MD 1.65 higher (0.46 lower to 3.76 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (7 weeks PT, teacher rated Children symptom inventory, 0-27, high is poor outcome) (follow-up 7 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	7	7	-	MD 2.43 lower (5.66 lower to 0.8 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (11 weeks FU, teacher rated Children symptom inventory, 0-27, high is poor outcome) (follow-up 11 weeks; Better indicated by lower values)												

1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	7	7	-	MD 3.14 lower (6.46 lower to 0.18 higher)	⊕OOO VERY LOW	CRITICAL
Function/Behaviour (6 weeks PT, parent reported SDQ, 0-40, high is poor outcome) (follow-up 6 weeks; Better indicated by lower values)												
1	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	35	34	-	MD 1.04 higher (2.09 lower to 4.17 higher)	⊕⊕OO LOW	IMPORTANT
Function/Behaviour (6 weeks PT, teacher reported SDQ, 0-40, high is poor outcome) (follow-up 6 weeks; Better indicated by lower values)												
1	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	35	34	-	MD 3.30 higher (1.1 to 5.5 higher)	⊕⊕OO LOW	IMPORTANT
Function/Behaviour (6 months FU, parent reported SDQ, 0-40, high is poor outcome) (follow-up 6 months; Better indicated by lower values)												
1	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	35	34	-	MD 1.22 lower (4.39 lower to 1.95 higher)	⊕⊕OO LOW	IMPORTANT
Function/Behaviour (6 months FU, teacher reported SDQ, 0-40, high is poor outcome) (follow-up 6 months; Better indicated by lower values)												
1	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	35	34	-	MD 0.32 lower (3.71 lower to 3.07 higher)	⊕⊕OO LOW	IMPORTANT

[1] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
[2] Downgraded by 1 increment if the confidence interval crossed 1 MID.
[3] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.

Table 49: Clinical evidence profile: Relaxation versus waitlist/usual care for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Relaxation**	**Waitlist/usual Care**	**Relative (95% CI)**	**Absolute**		
ADHD symptoms total (4 weeks PT, parent rated Conners scale, 0-84, high is poor outcome) (follow-up 4 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	9	8	-	MD 3.22 lower (10.84 lower to 4.4 higher)	⊕OOO VERY	CRITICAL

											LOW	
ADHD symptoms total (4 weeks PT, teacher rated Conners scale, 0-84, high is poor outcome) (follow-up 4 weeks; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	very serious[1]	none	9	8	-	MD 0.52 lower (5.88 lower to 4.84 higher)	⊕OOO VERY LOW	CRITICAL

[1] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
[2] Downgraded by 2 increments if the confidence interval crossed both MIDs.

Table 50: Clinical evidence profile: Exercise versus waitlist/usual care for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Exercise**	**Waitlist/Usual Care**	**Relative (95% CI)**	**Absolute**		
ADHD symptoms Inattention (10 weeks PT, teacher rated Behavior Rating scale, 0-54, High is good outcome) (follow-up 10 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	42	42	-	MD 2.84 higher (0.42 to 5.26 higher)	⊕⊕OO LOW	CRITICAL
Function/behaviour (10 weeks PT, teacher rated Behavior Rating scale, 0-54, High is good outcome) (follow-up 10 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	42	42	-	MD 0.74 lower (1.99 lower to 0.51 higher)	⊕⊕OO LOW	IMPORTANT
Academic performance (10 weeks PT, teacher rated Behavior Rating scale, 0-54, High is good outcome) (follow-up 10 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	42	42	-	MD 7.24 higher (4.42 to 10.06 higher)	⊕OOO VERY LOW	IMPORTANT

[1] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
[2] Downgraded by 1 increment if the confidence interval crossed 1 MID.
[3] Downgraded by 2 increments if the confidence interval crossed both MIDs.

Table 51: Clinical evidence profile: Organisational/school based versus waitlist/usual care for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Organisational/school based	Waitlist/usual care	Relative (95% CI)	Absolute		
ADHD symptoms total (35 weeks PT, Disruptive Behaviour Disorders rating scale, 0-3, high is poor outcome) (follow-up 35 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	33	27	-	MD 0.18 lower (0.51 lower to 0.15 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms Inattention (11-20 weeks PT, parent rated VADPRS, FBB-HKS, high is poor outcome) (follow-up 11-20 weeks; Better indicated by lower values)												
2	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	63	60	-	SMD 0.50 lower (0.86 to 0.14 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Inattention (39 weeks PT, parent rated disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) (follow-up 39 weeks; Better indicated by lower values)												
2	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[2]	none	253	118	-	MD 1.88 lower (3.23 to 0.52 lower)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms Inattention (65 weeks FU, parent rated disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) (follow-up 65 weeks; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	222	104	-	MD 0.46 lower (2.01 lower to 1.09 higher)	⊕⊕⊕⊕ HIGH	CRITICAL
ADHD symptoms Inattention (20-39 weeks PT, teacher rated disruptive behaviour disorder questionnaire, FBB-HKS, high is poor outcome) (follow-up 20-39 weeks; Better indicated by lower values)												
3	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	293	154	-	SMD 0.10 lower (0.3 lower to 0.1 higher)	⊕⊕⊕⊕ HIGH	CRITICAL
ADHD symptoms Inattention (65 weeks FU, teacher rated disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) (follow-up 65 weeks; Better indicated by lower												

values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	222	104	-	MD 0.21 lower (1.96 lower to 1.54 higher)	⊕⊕⊕⊕ HIGH	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (20-39 weeks PT, parent disruptive behaviour disorder questionnaire, FBB-HKS, high is poor outcome) (follow-up 20-39 weeks; Better indicated by lower values)												
3	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	293	154	-	SMD 0.05 lower (0.25 lower to 0.14 higher)	⊕⊕⊕⊕ HIGH	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (20-39 weeks PT, teacher disruptive behaviour disorder questionnaire, FBB-HKS, high is poor outcome) (follow-up 20-39 weeks; Better indicated by lower values)												
3	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	293	154	-	SMD 0.14 lower (0.33 lower to 0.06 higher)	⊕⊕⊕⊕ HIGH	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (65 weeks FU, parent disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) (follow-up 65 weeks; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	222	110	-	MD 0.91 lower (2.27 lower to 0.45 higher)	⊕⊕⊕⊕ HIGH	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (65 weeks FU, teacher disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) (follow-up 65 weeks; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	222	104	-	MD 0.73 lower (2.26 lower to 0.8 higher)	⊕⊕⊕⊕ HIGH	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (11 weeks PT, parent rated VADPRS, hyperactive/impulsive, 0-3, high is poor outcome) (follow-up 11 weeks; Better indicated by lower values)												
1	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	very serious[4]	none	23	24	-	MD 0.04 higher (0.36 lower to 0.44 higher)	⊕OOO VERY LOW	CRITICAL
Function/Behaviour (20-39 weeks PT, parent disruptive behaviour disorder questionnaire, SDQ, high is poor outcome) (follow-up 20-39 weeks; Better indicated by lower values)												
2	randomised trials	no serious risk of	no serious inconsistency	no serious indirectness	no serious imprecision	none	262	140	-	MD 0.47 lower (1.22 lower to	⊕⊕⊕⊕ HIGH	IMPORTANT

		bias								0.28 higher)		
Function/Behaviour (65 weeks FU, parent disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) (follow-up 65 weeks; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	222	104	-	MD 1.11 lower (2.35 lower to 0.13 higher)	⊕⊕⊕⊕ HIGH	IMPORTANT
Function/Behaviour (20-39 weeks PT, teacher disruptive behaviour disorder questionnaire, SDQ, high is poor outcome) (follow-up 20-39 weeks; Better indicated by lower values)												
3	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	295	167	-	SMD 0.16 lower (0.35 lower to 0.04 higher)	⊕⊕⊕⊕ HIGH	IMPORTANT
Function/Behaviour (65 weeks FU, teacher disruptive behaviour disorder questionnaire, 0-27, high is poor outcome) (follow-up 65 weeks; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	222	104	-	MD 0.22 higher (1.07 lower to 1.51 higher)	⊕⊕⊕⊕ HIGH	IMPORTANT
Academic - Literacy (35 weeks PT, Woodcock-Johnson reading subscale, 0-132, high is good outcome) (follow-up 35 weeks; Better indicated by higher values)												
1	randomised trials	very serious[4]	no serious inconsistency	no serious indirectness	serious[2]	none	33	27	-	MD 1.54 higher (6.87 lower to 9.95 higher)	⊕OOO VERY LOW	IMPORTANT
Academic (65 weeks FU, Teacher rated Classroom performance survey scale, unclear range, high is poor outcome) (follow-up 65 weeks; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	222	104	-	MD 0.05 higher (2.1 lower to 2.2 higher)	⊕⊕⊕⊕ HIGH	IMPORTANT
Academic (39 weeks PT, Teacher rated Classroom performance survey scale, unclear range, high is poor outcome) (follow-up 39 weeks; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	222	104	-	MD 0.98 lower (2.99 lower to 1.03 higher)	⊕⊕⊕⊕ HIGH	IMPORTANT
Academic - Numeracy (35 weeks PT, Woodcock-Johnson math subscale, 0-132, high is good outcome) (follow-up 35 weeks; Better indicated by higher values)												
1	randomised trials	very serious[4]	no serious inconsistency	no serious indirectness	serious[2]	none	33	27	-	MD 1.68 higher (6.42 lower to 9.78 higher)	⊕OOO VERY LOW	IMPORTANT
Academic performance (10-12 weeks PT, APRS, 19-95, High is good outcome) (follow-up 10-12 weeks; Better indicated by higher values)												

1	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	125	33	-	MD 8.51 higher (4.65 to 12.37 higher)	⊕⊕OO LOW	IMPORTANT
Academic - Numeracy (1 year PT, WJ-III math fluency, 0-98, high is good outcome) (follow-up 1 years; Better indicated by higher values)												
1	randomised trials	very serious[4]	no serious inconsistency	no serious indirectness	serious[2]	none	14	14	-	MD 2.08 higher (2.87 lower to 7.03 higher)	⊕OOO VERY LOW	IMPORTANT
Academic - Numeracy (during 10 week intervention, Maths worksheets, 0-100, high is good outcome) (follow-up 10 weeks; Better indicated by higher values)												
1	randomised trials	very serious[4]	no serious inconsistency	no serious indirectness	very serious[4]	none	14	14	-	MD 4.90 higher (10.66 lower to 20.46 higher)	⊕OOO VERY LOW	IMPORTANT
Academic - Numeracy (10 days PT, WJ-III ACH math fluency, 0-98, high is good outcome (follow-up 10 days; Better indicated by higher values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	14	13	-	MD 6.70 higher (20.03 lower to 33.43 higher)	⊕OOO VERY LOW	IMPORTANT
Academic performance (8 weeks PT, parent rated APRS, total, 19-95, High is good outcome) (follow-up 8 weeks; Better indicated by higher values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	24	13	-	MD 2.91 higher (4.29 lower to 10.11 higher)	⊕OOO VERY LOW	IMPORTANT

[1] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
[2] Downgraded by 1 increment if the confidence interval crossed 1 MID.
[3] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
[4] Downgraded by 2 increments if the confidence interval crossed both MIDs.

Table 52: Clinical evidence profile: Parent/Family Training & Organisation/School-based versus waitlist/usual care for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Parent/Family Training & Organisation/School-**	**Waitlist/Usual Care**	**Relative (95%**	**Absolute**		

							based		CI)			
ADHD symptoms total (3 years FU, SNAP, 0-3, high is poor outcome) (follow-up 3 years; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	127	116	-	MD 0.01 higher (0.14 lower to 0.16 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms Inattention (39-60 weeks PT, parent rated disruptive behaviour disorder, SNAP, high is poor outcome) (follow-up 39-60 weeks; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	163	142	-	SMD 0.13 lower (0.35 lower to 0.1 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms Inattention (60 weeks PT, teacher rated SNAP, 0-3, high is poor outcome) (follow-up 60 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	119	128	-	MD 0.01 lower (0.18 lower to 0.16 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (39-60 weeks PT, parents rated disruptive behaviour disorder, SNAP,, high is poor outcome) (follow-up 39-60 weeks; Better indicated by lower values)												
2	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	153	142	-	SMD 0.15 lower (0.38 lower to 0.08 higher)	⊕⊕⊕⊕ HIGH	CRITICAL
ADHD symptoms Hyperactivity/Impulsivity (60 weeks PT, teacher rated SNAP, 0-3, high is poor outcome) (follow-up 60 weeks; Better indicated by lower values)												
1	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	119	128	-	MD 0.15 lower (0.35 lower to 0.05 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Hyperactivity (60 weeks PT, classroom observer, unclear range, high is poor outcome) (follow-up 60 weeks; Better indicated by lower values)												
1	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	107	109	-	MD 0.11 higher (0.05 to 0.17 higher)	⊕OOO VERY LOW	CRITICAL
Function/behaviour - ODD (60 weeks PT, parent rated SNAP, 0-3, high is poor outcome) (follow-up 60 weeks; Better indicated by lower values)												
1	randomised	serious[1]	no serious	no serious	no serious	none	129	130	-	MD 0.06 lower	⊕⊕⊕O	IMPORTANT

	trials		inconsistency	indirectness	imprecision					(0.23 lower to 0.11 higher)	MODERATE	
Function/behaviour ODD (60 weeks PT, teacher rated SNAP, 0-3, high is poor outcome) (follow-up 60 weeks; Better indicated by lower values)												
1	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	119	128	-	MD 0.03 lower (0.23 lower to 0.17 higher)	⊕⊕OO LOW	IMPORTANT
Function/behaviour - ODD aggression (60 weeks PT, classroom observer, unclear range, high is poor outcome) (follow-up 60 weeks; Better indicated by lower values)												
1	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	107	109	-	MD 0.00 higher (0 to 0.01 higher)	⊕OOO VERY LOW	IMPORTANT
Social skills (60 weeks PT, parent rated Social skills rating system internalising subscale, unclear range, high is poor outcome) (follow-up 60 weeks; Better indicated by lower values)												
1	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	131	125	-	MD 0.05 lower (0.15 lower to 0.05 higher)	⊕⊕OO LOW	IMPORTANT
Social skills (60 weeks PT, teacher rated Social skills rating system internalising subscale, unclear range, high is poor outcome) (follow-up 60 weeks; Better indicated by lower values)												
1	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	105	102	-	MD 0.11 lower (0.22 lower to 0 higher)	⊕OOO VERY LOW	IMPORTANT
Academic - Literacy (3 years FU, WIAT, 0-132, high is good outcome) (follow-up 3 years; Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	127	116	-	MD 2.30 higher (1.32 lower to 5.92 higher)	⊕⊕⊕O MODERATE	IMPORTANT
Academic (39 weeks PT, Teacher rated Classroom performance survey scale, unclear range, high is poor outcome) (follow-up 39 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	24	12	-	MD 5.00 lower (9.99 to 0.01 lower)	⊕⊕OO LOW	IMPORTANT
Academic - Literacy (60 weeks PT, Wechsler Individual Achievement Test, 69-130, high is good outcome) (follow-up 60 weeks; Better indicated by higher values)												
1	randomised	serious[1]	no serious	no serious	no serious	none	134	131	-	MD 0.80	⊕⊕⊕O	IMPORTANT

	trials		inconsistency	indirectness	imprecision					higher (2.7 lower to 4.3 higher)	MODERATE	
Academic - Numeracy (60 weeks PT, Wechsler Individual Achievement Test, 69-130, high is good outcome (follow-up 60 weeks; Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	134	131	-	MD 0.10 lower (3.59 lower to 3.39 higher)	⊕⊕⊕O MODERATE	IMPORTANT

[1] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
[2] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
[3] Downgraded by 1 increment if the confidence interval crossed 1 MID.

Table 53: Clinical evidence profile: Cognitive training & exercise versus waitlist/usual care for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Cognitive training & exercise**	**Waitlist/usual care**	**Relative (95% CI)**	**Absolute**		
ADHD symptoms total (15 weeks PT, clinician rated SNAP, unclear range, high is poor outcome) (follow-up 15 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	42	38	-	MD 1.20 higher (2.24 lower to 4.64 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms total (15 weeks PT, parent rated SNAP, unclear range, high is poor outcome) (follow-up 15 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	41	38	-	MD 1.00 lower (4.89 lower to 2.89 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms total (15 weeks PT, teacher rated SNAP, unclear range, high is poor outcome) (follow-up 15 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	34	31	-	MD 0.10 lower (5.6 lower to 5.4 higher)	⊕⊕⊕O MODERATE	CRITICAL

[1] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
[2] Downgraded by 1 increment if the confidence interval crossed 1 MID.

Table 54: Clinical evidence profile: CBT/DBT versus non-specific supportive therapy for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	CBT/DBT	Non-specific supportive therapy	Relative (95% CI)	Absolute		
ADHD symptoms Inattention (17 weeks PT, parent rated Revised behaviour problem checklist, 0-27, high is poor outcome) (follow-up 17 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	13	12	-	MD 3.80 lower (9.74 lower to 2.14 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms Inattention (39 weeks FU, parent rated Revised behaviour problem checklist, 0-27, high is poor outcome) (follow-up 39 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	13	12	-	MD 2.00 lower (7.71 lower to 3.71 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms inattention (17 weeks PT, teacher rated Revised behaviour problem checklist, 0-27, high is poor outcome) (follow-up 17 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	13	12	-	MD 4.20 lower (7.97 to 0.43 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms inattention (39 weeks FU, teacher rated Revised behaviour problem checklist, 0-27, high is poor outcome) (follow-up 39 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	13	12	-	MD 1.20 lower (8.58 lower to 6.18 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms hyperactivity/Impulsivity (17 weeks PT, parent rated modified Werry Weiss Activity scale, 0-100, high is poor outcome) (follow-up 17 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	13	12	-	MD 11.00 lower (22.9 lower to 0.9 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms hyperactivity/Impulsivity (39 weeks FU, parent rated modified Werry Weiss Activity scale, 0-100, high is poor outcome) (follow-up 39 weeks; Better indicated by lower values)												

1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	13	12	-	MD 7.70 lower (20.12 lower to 4.72 higher)	⊕⊕OO LOW	CRITICAL

[1] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
[2] Downgraded by 1 increment if the confidence interval crossed 1 MID.
[3] Downgraded by 2 increments if the confidence interval crossed both MIDs.

Table 55: Clinical evidence profile: Organisational/school based versus non-specific supportive therapy for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Organisational/school based**	**Non-specific supportive therapy**	**Relative (95% CI)**	**Absolute**		
Function/behaviour (10 weeks PT, Aggression and Conduct Problems Scale, 0-27, high is poor outcome) (follow-up 10 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	9	-	MD 7.15 lower (12.99 to 1.31 lower)	⊕OOO VERY LOW	IMPORTANT
Emotional dysregulation (10 weeks PT, BASC-I, 0-100, high is poor outcome) (follow-up 10 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	9	-	MD 3.11 lower (7.58 lower to 1.36 higher)	⊕OOO VERY LOW	IMPORTANT

[1] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
[2] Downgraded by 1 increment if the confidence interval crossed one MID.

Table 56: Clinical evidence profile: Neurofeedback versus sham for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Neurofeedback**	**Sham**	**Relative (95% CI)**	**Absolute**		

ADHD symptoms total (15 weeks PT, teacher rated ADHD-RS-IV , 0-54, high is poor outcome) (follow-up 15 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	22	19	-	MD 0.40 higher (6.21 lower to 7.01 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms total (15 weeks PT, investigator rated ADHD-RS-IV , 0-54, high is poor outcome) (follow-up 15 weeks; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[3]	none	22	19	-	MD 2.90 lower (8.02 lower to 2.22 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms inattention (15 weeks PT, teacher rated ADHD-RS-IV inattention, 0-27, high is poor outcome) (follow-up 15 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	22	19	-	MD 0.30 higher (2.91 lower to 3.51 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms inattention (15-17 weeks PT, investigator rated ADHD-RS-IV inattention, ADHD DSM-IV, high is poor outcome) (follow-up 15-17 weeks; Better indicated by lower values)												
2	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[3]	none	30	25	-	SMD 0.06 lower (0.59 lower to 0.48 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms hyperactivity (15 weeks PT, teacher rated ADHD-RS-IV hyperactivity, 0-27, high is poor outcome) (follow-up 15 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	22	19	-	MD 0.00 higher (4.17 lower to 4.17 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms hyperactivity (15-17 weeks PT, investigator rated ADHD-RS-IV hyperactivity, ADHD DSM-IV, high is poor outcome) (follow-up 15-17 weeks; Better indicated by lower values)												
2	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[3]	none	30	25	-	SMD 0.46 lower (1 lower to 0.08 higher)	⊕⊕⊕O MODERATE	CRITICAL
CGI-I ~ much improved or very much improved (43 weeks FU, investigator rated) (follow-up 43 weeks)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[2]	none	1/8 (12.5%)	0%	Peto OR 5.75 (0.11 to .302.04)	-	⊕⊕OO LOW	CRITICAL
Serious adverse events (15 weeks PT, Pittsburgh Side Effects Rating Scale, 0-27, high is poor outcome) (follow-up 15 weeks; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[2]	none	22	19	-	MD 0.20 higher (2.41 lower to 2.81 higher)	⊕⊕OO LOW	CRITICAL

[1] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
[2] Downgraded by 2 increments if the confidence interval crossed both MIDs.
[3] Downgraded by 1 increment if the confidence interval crossed 1 MID.

Table 57: Clinical evidence profile: Neurofeedback versus Exercise for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Neurofeedback	Exercise	Relative (95% CI)	Absolute		
ADHD symptoms hyperactivity, (10-12 weeks PT, parent rated, SWAN,0-3, higher is poorer) (follow-up 10-12 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	39	37	-	MD 0.05 lower (0.41 lower to 0.31 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms hyperactivity, (10-12 weeks PT, teacher rated, SWAN, 0-3, higher is poorer) (follow-up 10-12 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	39	35	-	MD 0.06 higher (0.41 lower to 0.53 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms inattention (10-12 weeks PT, parent rated SWAN, 0-3, high is poor outcome) (follow-up 10-12 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	39	37	-	MD 0.00 higher (0.31 lower to 0.31 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms inattention (10-12 weeks PT, teacher rated SWAN, 0-3, high is poor outcome) (follow-up 10-12 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	39	35	-	MD 0.03 lower (0.37 lower to 0.31 higher)	⊕⊕⊕O MODERATE	CRITICAL
Function/Behaviour (10-12 weeks PT, parent reported SDQ, 0-40, high is poor outcome) (follow-up 10-12 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	39	37	-	MD 0.89 lower (3.29 lower to 1.51 higher)	⊕⊕OO LOW	IMPORTANT
Function/Behaviour (10-12 weeks PT, teacher reported SDQ, 0-40, high is poor outcome) (follow-up 10-12 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	39	35	-	MD 0.59 lower (2.88 lower to 1.7 higher)	⊕⊕OO LOW	IMPORTANT

[1] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
[2] Downgraded by 1 increment if the confidence interval crossed 1 MID.

Table 58: Clinical evidence profile: Parent/Family Training versus Relaxation for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Parent/Family Training	Relaxation	Relative (95% CI)	Absolute		
ADHD symptoms hyperactivity/Impulsivity (12 weeks PT, parent rated CBCL, 0-106, high is poor outcome) (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	12	12	-	MD 0.00 higher (8.41 lower to 8.41 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms hyperactivity/Impulsivity (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome) (follow-up 47 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	12	12	-	SMD 1.10 lower (9.25 lower to 7.05 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms hyperactivity/Impulsivity (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome) (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	12	12	-	MD 1.50 lower (6.41 lower to 3.41 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms hyperactivity/Impulsivity (47 weeks FU, teacher rated CTRS, 0-15, high is poor outcome) (follow-up 47 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	12	12	-	MD 6.40 lower (11.52 to 1.28 lower)	⊕OOO VERY LOW	CRITICAL
Function/behaviour (12 weeks PT, parent rated CBCL, 0-106, high is poor outcome) (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	12	12	-	MD 1.30 higher (4.7 lower to 7.3 higher)	⊕OOO VERY	IMPORTANT

											LOW	
Function/behaviour (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome) (follow-up 47 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	12	12	-	MD 1.60 higher (3.72 lower to 6.92 higher)	⊕OOO VERY LOW	IMPORTANT
Function/behaviour (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome) (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	12	12	-	MD 1.40 lower (4.56 lower to 1.76 higher)	⊕OOO VERY LOW	IMPORTANT
Function/behaviour (47 weeks FU, teacher rated CTRS, 0-15, high is poor outcome) (follow-up 47 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	12	12	-	MD 0.70 higher (3.54 lower to 4.94 higher)	⊕OOO VERY LOW	IMPORTANT
Academic - Literacy (12 weeks PT, WRAT-R, 55-145, high is good outcome) (follow-up 12 weeks; Better indicated by higher values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	12	12	-	MD 13.00 higher (2.2 lower to 28.2 higher)	⊕OOO VERY LOW	IMPORTANT
Academic - Literacy (47 weeks FU, WRAT-R, 55-145, high is good outcome) (follow-up 47 weeks; Better indicated by higher values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	12	12	-	MD 10.10 higher (4.08 lower to 24.28 higher)	⊕OOO VERY LOW	IMPORTANT
Academic - Numeracy (12 weeks PT, WRAT-R, 0-145, high is good outcome) (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	12	12	-	MD 8.10 higher (2.57 to 13.63 higher)	⊕OOO VERY LOW	IMPORTANT
Academic - Numeracy (47 weeks FU, WRAT-R, 0-145, high is good outcome) (follow-up 47 weeks; Better indicated by higher values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	12	12	-	MD 10.70 higher (5.33 to 16.07 higher)	⊕OOO VERY LOW	IMPORTANT

[1] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
[2] Downgraded by 1 increment if the confidence interval crossed 1 MID.
[3] Downgraded by 2 increments if the confidence interval crossed both MIDs.

Table 59: Clinical evidence profile: Parent/Family Training versus Psychoeducation for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Parent/Family Training	Psychoeducation	Relative (95% CI)	Absolute		
Academic (26 weeks FU, teacher rated APRS questionnaire, 0-5, high is good outcome) (follow-up 26 weeks; Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	92	96	-	MD 0.15 higher (0.05 lower to 0.35 higher)	⊕⊕⊕O MODERATE	IMPORTANT
Academic (12 weeks PT, teacher rated APRS questionnaire, 0-5, high is good outcome) (follow-up 12 weeks; Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	92	96	-	MD 0.12 higher (0.07 lower to 0.31 higher)	⊕⊕⊕O MODERATE	IMPORTANT

[1] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.

Table 60: Clinical evidence profile: Neurofeedback versus Attention/memory/cognitive training for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Neurofeedback	Attention/memory/cognitive training	Relative (95% CI)	Absolute		
ADHD symptoms total (3-4 weeks PT, parent rated German ADHD rating scale, 0-3, high is poor outcome) (follow-up 3-4 weeks; Better indicated by lower values)												
1	randomised	serious[1]	no serious	no serious	serious[2]	none	59	35	-	MD 0.25	⊕⊕OO	CRITICAL

	trials		inconsistency	indirectness						lower (0.42 to 0.08 lower)	LOW	
ADHD symptoms total (26 weeks FU, parent rated German ADHD rating scale, 0-3, high is poor outcome) (follow-up 26 weeks; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	38	23	-	MD 0.16 lower (0.47 lower to 0.15 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms total (3-4 weeks PT, teacher rated German ADHD rating scale, 0-3, high is poor outcome) (follow-up 3-4 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	59	35	-	MD 0.01 higher (0.17 lower to 0.19 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms inattention (3-4 weeks PT, parent rated German ADHD rating scale, 0-3, high is poor outcome) (follow-up 3-4 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	59	38	-	MD 0.29 lower (0.5 to 0.08 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms inattention (17-20 weeks PT, parent rated Conners Rating Scales–Revised, high is poor outcome) (follow-up 17-20 weeks; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	43	45	-	MD 3.25 higher (0.42 lower to 6.92 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms inattention (24 weeks FU, parent rated Conners 3-P, 0-84, high is poor outcome) (follow-up 24 weeks; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	34	34	-	MD 2.50 higher (2.87 lower to 7.87 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms inattention (26 weeks FU, parent rated German ADHD rating scale, 0-3, high is poor outcome) (follow-up 26 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	38	23	-	MD 0.07 lower (0.37 lower to 0.23 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms inattention (3-4 weeks PT, teacher rated German ADHD rating scale, Conners 3-T, 0-3, high is poor outcome) (follow-up 3-4 weeks; Better indicated by lower												

values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	59	35	-	MD 0.29 lower (0.54 to 0.04 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms inattention (17-20 weeks PT, teacher rated, Conners 3-T, high is poor outcome) (follow-up 17-20 weeks; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	43	45	-	MD 1.73 lower (6.13 lower to 2.67 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms hyperactivity/Impulsivity (3-4 weeks PT, parent rated German ADHD scale, 0-3, high is poor outcome) (follow-up 3-4 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	59	35	-	MD 0.19 lower (0.37 to 0.01 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms hyperactivity/Impulsivity (17-20 weeks PT, parent rated Conners Rating Scales–Revised, high is poor outcome) (follow-up 17-20 weeks; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	43	45	-	MD 1.22 higher (5.24 lower to 7.68 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms hyperactivity/Impulsivity (24 weeks FU, parent rated Conners 3-P, 0-84, high is poor outcome) (follow-up 24 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	34	34	-	MD 0.17 higher (6.83 lower to 7.17 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms hyperactivity/Impulsivity (26 weeks FU, parent rated German ADHD rating scale, 0-3, high is poor outcome) (follow-up 26 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	38	23	-	MD 0.24 lower (0.63 lower to 0.15 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms hyperactivity/Impulsivity (3-4 weeks PT, teacher rated German ADHD rating scale, 0-3, high is poor outcome) (follow-up 3-4 weeks; Better indicated by lower values)												
1	randomised	serious[1]	no serious	no serious	serious[2]	none	59	35	-	MD 0.20	⊕⊕OO	CRITICAL

	trials		inconsistency	indirectness						lower (0.42 lower to 0.02 higher)	LOW	
ADHD symptoms hyperactivity/Impulsivity (17 weeks PT, teacher rated Conners 3-T rating scale, 0-84, high is poor outcome) (follow-up 17 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	9	11	-	MD 8.50 lower (22.84 lower to 5.84 higher)	⊕⊕OO LOW	CRITICAL
Function/Behaviour (3-4 weeks PT, parent rated Oppositional defiant/conduct disorders scale, 0-3, high is poor outcome) (follow-up 3-4 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	59	35	-	MD 0.18 lower (0.39 lower to 0.03 higher)	⊕⊕OO LOW	IMPORTANT
Function/Behaviour (5 months PT, parent rated BRIEF, global executive subscale 0-100, high is poor outcome) (follow-up 5 months; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	34	34	-	MD 0.60 higher (3.49 lower to 4.69 higher)	⊕⊕OO LOW	IMPORTANT
Function/Behaviour (24 weeks FU, parent rated BRIEF, global executive subscale 0-100, high is poor outcome) (follow-up 24 weeks; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	34	34	-	MD 0.73 higher (3.87 lower to 5.33 higher)	⊕OOO VERY LOW	IMPORTANT
Function/Behaviour (26 weeks FU, parent rated German ADHD scale, 0-3, high is poor outcome) (follow-up 26 weeks; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	38	23	-	MD 0.11 lower (0.48 lower to 0.26 higher)	⊕OOO VERY LOW	IMPORTANT
Function/Behaviour (3-4 weeks PT, teacher rated German rating scale for oppositional defiant disorders, 0-3, high is poor outcome) (follow-up 3-4 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	59	35	-	MD 0.23 lower (0.41 to 0.05 lower)	⊕⊕OO LOW	IMPORTANT

Function/Behaviour (5 months PT, investigator rated BOSS scale, 0-100, high is good outcome) (follow-up 5 months; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	34	34	-	MD 0.90 higher (5.81 lower to 7.61 higher)	⊕⊕OO LOW	IMPORTANT
Function/Behaviour (6 months FU, investigator rated BOSS scale, 0-100, high is good outcome) (follow-up 6 months; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	34	34	-	MD 1.60 higher (5.41 lower to 8.61 higher)	⊕⊕OO LOW	IMPORTANT
Emotional dysregulation (3-4 weeks PT, parents rated SDQ questionnaire, 0-10, high is poor outcome) (follow-up 3-4 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	59	35	-	MD 0.40 lower (1.78 lower to 0.98 higher)	⊕⊕OO LOW	IMPORTANT
Emotional dysregulation (3-4 weeks PT, teacher rated SDQ questionnaire, 0-10, high is poor outcome) (follow-up 3-4 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	59	35	-	MD 0.43 higher (0.46 lower to 1.32 higher)	⊕⊕OO LOW	IMPORTANT

[1] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
[2] Downgraded by 1 increment if the confidence interval crossed 1 MID.
[3] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.

Table 61: Clinical evidence profile: Neurofeedback versus Psychoeducation for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Neurofeedback	Psychoeducation	Relative (95% CI)	Absolute		
ADHD symptoms inattention (17 weeks PT, parent rated Conners-3P, 0-15, high is poor outcome) (follow-up 17 weeks; Better indicated by lower values)												

1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	14	15	-	MD 0.71 higher (3.28 lower to 4.7 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms inattention (17 weeks PT, teacher rated Conners-3P, 0-15, high is poor outcome) (follow-up 17 weeks; Better indicated by lower values)												
1	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	very serious[2]	none	14	15	-	MD 0.74 higher (3.05 lower to 4.53 higher)	⊕OOO VERY LOW	CRITICAL

[1] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
[2] Downgraded by 2 increments if the confidence interval crossed both MIDs.
[3] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.

Table 62: Clinical evidence profile: Parent/Family Training & Relaxation versus Parent/Family Training for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Parent/Family Training & Relaxation**	**Parent/Family Training**	**Relative (95% CI)**	**Absolute**		
ADHD symptoms hyperactivity/Impulsivity (12 weeks PT, parent rated CBCL, 0-106, high is poor outcome) (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	12	-	MD 6.00 lower (13.09 lower to 1.09 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms hyperactivity/Impulsivity (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome) (follow-up 47 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	12	-	MD 5.50 lower (11.07 lower to 0.07 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms hyperactivity/Impulsivity (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome) (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	12	-	MD 2.60 higher (2.32 lower to 7.52 higher)	⊕OOO VERY LOW	CRITICAL

ADHD symptoms hyperactivity/Impulsivity (47 weeks FU, teacher rated CTRS, unclear range, high is poor outcome) (follow-up 47 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	12	-	MD 3.00 higher (2.7 lower to 8.7 higher)	⊕OOO VERY LOW	CRITICAL
Function/behaviour (12 weeks PT, parent rated CBCL, 0-106, high is poor outcome) (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	12	-	MD 4.50 lower (10.39 lower to 1.39 higher)	⊕OOO VERY LOW	IMPORTANT
Function/behaviour (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome) (follow-up 47 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	12	-	MD 5.80 lower (10.33 to 1.27 lower)	⊕OOO VERY LOW	IMPORTANT
Function/behaviour (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome) (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	12	-	MD 1.40 higher (1.62 lower to 4.42 higher)	⊕OOO VERY LOW	IMPORTANT
Function/behaviour (47 weeks FU, teacher rated CTRS, 0-15, high is poor outcome) (follow-up 47 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	11	12	-	MD 0.40 higher (3.86 lower to 4.66 higher)	⊕OOO VERY LOW	IMPORTANT
Academic - Literacy (12 weeks PT, WRAT-R, 55-145, high is good outcome) (follow-up 12 weeks; Better indicated by higher values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	12	-	MD 9.90 lower (25.48 lower to 5.68 higher)	⊕OOO VERY LOW	IMPORTANT
Academic - Literacy (47 weeks FU, WRAT-R, 55-145, high is good outcome) (follow-up 47 weeks; Better indicated by higher values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	12	-	MD 7.10 lower (21.95 lower to 7.75 higher)	⊕OOO VERY LOW	IMPORTANT
Academic - Numeracy (12 weeks PT, WRAT-R, 0-145, high is good outcome) (follow-up 12 weeks; Better indicated by higher values)												

1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	12	-	MD 5.70 lower (10.47 to 0.93 lower)	⊕OOO VERY LOW	IMPORTANT
Academic - Numeracy (47 weeks FU, WRAT-R, 0-145, high is good outcome) (follow-up 47 weeks; Better indicated by higher values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	12	-	MD 4.40 lower (12 lower to 3.2 higher)	⊕OOO VERY LOW	IMPORTANT

[1] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
[2] Downgraded by 1 increment if the confidence interval crossed 1 MID.
[3] Downgraded by 2 increments if the confidence interval crossed both MIDs.

Table 63: Clinical evidence profile: Parent/Family Training & Relaxation versus Relaxation for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Parent/Family Training & Relaxation**	**Relaxation**	**Relative (95% CI)**	**Absolute**		
ADHD symptoms hyperactivity/Impulsivity (12 weeks PT, parent rated CBCL, 0-106, high is poor outcome) (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	12	-	MD 6.00 lower (13.46 lower to 1.46 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms hyperactivity/Impulsivity (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome) (follow-up 47 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	12	-	MD 6.60 lower (13.83 lower to 0.63 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms hyperactivity/Impulsivity (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome) (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	11	12	-	MD 1.10 higher (2.91 lower to 5.11 higher)	⊕OOO VERY LOW	CRITICAL

ADHD symptoms hyperactivity/Impulsivity (47 weeks FU, teacher rated CTRS, unclear range, high is poor outcome) (follow-up 47 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	12	-	MD 3.40 lower (9.24 lower to 2.44 higher)	⊕OOO VERY LOW	CRITICAL
Function/behaviour (12 weeks PT, parent rated CBCL, 0-106, high is poor outcome) (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	12	-	MD 3.20 lower (10.31 lower to 3.91 higher)	⊕OOO VERY LOW	IMPORTANT
Function/behaviour (47 weeks FU, parent rated CBCL, 0-106, high is poor outcome) (follow-up 47 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11	12	-	MD 4.20 lower (9.87 lower to 1.47 higher)	⊕OOO VERY LOW	IMPORTANT
Function/behaviour (12 weeks PT, teacher rated CTRS, 0-15, high is poor outcome) (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	11	12	-	MD 0.90 higher (2.87 lower to 4.67 higher)	⊕OOO VERY LOW	IMPORTANT
Function/behaviour (47 weeks FU, teacher rated CTRS, 0-15, high is poor outcome) (follow-up 47 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	11	12	-	MD 1.10 higher (3.32 lower to 5.52 higher)	⊕OOO VERY LOW	IMPORTANT
Academic - Literacy (47 weeks FU, WRAT-R, 55-145, high is good outcome) (follow-up 47 weeks; Better indicated by higher values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	11	12	-	MD 3.00 higher (7.57 lower to 13.57 higher)	⊕OOO VERY LOW	IMPORTANT
Academic - Literacy (12 weeks PT, WRAT-R, 55-145, high is good outcome) (follow-up 12 weeks; Better indicated by higher values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	11	12	-	MD 3.10 higher (9.92 lower to 16.12 higher)	⊕OOO VERY LOW	IMPORTANT
Academic - Numeracy (47 weeks FU, WRAT-R, 0-145, high is good outcome) (follow-up 47 weeks; Better indicated by higher values)												

1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	11	12	-	MD 6.30 higher (2.06 lower to 14.66 higher)	⊕OOO VERY LOW	IMPORTANT
Academic - Numeracy (12 weeks PT, WRAT-R, 0-145, high is good outcome) (follow-up 12 weeks; Better indicated by higher values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	11	12	-	MD 2.40 higher (4.24 lower to 9.04 higher)	⊕OOO VERY LOW	IMPORTANT

[1] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
[2] Downgraded by 1 increment if the confidence interval crossed 1 MID.
[3] Downgraded by 2 increments if the confidence interval crossed both MIDs.

Table 64: Clinical evidence profile: Attention/memory/cognitive training & BPT versus attention/memory/cognitive training for ADHD in children and young people

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Attention/memory/cognitive training & BPT**	**Attention/memory/cognitive training**	**Relative (95% CI)**	**Absolute**		
ADHD symptoms inattention (5 weeks PT, mother rated ADHD-RS, 0-27, high is poor outcome) (follow-up 5 weeks; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[1]	none	22	23	-	MD 0.59 higher (2.61 lower to 3.79 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms inattention (5 weeks PT, teacher rated ADHD-RS, 0-27, high is poor outcome) (follow-up 5 weeks; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[1]	none	22	23	-	MD 2.00 higher (1.9 lower to 5.9 higher)	⊕⊕⊕O MODERATE	CRITICAL

ADHD symptoms hyperactivity/Impulsivity (5 weeks PT, mother rated ADHD-RS, 0-27, high is poor) (follow-up 5 weeks; Better indicated by lower values)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	very serious[3]	none	22	23	-	MD 0.26 lower (3.77 lower to 3.25 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms hyperactivity/Impulsivity (5 weeks PT, teacher rated ADHD-RS, 0-27, high is poor) (follow-up 5 weeks; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[3]	none	22	23	-	MD 0.40 lower (3.36 lower to 2.56 higher)	⊕⊕OO LOW	CRITICAL
Function/Behaviour (5 weeks PT, mother rated, BRIEF, Global Executive Composite, unclear range, high is poor outcome) (follow-up 5 weeks; Better indicated by lower values)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[1]	none	22	23	-	MD 4.37 higher (9.83 lower to 18.57 higher)	⊕⊕OO LOW	IMPORTANT
Function/Behaviour (5 weeks PT, teacher rated, BRIEF, Global Executive Composite, unclear range, high is poor outcome) (follow-up 5 weeks; Better indicated by lower values)												
1	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	very serious[3]	none	22	23	-	MD 1.55 lower (19.03 lower to 15.93 higher)	⊕OOO VERY LOW	IMPORTANT

[1] Downgraded by 1 increment if the confidence interval crossed 1 MID.
[2] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
[3] Downgraded by 2 increments if the confidence interval crossed both MIDs.

Adults (>18 years old)

Table 65: Clinical evidence profile: Neurofeedback versus waitlist/usual care for ADHD in adults

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Neurofeedback	Waitlist/usual care	Relative (95% CI)	Absolute		
ADHD symptoms inattention [8-20 weeks PT, self-rated ADHD RS, 0-3, CS, high is poor outcome] (follow-up 8-20 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	23	21	-	MD 1.06 lower (2.06 to 0.06 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms hyperactivity [8-20 weeks PT, self-rated ADHD RS, 0-3, CS, high is poor outcome] (follow-up 8-20 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	23	21	-	MD 1.46 lower (2.64 to 0.28 lower)	⊕⊕OO LOW	CRITICAL

[1] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
[2] Downgraded by 1 increment if the confidence interval crossed 1 MID.

Table 66: Clinical evidence profile: CBT/DBT versus waitlist/usual care for ADHD in adults

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	CBT/DBT	Waitlist/usual care	Relative (95% CI)	Absolute		
Quality of life [FU, self-rated, 21 weeks, AAQoL, 0-100, higher is better] (follow-up 21 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	17	16	-	MD 6.21 higher (4.18 lower to 16.6 higher)	⊕⊕OO LOW	CRITICAL
Quality of life [PT, 8-10 weeks, AAQoL, Q-LES-Q, general, higher is better] (follow-up 8-10 weeks; Better indicated by lower values)												

2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	24	22	-	SMD 0.71 higher (0.34 lower to 1.75 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms total [6-10 weeks PT, self-rated CAARS, high is poor outcome] (follow-up 6 weeks; Better indicated by lower values)												
2	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	57	44	-	SMD 0.75 lower (1.17 to 0.34 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms total [3 months FU, self-rated CAARS, unclear range, high is poor outcome] (follow-up 3 months; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	30	26	-	MD 10.65 lower (15.43 to 5.87 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms total [12 weeks PT, investigator rated CAARS, high is poor outcome] (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	41	42	-	SMD 0.83 lower (1.24 to 0.43 lower)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms total [12 weeks PT, self-rated CAARS, high is poor outcome] (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	41	42	-	SMD 0.62 lower (1.01 to 0.22 lower)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms inattention [PT self-rated, 6-8 weeks, BAARS-IV, CAARS, high is poor] (follow-up 6-8 weeks; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	47	42	-	SMD 0.89 lower (1.83 lower to 0.05 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms inattention [FU self-rated, 12 - 21 weeks, BAARS-IV, CAARS, high is poor] (follow-up 12-21 weeks; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	47	42	-	SMD 1.00 lower (1.63 to 0.37 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms inattention [12 weeks PT, self-rated CAARS, 0 - 36, high is poor outcome] (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	41	42	-	SMD 0.65 lower (1.05 to 0.25 lower)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms inattention [12 weeks PT, investigator rated CAARS, 0 - 36, high is poor outcome] (follow-up 12 weeks; Better indicated by lower values)												

1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	41	42	-	SMD 0.73 lower (1.13 to 0.33 lower)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms hyperactivity [6 weeks PT, self-rated CAARS, unclear range, high is poor outcome] (follow-up 6 weeks; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	30	26	-	MD 10.29 lower (14.86 to 5.72 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms hyperactivity [3 months FU, self-rated CAARS, unclear range, high is poor outcome] (follow-up 3 months; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	30	26	-	MD 12.17 lower (16.71 to 7.63 lower)	⊕⊕OO LOW	CRITICAL
ADHD symptoms hyperactivity [12 weeks PT, investigator rated CAARS, 0 - 36, high is poor outcome] (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	41	42	-	SMD 0.68 lower (1.08 to 0.28 lower)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms hyperactivity [12 weeks PT, self-rated CAARS, 0 - 36, high is poor outcome] (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	41	42	-	SMD 0.43 lower (0.82 to 0.04 lower)	⊕OOO VERY LOW	CRITICAL
Improvement of ADHD symptoms [FU, 21 weeks, BAARS-IV Inattention] (follow-up 21 weeks)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11/17 (64.7%)	25%	RR 2.59 (1.03 to 6.48)	397 more per 1000 (from 7 more to 1000 more)	⊕⊕OO LOW	CRITICAL
Improvement of ADHD symptoms [PT, 8-17 weeks, BAARS-IV Inattention, Current ADHD Symptom Scale Self-Report Form] (follow-up 8-17 weeks)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11/17 (64.7%)	25%	RR 2.59 (1.03 to 6.48)	397 more per 1000 (from 7 more to 1000 more)	⊕⊕OO LOW	CRITICAL
Improvement of ADHD symptoms [PT, 10-15 weeks, BADDS, SCL-16, ASR] (follow-up 10-15 weeks)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	6/10 (60%)	20%	RR 3 (0.79 to 11.44)	400 more per 1000 (from 42 fewer to 1000 more)	⊕OOO VERY LOW	CRITICAL

Improvement of ADHD symptoms [PT, 10 weeks, CG-I] (follow-up 10 weeks)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	7/10 (70%)	30%	RR 2.33 (0.83 to 6.54)	399 more per 1000 (from 51 fewer to 1000 more)	⊕OOO VERY LOW	CRITICAL
Function/behaviour [12 weeks PT, self-rated BRIEF-ASR, 0 - 54, high is poor outcome] (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	41	42	-	SMD 0.86 lower (1.27 to 0.46 lower)	⊕OOO VERY LOW	IMPORTANT
Emotional dysregulation [PT self-rated, 6-8 weeks, BDI, BDI-2, higher is poorer] (follow-up 6-8 weeks; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	47	42	-	SMD 0.63 lower (1.06 to 0.2 lower)	⊕⊕OO LOW	IMPORTANT
Emotional dysregulation [FU self-rated, 12- 21weeks, BDI, BDI-2, higher is poorer] (follow-up 12-21 weeks; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	47	42	-	SMD 0.31 lower (0.81 lower to 0.2 higher)	⊕⊕OO LOW	IMPORTANT
Emotional dysregulation [12 weeks PT, self-rated BDI, 0-63, higher is poorer] (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	41	42	-	SMD 0.25 lower (0.64 lower to 0.14 higher)	⊕OOO VERY LOW	IMPORTANT
Academic outcome [PT, 8 weeks, GPA, 0-4, higher is better (follow-up 8 weeks; Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[4]	none	17	16	-	MD 0.08 lower (0.44 lower to 0.28 higher)	⊕OOO VERY LOW	IMPORTANT
Academic outcome [FU, 21 weeks, GPA, 0-4, higher is better] (follow-up 21 weeks; Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	17	16	-	MD 0.22 lower (0.59 lower to 0.15 higher)	⊕⊕OO LOW	IMPORTANT

[1] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
[2] Downgraded by 1 increment if the confidence interval crossed 1 MID.
[3] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
[4] Downgraded by 2 increments if the confidence interval crossed both MIDs.

Table 67: Clinical evidence profile: Attention/memory/cognitive training versus waitlist/usual care for ADHD in adults

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Attention/memory/cognitive training	Waitlist/usual care	Relative (95% CI)	Absolute		
Quality of life [PT, 10 weeks, Q-LES-Q general, 0-100] (follow-up 10 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	8	6	-	MD 6.00 higher (13.54 lower to 25.54 higher)	⊕OOO VERY LOW	CRITICAL
Improvement of ADHD symptoms [PT, 10 weeks, BADDS, SCL-16, ASR] (follow-up 10 weeks)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	2/9 (22.2%)	22.2%	RR 1 (0.18 to 5.63)	0 fewer per 1000 (from 182 fewer to 1000 more)	⊕OOO VERY LOW	CRITICAL
Improvement of ADHD symptoms [PT, 10 weeks, CG-I] (follow-up 10 weeks)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	2/9 (22.2%)	30%	RR 0.74 (0.16 to 3.48)	78 fewer per 1000 (from 252 fewer to 744 more)	⊕OOO VERY LOW	CRITICAL

[1] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
[2] Downgraded by 2 increments if the confidence interval crossed both MIDs.

Table 68: Clinical evidence profile: CBT/DBT versus Non-specific supportive therapy for ADHD in adults

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	CBT/DBT	Non-specific supportive therapy	Relative (95% CI)	Absolute		
ADHD symptoms total [PT, 13 weeks, self-reported, CAARS, higher is poorer] (follow-up 13 weeks; Better indicated by lower values)												

1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	106	103	-	MD 1.20 higher (0.41 lower to 2.81 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms total [12 weeks PT, self-rated, Brown attention deficit disorder scale, CS, high is poor outcome] (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	41	40	-	SMD 0.03 higher (0.41 lower to 0.46 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms total [52 weeks FU, self-rated CAARS, 0 - 36, high is poor outcome] (follow-up 52 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	106	103	-	MD 1.10 lower (2.92 lower to 0.72 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms total [13 weeks PT, observer rated CAARS, 0 - 36, high is poor outcome] (follow-up 13 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	106	103	-	MD 1.10 higher (0.51 lower to 2.71 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms total [52 weeks FU, observer rated CAARS, 0 - 36, high is poor outcome] (follow-up 52 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	106	103	-	MD 1.10 lower (2.92 lower to 0.72 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms inattention [PT, 12 weeks, self-rated CAARS, higher is poorer] (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	41	40	-	SMD 0.52 higher (0.07 to 0.96 higher)	⊕⊕OO LOW	CRITICAL
ADHD symptoms inattention [PT, 13 weeks, investigator rated CAARS, 0-36, higher is poorer] (follow-up 13 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[2,3]	none	106	103	-	MD 0.20 higher (1.55 lower to 1.95 higher)	⊕OOO VERY LOW	CRITICAL
ADHD symptoms inattention [52 weeks FU, observer rated CAARS, 0 - 36, high is poor outcome] (follow-up 52 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	106	103	-	MD 1.50 lower (3.39 lower to 0.39	⊕⊕⊕O MODERATE	CRITICAL

										higher)		
ADHD symptoms hyperactivity [13 weeks PT, observer rated CAARS, 0 - 36, high is poor outcome] (follow-up 13 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	106	103	-	MD 0.60 higher (1.51 lower to 2.71 higher)	⊕⊕⊕O MODERATE	CRITICAL
ADHD symptoms hyperactivity [52 weeks FU, observer rated CAARS, 0 - 36, high is poor outcome] (follow-up 52 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	106	103	-	MD 0.30 lower (2.26 lower to 1.66 higher)	⊕⊕⊕O MODERATE	CRITICAL
Improvement of ADHD symptoms [PT, 17 weeks, BAARS-IV Inattention, Current ADHD Symptom Scale Self-Report Form] (follow-up 17 weeks)												
1	randomised trials	very serious[4]	no serious inconsistency	no serious indirectness	serious[2]	none	8/19 (42.1%)	0%	Peto OR 11.22 (2.39 to 52.57)	-	⊕OOO VERY LOW	CRITICAL
Serious adverse events PT [17 weeks] (follow-up 17 weeks)												
1	randomised trials	very serious[4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	0/19 (0%)	0%	RD 0 (-0.10 to 0.10)	-	⊕⊕OO LOW	CRITICAL
Function/behaviour [PT, 12 weeks, self-rated BRIEF, higher is poorer] (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	41	40	-	SMD 0.38 higher (0.06 to 0.82 lower)	⊕⊕OO LOW	IMPORTANT
Emotional dysregulation [12 weeks PT, self-rated BDI, 0-63, higher is poorer] (follow-up 12 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness		none	41	40	-	SMD 0.08 lower (0.52 lower to 0.36 higher)	⊕⊕⊕O MODERATE	IMPORTANT
Emotional dysregulation [13 weeks PT, self-rated BDI, 0-63, higher is poorer] (follow-up 13 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	106	103	-	MD 0.10 lower (1.92 lower to 1.72 higher)	⊕OOO VERY LOW	IMPORTANT
Emotional dysregulation [52 weeks FU, self-rated BDI, 0-63, higher is poorer] (follow-up 52 weeks; Better indicated by lower values)												

1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	106	103	-	MD 0.70 lower (2.8 lower to 1.4 higher)	⊕⊕⊕O MODERATE	IMPORTANT

[1] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
[2] Downgraded by 1 increment if the confidence interval crossed 1 MID.
[3] Downgraded by 2 increments if the confidence interval crosses 2 MIDs.
[4] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
[5] Zero serious adverse events reported in both arms

Table 69: Clinical evidence profile: Attention/memory/cognitive training versus Non-specific supportive therapy for ADHD in adults

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Attention/memory/cognitive training**	**Non-specific supportive therapy**	**Relative (95% CI)**	**Absolute**		
ADHD symptoms total [PT, 8 weeks, ASRS(0-54), CAARS] (follow-up 8 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	65	32	-	MD 0.69 lower (5.3 lower to 3.92 higher)	⊕OOO VERY LOW	CRITICAL
Functioning/Behaviour [PT, 8 weeks, Barkley Deficits in Executive Functioning scale short form, unclear range, higher is worse] (follow-up 8 weeks; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	65	32	-	MD 2.03 higher (2.57 lower to 6.63 higher)	⊕⊕OO LOW	IMPORTANT
Literacy [PT, 8 weeks, The Test of Word Reading Efficiency-II, unclear range, higher is better] (follow-up 8 weeks; Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	65	32	-	MD 2.78 lower (9.33 lower to 3.77 higher)	⊕⊕OO LOW	CRITICAL
Numeracy [PT, 8 weeks, The Woodcock Johnson-III, unclear range, higher is better] (follow-up 8 weeks; Better indicated by higher values)												
1	randomised	serious[1]	no serious	no serious	serious[3]	none	65	32	-	MD 2.34 higher	⊕⊕OO	IMPORTANT

	trials		inconsistency	indirectness						(9.08 lower to 13.76 higher)	LOW	

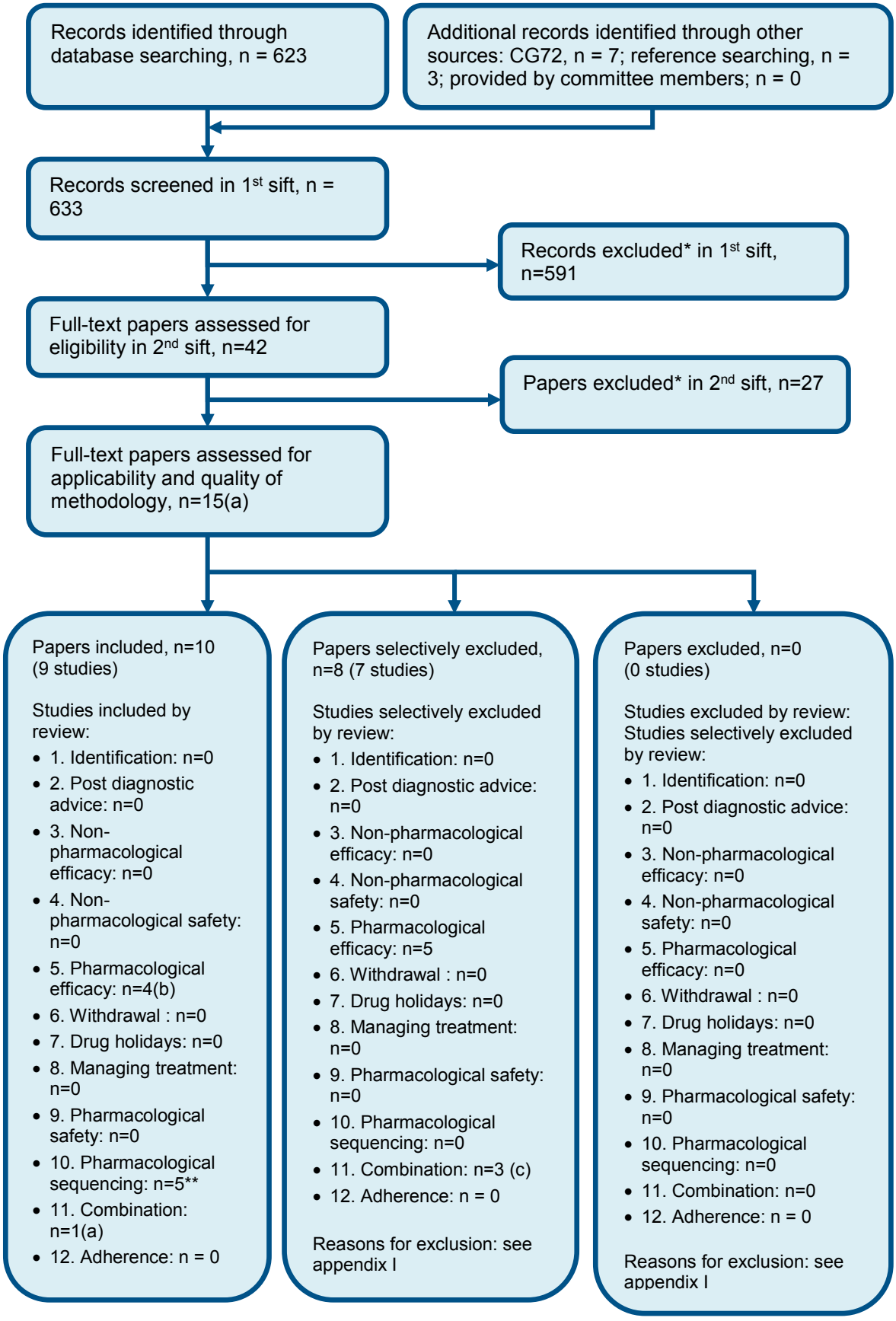
[1] Downgraded by 1 increment if the majority of the evidence was at high risk of bias.
[2] Downgraded by 2 increments if the confidence interval crossed both MIDs.
[3] Downgraded by 1 increment if the confidence interval crossed 1 MID.

Table 70: Clinical evidence profile: CBT/DBT versus attention/memory/cognitive training for ADHD in adults

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**CBT/DBT**	**Attention/memory/cognitive training**	**Relative (95% CI)**	**Absolute**		
Quality of life [PT, self-rated, 10 weeks, Q-LES-Q general, unclear range, higher is better] (follow-up 10 weeks; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	7	8	-	MD 4.30 lower (18.96 lower to 10.36 higher)	⊕OOO VERY LOW	CRITICAL
Improvement of ADHD symptoms [PT, 10 weeks, BADDS, SCL-16, ASR,CGI] (follow-up 10 weeks)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	9/19 (47.4%)	22.2%	RR 2.06 (0.7 to 6.11)	235 more per 1000 (from 67 fewer to 1000 more)	⊕OOO VERY LOW	CRITICAL

[1] Downgraded by 2 increments if the majority of the evidence was at very high risk of bias.
[2] Downgraded by 2 increments if the confidence interval crossed both MIDs.

Appendix G: Health economic evidence selection



Appendix H:Health economic evidence tables

None.

Appendix I: Excluded studies

I.1 Excluded clinical studies

I.1.1 Non-pharmacological efficacy

Table 71: Studies excluded from the clinical review

Study	Exclusion reason
Abadi 2008[2]	Incorrect study design
Abdollahian 2013[3]	Incorrect study design
Abrahamse 2012[6]	Not review population
Accorsi 2014[7]	Inappropriate comparison
Adler 2007[8]	Incorrect study design. Letter to editor
Aghebati 2014[9]	Incorrect interventions. combination therapy
Akutsu 2014[14]	Not guideline condition. Not review population
Alam 2014[15]	Incorrect study design. Incorrect interventions. Inappropriate comparison
Aman 2008[17]	Inappropriate comparison
Aman 2009[18]	Inappropriate comparison. Incorrect interventions
Aman 2014[16]	Combination intervention
Anastopoulos 1993[19]	Incorrect study design
Anon 2002[460]	Incorrect interventions. Pharma trial
Anon 2002[459]	Incorrect interventions. Pharma trial
Anonymous 2009[165]	Incorrect study design. Pharmacological
Arnold 2007[22]	Incorrect interventions
Arnold 2015[23]	Combination intervention
Axberg 2012[25]	Not guideline condition
Ayaz 2013[26]	Incorrect study design. Incorrect interventions. Inappropriate comparison
Azevedo 2013[27]	Not guideline condition. Not review population
Babinski 2014[28]	Combination intervention
Bagner 2007[30]	Not guideline condition
Bai 2015[31]	Systematic review is not relevant to review question or unclear PICO. Its a RCT to improve Adherence
Bakhshayesh 2011[32]	Incorrect interventions
Bakhtadze 2015[33]	Incorrect study design
Baumeister 2016[36]	wrong comparison
Beck 2010[37]	Incorrect study design. quasi-randomised trial
Bedard 2008[38]	Incorrect interventions
Benzing 2017[40]	Protocol only
Bernat 2007[43]	Not review population
Biederman 2011[44]	Incorrect study design. Not review population. Incorrect interventions
Bierman 2013[45]	Not guideline condition. Not review population
Bierman 2014[46]	Not guideline condition. Not review population
Bigorra 2015[47]	Inappropriate comparison

Study	Exclusion reason
Bink 2014[49]	Inappropriate comparison
Bink 2014[50]	Reported outcomes not relevant to protocol.
Bioulac 2014[51]	Incorrect interventions
Bloomquist 1991[52]	Incorrect study design. Not RCT
Bögels 2008[53]	Wrong population. Incorrect study design
Boisjoli 2007[54]	Not guideline condition
Borsting 2008[56]	ADHD is parent reported not diagnosed using DSM-III/ICD-9
Boyer 2014[57]	Inappropriate comparison
Bramham 2009[58]	Incorrect study design
Bratton 2013[59]	Not guideline condition. Not review population
Brown 2010[68]	Incorrect interventions
Bubnik 2015[69]	Incorrect interventions. Incorrect study design
Bueno 2015[70]	Incorrect study design
Bul 2016[71]	wrong intervention
Bunnell 2013[72]	Not guideline condition. Not review population
Burke 2015[73]	Not guideline condition. Not review population
Bustamante 2016[77]	wrong population
Cabiya 2008[79]	Not review population
Cachoeira 2017[80]	wrong intervention
Capodieci 2017[82]	Not ADHD diagnosed with protocol criteria
Castellanos-ryan 2013[85]	Not guideline condition
Cerrillo-urbina 2015[86]	Incorrect interventions. Inappropriate comparison. Not Cochrane
Chacko 2013[88]	Systematic review, original articles will be used
Chacko 2014[87]	Inappropriate comparison
Chang 2012[91]	No outcomes of interest
Choi 2015[96]	Inappropriate comparison. Incorrect interventions
Chou 2017[97]	NRS
Christiansen 2015[98]	Incorrect study design
Chu 2007[100]	Incorrect study design
Classen 2013[103]	Not RCTs
Coates 2014[105]	SR not matching PICO
Comer 2013[107]	Incorrect study design. Not guideline condition. Not review population
Corkum 2005[111]	Wrong comparison
Corkum 2016[110]	wrong population
Daley 2014[117]	Systematic review, original articles will be used
Day 2012[121]	Not review population
De vries 2015[122]	Not guideline condition
Deputy 2002[125]	Incorrect interventions. Pharma trial
Dittman 2016[126]	wrong population
Dittmann 2014[127]	Incorrect study design
Dose 2016[128]	combination
Duric 2012[134]	Combination
Duric 2014[133]	Inappropriate comparison
Eichelberger 2016[137]	wrong comparison
Emilsson 2011[141]	Combination

Study	Exclusion reason
Epstein 2011[143]	Incorrect interventions
Estrada 2013[144]	Combination
Evans 2007[148]	No extractable outcomes for meta-analysis
Fabiano 2007[152]	Combined intervention.
Fabiano 2009[150]	Comparison too similar
Farmer 2012[154]	Incorrect interventions. Not guideline condition. Not review population
Farmer 2015[155]	Irrelevant Subgroup analysis
Fernandes azevedo 2014[157]	Not review population. Not guideline condition
Ferrin 2014[158]	Combination
Forehand 2016[166]	wrong comparison
Fowler 2014[167]	Not guideline condition. Not review population
Franke 2016[169]	wrong population
Fristad 2015[171]	Not guideline condition. Not review population
Fuentes 2013[172]	Combination. Incorrect interventions. Inappropriate comparison
Gadow 2014[173]	Combination therapy
Garg 2013[175]	Incorrect study design. Incorrect interventions. Inappropriate comparison
Gau 2010[178]	Incorrect interventions. Incorrect study design
Gawrilow 2016[179]	Incorrect interventions
Gibson 2011[188]	Comparisons too similar
Griggs 2011[192]	not a relevant outcome reported
Groom 2013[193]	Incorrect study design. Incorrect interventions. Inappropriate comparison
Gropper 2014[194]	Not guideline condition. Not review population
Guo 2008[196]	Unavailable
Gustafsson 2010[197]	Incorrect interventions
Haack 2016[200]	wrong comparison
Habibollahi 2016[201]	NRS
Haffner 2006[203]	Comparisons too similar
Handen 2011[206]	Incorrect study design. Not guideline condition. Not review population
Hanisch 2010[207]	Not review population. Not guideline condition
Hantson 2012[210]	Incorrect study design
Hariri 2013[213]	Incorrect study design
Heinrich 2013[218]	Not guideline condition. paper could not be retrieved
Hektner 2014[219]	Not guideline condition. Not review population
Helseth 2015[220]	Incorrect interventions. Combination. Irrelevant Outcomes
Herbert 2013[223]	Not guideline condition. Not review population
Hiltunen 2014[225]	Inappropriate comparison
Hirvikoski 2015[227]	Incorrect study design. Inappropriate comparison
Hiscock 2013[228]	Abstract only
Hiscock 2015[229]	Wrong population
Hosainzadeh maleki 2014[236]	Not enough detail about interventions
Hovik 2013[237]	No relevant outcomes
Huang 2015[238]	NRS

Study	Exclusion reason
Huizink 2009[241]	Not relevant
Irvine 2015[244]	Not guideline condition. Not review population
Ise 2015[245]	Not guideline condition. Not review population
Jans 2015-1[248]	Incorrect interventions. its a combination treatment
Janssen 2016[249]	Combination
Jensen 2004[251]	Crossover study
Johnstone 2010[252]	Data was not extractable
Jones 2007[253]	Not guideline condition
Jones 2008[254]	Not diagnosed using DSM-III/ICD-9 or later versions of these
Jonkman 2016[255]	no usable outcomes
Keshavarzi 2014[260]	Outcomes not relevant
Kolko 2014[269]	Not guideline condition. Not review population. Not ADHD specific
Kratter 1983[273]	No usable outcomes
Krisanaprakornkit 2010[274]	Systematic review, original articles will be used
Laezer 2015[277]	Incorrect study design. Not guideline condition. Not review population
Li 2010[293]	Incorrect interventions. electro-acupuncture
Li 2011[291]	Incorrect interventions. Pharmacological
Li 2011[294]	Incorrect interventions
Li 2013[292]	Inappropriate comparison
Liber 2013[295]	Not review population. Not guideline condition. Not ADHD specific
Liu 2011[298]	Incorrect interventions
M 2016[323]	No usable outcomes
Maeir 2014[304]	Incorrect study design. Crossover study
Maurizio 2014[310]	Incorrect interventions. Inappropriate comparison
Mcdermott 2016[313]	wrong intervention
Mcgilloway 2012[314]	Not guideline condition
Mcgrath 2011[316]	No useable data
Meisel 2013[322]	Incorrect interventions
Mesler 2016[325]	wrong intervention
Meyer 2007[326]	No outcomes of interest reported
Mikami 2013[328]	Crossover study
Miranda 2000[330]	Incorrect study design
Mishra 2016[331]	wrong intervention
Moell 2015[332]	Not guideline condition. Not review population. Not all ADHD diagnosed
Mohammadi 2014[334]	Combination
Montoya 2014[336]	Inappropriate comparison
Myers 2015[343]	Inappropriate comparison
Nouchi 2016[346]	Wrong population
Ogrim 2013[348]	Inappropriate comparison
Pan 2016[352]	No usable outcomes
Parker 2013[353]	SR, not matching PICO
Paz 2017[354]	Wrong intervention
Pelham 2014[355]	Crossover study
Perez-alvarez 2009[356]	Combination intervention

Study	Exclusion reason
Perreau-linck 2010[357]	No usable outcomes
Pfiffner 2016[361]	wrong population
Philipsen 2007[365]	Incorrect study design
Philipsen 2014[363]	Combination
Plueck 2015[366]	Not guideline condition. Not review population. Incorrect study design
Prada 2015[368]	Incorrect study design
Prins 2011[369]	No relevant outcome measured
Re 2015[373]	No diagnosis of ADHD
Reading 2012[374]	Incorrect study design. Commentary
Riddle 2007[377]	Incorrect study design. Commentary
Riggs 2011[378]	Incorrect interventions
Rooney 2016[380]	no usable outcomes
Rosenberg 2015[381]	Incorrect study design
Rubia 2009[382]	Incorrect interventions
Safren 2010[384]	combination
Salehi 2010[385]	Incorrect interventions
Salomone 2015[386]	Interventions too similar
Sanchez-lopez 2015[388]	Crossover study. Incorrect interventions. Protocol Only
Sanders 2007[390]	Children with ADHD at baseline are not the same group of children at PT
Sanders 2008[389]	Not guideline condition
Sanders 2014[391]	Not guideline condition
Sayal 2010[393]	Not guideline condition
Schuck 2015[399]	Incorrect interventions
Sciberras 2011[400]	Incorrect interventions
Scott 2010[401]	Not guideline condition
Seeley 2009[402]	Not guideline condition. no formal diagnosis of adhd
Shaffer 2016[405]	no usable outcomes
Shakibaei 2015[406]	Incorrect interventions
Shalev 2007[407]	Interventions too similar
Sharif 2015[408]	Not review population. Doesn't meet protocol
Sibley 2014[411]	Inappropriate comparison. Inappropriate outcomes. Incorrect study design
Silverstein 2015[415]	Incorrect interventions. Not guideline condition. Not review population
So 2008[424]	Incorrect interventions. combined intervention
Soff 2017[426]	wrong intervention
Somech 2012[429]	Not guideline condition
Sonuga-barke 2001[431]	Not clinically diagnosed. Not guideline condition
Sonuga-barke 2004[432]	Not guideline condition. Not clincally diagnosed
Sonuga-barke 2013[430]	SR, not matching PICO
Sourander 2016[433]	wrong population
Sprich 2016[435]	Combination
Stern 2016[441]	wrong comparison
Storebø 2011[444]	Protocol only

Study	Exclusion reason
Storebo 2012[442]	Combined treatment
Storebo 2015[445]	No usable outcomes
Strand 2012[446]	Incorrect interventions. No relevant outcomes. Incorrect study design
Suehs 2015[448]	Incorrect study design
Tamm 2014[452]	Incorrect study design
Taylor 2015[454]	Incorrect study design. Qualitative
Tucha 2011[461]	No outcome we want to include were measured
Van den hoofdakker 2010[462]	Incorrect interventions. Inappropriate comparison
Van der donk 2015[464]	Protocol only
Van der oord 2007[468]	combination treatment
Van der oord 2008[467]	Systematic review
Van dongen-Boomsma 2014[469]	Inappropriate comparison
Vidal 2015[472]	Combination
Virta 2010[473]	Incorrect interventions
Vollebregt 2014[475]	Outcomes not relevant
Waxmonsky 2008[480]	combination intervention
Waxmonsky 2010[481]	combination intervention
Weber 2008[482]	Incorrect interventions. medication trial
Weiss 2006[485]	Combination intervention
Weiss 2012[486]	Incorrect interventions
Wilkes-gillan 2016[489]	no usable outcomes
Williford 2015[495]	no usable outcomes
Xie 2013[498]	Incorrect interventions
Young 2015[503]	Combination
Young 2016[501]	combination
Zentall 2012[504]	Incorrect study design
Zwi 2009[506]	Protocol

I.1.2 Impact of adverse events associated with non-pharmacological treatments of ADHD

Table 72: Studies excluded from the qualitative review

Reference	Reason for exclusion
Ahmed 2006[12]	No relevant themes
Ahmed 2013[11]	No relevant themes
Ahmed 2013[13]	Systematic review
Andrews 2015[493]	Incorrect study design
Ansari 2016[20]	Survey
Arango 2013[21]	Article
Bachman 2000[29]	Survey
Ball 2001[34]	Survey
Bartlett 2010[35]	No relevant themes
Bekle 2004[39]	Survey

Reference	Reason for exclusion
Berger 2008[41]	Survey
Berger 2015[42]	No relevant themes
Bringewatt 2013[60]	No relevant themes
Brinkman 2008[62]	No relevant themes
Brinkman 2011[61]	Literature review
Brinkman 2012[63]	No relevant themes
Brodin 2008[64]	No relevant themes
Brook 2000[66]	Survey
Brook 2005[65]	Incorrect study design
Brown 2010[67]	No relevant themes
Bussing 1998[76]	Survey
Bussing 2012[74]	Survey
Bussing 2016[75]	Survey
Butler 2015[78]	Systematic review
Canela 2017[81]	No relevant themes
Carpenter-Song 2010[83]	Article
Carter 2005[84]	Survey
Charach 2006[92]	No relevant themes
Charach 2008[93]	Incorrect study design
Charach 2014[94]	No relevant themes
Cheung 2015[95]	No relevant themes
Clarke 2012[102]	Incorrect study design
Clarke 2013[101]	Incorrect population
Clay 2008[104]	Wrong population
Coletti 2012[106]	No relevant themes
Coletti 2012[106]	No relevant themes
Cooper 1998[108]	No relevant themes
Corcoran 2016[109]	Systematic review
Cormier 2012[112]	No relevant themes
Couture 2003[113]	Questionnaire
Darredeau 2007[118]	Survey
Davis-Berman 2010[119]	No relevant themes
Davis-Berman 2012[120]	No relevant themes
Deane 2012[123]	Incorrect population
Dennis 2008[124]	Literature review
dosReis 2007[131]	No relevant themes
Dosreis 2008[132]	Incorrect study design
dosReis 2009[130]	No relevant themes
dosReis 2010[129]	No relevant themes
Edwards 2013[135]	Wrong population
Einarsdottir 2008[138]	No relevant themes
Eisenberg 2007[139]	Survey
Elias 2017[140]	Incorrect population
Emilsson 2016[142]	Survey
Faber 2006[149]	Incorrect study design

Reference	Reason for exclusion
Fiks 2010[160]	No relevant themes
Firmin 2009[161]	No relevant themes
Flannagan 2002[162]	No relevant themes
Fleishcmann 2013[163]	Survey
Frank 2015[168]	Incorrect study design
Friars 2009[170]	No relevant themes
Gallichan 2008[174]	No relevant themes
Garro 2009[176]	Article
Gau 2009[177]	Incorrect study design
Gerdes 2014[181]	Incorrect study design - questionnaire
Ghanizadeh 2010[186]	Questionnaire
Ghosh 2016[187]	No relevant themes
Ginsberg 2008[189]	Incorrect study design
Goodwillie 2014[190]	No relevant themes
Gwernan-Jones 2015[199]	Literature review
Gwernan-Jones 2016[198]	Systematic review
Hack 2001[202]	Incorrect study design
Hallberg 2008[204]	No relevant themes
Hallerod 2015[209]	No relevant themes
Hansen 2006[208]	No relevant themes
Harazni 2016[211]	No relevant themes
Harvey 2009[214]	Wrong population, incorrect study design
Hassink-Franke 2016[215]	No relevant themes
Hazell 2004[216]	No qualitative results reported
Hebert 2013[217]	Survey
Henry 2011[221]	No relevant themes
Hill 2016[224]	Survey
Ho 2011[490]	No relevant themes
Hong 2008[232]	No relevant themes
Honkasilta 2014[233]	No relevant themes
Honkasilta 2016[234]	No relevant themes
Hughes 2007[239]	No relevant themes
Hughes 2009[240]	No relevant themes
Ibrahim 2016[242]	No relevant themes
Ide-Okochi 1016 [243]	Article
Jackson 2008[247]	No relevant themes
Kean 2005[256]	Incorrect study design
Kendall 1997[257]	Incorrect study design
Kendall 2003[258]	No relevant themes
Kendall 2016[259]	No relevant themes
Kildea 2011[262]	No relevant themes
King 2016[263]	Wrong population
Kisely 2002[264]	Survey
Klasen 2000[265]	No relevant themes
Knipp 2006[266]	No relevant themes

Reference	Reason for exclusion
Ko 2008[267]	Questionnaire
Koerting 2013[268]	Review
Kollins 2008[270]	Review
Koversushoff 2012[272]	No relevant themes
Kronenberg 2014[275]	Incorrect population
Kutuk 2016[276]	Survey
Larson 2011[281]	No relevant themes
Laugesen 2016[282]	Systematic review
Laugesen 2016[282]	Unable to access
Lee 2008[284]	No relevant themes
Lee 2014[283]	No relevant themes
Lefler 2016[285]	No relevant themes
Leggett 2011[286]	No relevant themes
Leslie 2007[287]	No relevant themes
Lewis 2016[289]	No relevant themes
Lewis 2016[290]	Erratum
Lewis-Morton 2014[288]	No relevant themes
Liebrenz 2016[296]	No relevant themes
Lin 2009[297]	No relevant themes
Ljusberg 2011[299]	No relevant themes
Loe 2008[300]	No relevant themes
Lopes 2009[302]	Incorrect population
Maassen 2016[303]	No relevant themes
Marcer 2008[305]	Questionnaire
Mathers 2006[306]	Incorrect study design
Matheson 2013[307]	No relevant themes
Matthys 2014[309]	No relevant themes
McCarthy 2000[312]	Survey
McGoron 2014[315]	Questionnaire
McIntrye 2012[317]	No relevant themes
McKay 1996[318]	Wrong population
McMenamy 2008[319]	Wrong population
Meaux 2006[321]	No relevant themes
Meaux 2009[320]	No relevant themes
Michielsen 2015[327]	Wrong population
Mills 2008[271]	Abstract
Mills 2011[329]	No relevant themes
Moen 2011[333]	No relevant themes
Morsink 2017[338]	No relevant themes
Muhlbacher 2009[339]	Abstract
Muhlbacher 2009[339]	Abstract
Murrell 2015[340]	Incorrect study design
Mychailyszyn 2008[341]	No relevant themes
Myers 2013[342]	Incorrect study design
Nehlin 2015[345]	No relevant themes

Reference	Reason for exclusion
O'Callaghan 2014[347]	No relevant themes
Olaniyan 2007[349]	No relevant themes
Oruche 2014[350]	Wrong population
Perry 2005[358]	No relevant themes
Ramsay 2012[371]	Incorrect study design
Raskind 2006[372]	Survey
Reale 2015[375]	Survey
Reid 1996[376]	No relevant themes
Rogalin 2015[379]	No relevant themes
Russell 2016[383]	No relevant themes
Salt 2005[387]	No relevant themes
Sandler 2007[392]	No relevant themes
Schatz 2015[394]	Systematic review
Schreuer 2017[396]	No relevant themes
Schrevel 2014[397]	No relevant themes
Schrevel 2015[397]	No relevant themes
Schubert 2009[398]	No relevant themes
Segal 1998[404]	No relevant themes
Segal 2001[403]	No relevant themes
shattell 2008[409]	No relevant themes
Shaw 2003[410]	No relevant themes
Sikirica 2014[414]	No relevant themes
Simons 2016[416]	No relevant themes
Singh 2003[417]	No relevant themes
Singh 2005[418]	Article
Singh 2011[419]	Article
Singh 2015[420]	Article
Sleath 2016[421]	Survey
Soderqvist 2017[425]	No relevant themes
Solberg 2015[428]	Incorrect study design - questionnaire
Sox 2010[434]	Incorrect study design
Srignanasoundari 2017[436]	No relevant themes
Stroh 2008[447]	Survey
Surman 2006[449]	Incorrect study design
Swift 2013[450]	No relevant themes
Tatlow-Golden 2016[453]	Systematic review
Taylor 2006[455]	No relevant themes
Taylor 2015[454]	No relevant themes
Thiruchelvam 2001[456]	Incorrect study design
Travell 2006[458]	Analysis
Varley 2011[471]	Article
Waite 2010[476]	No relevant themes
Wallace 2005[477]	No relevant themes
Wan 2016[478]	No relevant themes
Wiener 2015[488]	No relevant themes

Reference	Reason for exclusion
Wilkes-Gillan 2015[230]	No relevant themes (parental intervention)
Wilkinson 2013[491]	No relevant themes
Williams 2014[492]	No relevant themes
Williamson 2009[494]	Incorrect study design
Winter 2015[496]	Incorrect study design
Wolpert 2004[212]	No relevant themes
Wright 1997[497]	No relevant themes
Young 2008[499]	No relevant themes
Young 2009[500]	No relevant themes
Young 2009[502]	No relevant themes
Zhang 1017[505]	No relevant themes

I.2 Excluded health economic studies

None.

Appendix J: Research recommendations

J.1 Children and young people aged 5 to 18 years – brief, group-based, ADHD-focused, parent-training intervention

Research question: What is the clinical and cost effectiveness, and optimum length of a brief parent-training intervention for parents and carers of children and young people with ADHD aged 5 to 18 years?

Why this is important:

The evidence identified in this guideline was not clear about the benefit of formal parent-training programmes for children and young people aged 5 to 18 years. This guideline was unable to provide a robust assessment of the cost effectiveness of an intervention, partly because of uncertainty over the number of sessions/length of intervention needed to achieve the clinical benefits seen in trials. This research recommendation would help address these uncertainties.

Criteria for selecting high-priority research recommendations:

PICO question	Population: children and young people aged 5 to 18 with ADHD symptoms causing functional impairment, and their parents or carers Intervention(s): group based, ADHD-focused, parent-training support 1-2 sessions Comparison: group based, ADHD-focused, parent-training programme with weekly sessions for 10-12 weeks plus follow-up session at 12 months Outcome(s): quality of life (child and parent), ADHD symptoms (total, inattention, hyperactivity) assessed by blinded neutral observer and reported as continuous and dichotomous responder outcomes, behavioural measures, discontinuations
Importance to patients or the population	If effective and cost-effective, such an intervention could potentially provide significant benefits in terms of symptom reduction and health-related quality of life.
Relevance to NICE guidance	There is current uncertainty about the cost-effectiveness of providing such input and also how many intervention sessions are required.
Relevance to the NHS	Research in this area will inform NICE recommendations for service delivery and provide information about cost-effectiveness.
National priorities	NICE guidelines for ADHD
Current evidence base	There is insufficient evidence currently available to identify the optimum length/frequency of parent-training programmes for ADHD, this review found no studies that directly compared different regimens on this basis There is a lack of evidence measuring the long term effects of treatments for ADHD. As a chronic lifelong condition it is imperative trials have longer follow up measuring the benefits and risks of treatments.
Equality	As a universal intervention, it addresses equality issues
Study design	RCT
Feasibility	No obvious feasibility issues
Other comments	Population to include those using optimised medication but to report results separately for those using medication and those not using medication as well as in aggregate
Importance	• High: the research is essential to inform future updates of key recommendations in the guideline.

J.2 Additional non-pharmacological interventions

Research question: What is the clinical and cost effectiveness of neurofeedback, exercise and online self help resources for children, young people and adults with ADHD?

Why this is important:

This review did not identify sufficient evidence to support routine recommendation of any of these non-pharmacological intervention strategies, however, there was not a body of evidence showing no effect of these interventions. The committee agreed that further research may provide greater clarity and allow for recommendations in the future.

Criteria for selecting high-priority research recommendations:

PICO question	Population: children, young people and adults with ADHD whose symptoms are causing functional impairment
	Intervention(s):
	• Neurofeedback
	• Exercise (children and young people only)
	  ○ Daily periods of high intensity physical activity of 30 minutes
	• Self help resources
	  ○ Online or offline
	  ○ Provide similar content to psychoeducation interventions
	Comparison: treatment as usual
	Outcome(s): quality of life, ADHD symptoms (total, inattention, hyperactivity) assessed by neutral observer and reported as continuous and dichotomous responder outcomes, medication use, behavioural measures, discontinuations, academic outcomes

Importance to patients or the population	If effective and cost-effective, such an intervention could potentially provide significant benefits in terms of symptom reduction and health-related quality of life.
Relevance to NICE guidance	There is current uncertainty about the cost-effectiveness of providing these interventions.
Relevance to the NHS	Research in this area will inform NICE recommendations for service delivery and provide information about cost-effectiveness.
National priorities	NICE guidelines for ADHD
Current evidence base	Very limited, small RCTs or non-randomised studies showing mixed and conflicting results There is a lack of evidence measuring the long term effects of treatments for ADHD. As a chronic lifelong condition it is imperative trials have longer follow up measuring the benefits and risks of treatments.
Equality	As a universal intervention, it addresses equality issues
Study design	RCT, adequately powered, with long term follow-up (at least 6 months)
Feasibility	No obvious feasibility issues
Other comments	Population to include those using medication but to report results separately for those using medication and those not using medication as well as in aggregate
Importance	• Medium: the research is relevant to the recommendations in the guideline, but the research recommendations are not key to future updates.