

Social, emotional and mental wellbeing in primary and secondary education

[A] Evidence reviews for whole-school approaches

NICE guideline <number>

Evidence reviews underpinning recommendations 1.1.1 to 1.1.23 in the NICE guideline

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Draft for Consultation

*These evidence reviews were developed
by PHIGD*

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1 Whole-school approaches in primary education

1.1 Review question

What principles or combination of principles of whole-school approaches to promote social, emotional and mental wellbeing in children in primary education are effective and cost-effective?

1.1.1 Introduction

Social and emotional skills are key during children and young people's development and may help to achieve positive outcomes in health, wellbeing and future success. Whole-school approaches aim to nurture these skills at the individual level in the classroom and at the school level through the school environment, policies and community.

1.1.2 Summary of the protocol

Table 1: PICOS Table

Population	<ul style="list-style-type: none"> Children (including those with SEND) in UK key stages 1 and 2 or equivalent (usually ages 5-11 years of age)
Intervention	<p>Whole school-led approaches to social, emotional and mental wellbeing with a combination of at least two of the following principles / components / aspects:</p> <ul style="list-style-type: none"> Promote mental/ physical health across the curriculum Ethos and environment Working with parents/carers and community Leadership and management Student voice Staff development Identifying need and monitoring impact of interventions Targeted support
Comparator	Usual practice (can include no intervention or waiting list)
Outcomes	<p>Social and emotional wellbeing outcomes Any validated measure of mental, social, emotional or psychological wellbeing categorised as:</p> <ul style="list-style-type: none"> Social and emotional skills and attitudes (such as knowledge) Emotional distress (such as depression, anxiety and stress) Behavioural outcomes that are observed (such as positive social behaviour, conduct problems) <p>Academic outcomes Academic progression and attainment</p> <p>Secondary outcomes</p> <ul style="list-style-type: none"> School/class environment outcomes such as school belonging School attendance School exclusions

	<ul style="list-style-type: none">• Unintended consequences (e.g. stigma, reinforcement of negative behaviours)• Quality of life
Study type	Randomised and non-randomised controlled trials

1 For the full protocol see [appendix A](#).

2 **1.1.3 Methods and process**

3 This evidence review was developed using the methods and process described in
4 [Developing NICE guidelines: the manual and the methods chapter](#). Methods specific to
5 this review question are described in the review protocol in [Error! Reference source not
6 found.](#)

7 Declarations of interest were recorded according to [NICE's conflicts of interest policy](#).

8 **Methods specific to this review**

9 **Outcome measures**

10 Where social and emotional outcome measures were reported in a study from multiple
11 sources, the data used followed the following hierarchy of preference:

- 12 1. Child/ young person reported
- 13 2. Teacher reported
- 14 3. Parent reported

15 However, for behavioural outcomes, measures reported by teachers were the preferred
16 option as they are generally outcomes that are observed.

17 **Cluster randomised controlled trials**

18 Where cluster randomised controlled trials have been pooled with individually randomised
19 controlled trials, the number of people included in the analysis from these trials have been
20 adjusted using a reported or imputed intra-class correlation coefficient (ICC) for that
21 outcome.

22 **1.1.4 Effectiveness evidence**

23 **1.1.4.1 Included studies**

24 In total 47,322 references were identified through systematic searches. Of these, 246
25 references were considered relevant, based on title and abstract, to the protocols for whole-
26 school approach interventions and were ordered. A total of 45 references were included and
27 201 references were excluded.

28 The 45 references provided data on 28 separate studies (17 references were secondary
29 publications). Of the effectiveness studies, 18 were cluster randomised controlled trials, 5
30 were non-randomised studies. and 5 were qualitative studies. Of these, 9 studies provided
31 effectiveness data from primary school settings. See summary of studies (Table 2) included
32 in this review and a brief outline of the interventions in these studies (Table 3). See Table 4
33 for details of the whole-school approach components covered by each intervention. See
34 [Appendix D](#) for full evidence tables.

- 1 **1.1.4.2 Excluded studies**
- 2 See [Appendix J](#) for full list of excluded studies.

1.1.5 Summary of studies included in the effectiveness evidence

Table 2: Summary of studies identified

Study [Country]	Study design	Setting	Equivalent UK Key stage	Population (number [N])	Intervention	Comparator	Outcome(s)
Axford 2020 [UK]	cRCT	Primary schools	Key stage 2	All key stage 2 students (N= 3480)	KiVa antibullying program	Usual practices	<ul style="list-style-type: none"> • Bullying victimisation • Bullying perpetration • Absenteeism
Brown 2011 [USA]	cRCT	Elementary school	Key stage 2	Pupils in elementary school (3rd, 4th and 5th Grade), mean age 8.9 years (N= 2940)	Steps to Respect (STR)	Waitlist control	<ul style="list-style-type: none"> • Bullying victimisation • Student attitudes against bullying • Student climate • School connectedness
Karna 2011 [Finland]	cRCT	Primary school	Key stage 2	Pupils in Grades 3-5 (aged 9-11 years) (N= 8237)	KiVa antibullying program	Control (not further described)	<ul style="list-style-type: none"> • Bullying victimisation • Bullying perpetration • Well-being at school
Karna 2013 [Finland]	cRCT	Primary school	Key stage 2	Pupils in Grades 1-3 (aged 7-9 years) (N= NR)	KiVa antibullying program	Control (not further described)	<ul style="list-style-type: none"> • Bullying victimisation • Bullying perpetration
Kiviruusu 2016 [Finland]	cRCT	Primary school	Key stage 2	Pupils in primary school (mean age 8.1 years) (N= 3704)	Together at School intervention program	Control (not further described)	<ul style="list-style-type: none"> • Cooperation • Empathy • SDQ total difficulties • SDQ prosocial behaviour
Nocentini 2016 [Italy]	cRCT	Primary school	Key stage 2	Pupils in Grades 4-6 (age 8-10 years) (N= 2042)	KiVa antibullying program	Usual school provision	<ul style="list-style-type: none"> • Victimization • Bullying
Sorlie 2015 [Norway]	NRCT	Primary schools	Key stage 2	Pupils in Grades 4-6 (mean age not reported) (N= 5379)	SWPBS/N-PALS	Usual school provision	<ul style="list-style-type: none"> • Problem behaviour on common school areas • Problem behaviour in classrooms

Study [Country]	Study design	Setting	Equivalent UK Key stage	Population (number [N])	Intervention	Comparator	Outcome(s)
Tsiantis 2013 [Greece]	cRCT	Elementary school	Key stage 2	Pupils in Grades 4-6 (mean age not reported) (N= 666)	Modified Olweus program	Control (not further described)	<ul style="list-style-type: none"> Classroom climate Bullying victims Bullies Bullies and victims
Ward 2013 [USA]	cRCT	Elementary school	Key stage 1/2	Population not described (N= NR)	Safe and Civil Schools (SCS) Model for Positive Behavioral Interventions	Waitlist control	<ul style="list-style-type: none"> Never pushed or hit by other students Never had other students spread mean rumours about them Suspensions

Table 3: Summary of interventions

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/intensity	Treatment fidelity
KiVa antibullying program	Axford 2020 Karna 2011 Karna 2013 Nocentini 2016	<ul style="list-style-type: none"> Social cognitive theory KiVa emphasises the need to enhance the empathy, self-efficacy and anti-bullying attitudes of bystanders (neither bullies nor victims) 	<ul style="list-style-type: none"> Anti-bullying computer game Parents also receive a guide about bullying and how to prevent it Schools receive professional prepared materials 	<ul style="list-style-type: none"> Lessons include discussion, group work, role play and short films. Students play an anti-bullying computer game Occurrences of bullying are addressed by teams of four 	Classroom teachers	Face to face group sessions	20 hours of KiVa lessons over the academic year	None reported

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/intensity	Treatment fidelity
			and activity packs	school personnel through individual and small-group discussions with victims and bullies				
Modified Olweus program	Tsiantis 2013	<ul style="list-style-type: none"> To increase the positive climate in the school environment 	<ul style="list-style-type: none"> Teacher's manual 	<ul style="list-style-type: none"> Teachers took part in a 2-day training seminar Weekly workshops as well as two meetings with parents 	<ul style="list-style-type: none"> Class teachers supported by mental health professionals and program coordinators 	Group	11 weekly 90 minute workshops plus 2 parent meetings	The percentage of properly implemented workshops was 81.25% to 95.28%
Safe and Civil Schools (SCS) Model for Positive Behavioral Interventions	Ward 2013	<ul style="list-style-type: none"> An approach to Positive Behavioural Interventions (PBIS) Designed to improve students' social and academic outcomes, and to support staff in their endeavours to teach appropriate behaviour and 	<ul style="list-style-type: none"> SCS materials are intended to guide the efforts of administrators, teachers, specialists, paraprofessionals, bus drivers, and others who contribute to the climate of schools. 	<ul style="list-style-type: none"> The leadership teams participated in 7 days of training facilitated by an SCS consultant Teams were taught skills for training their staff in PBIS 	<ul style="list-style-type: none"> SCS consultant 	Not reported	One year (at least)	Not reported

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/intensity	Treatment fidelity
		correct misbehaviour						
Steps to Respect (STR)	Brown 2011	<ul style="list-style-type: none"> Based on a social-ecological model of bullying Underlying theory is that peer attitudes, norms and behaviours are important in determining and maintaining rates of bullying 	<ul style="list-style-type: none"> Steps to Respect is a fully manualised program that includes classroom lessons, staff training and support materials (http://www.cfchildren.org) 	<ul style="list-style-type: none"> Participating school staff received 1-day training Lessons on topics including joining groups and being a responsible bystander. Parents were engaged in the program through letters outlining key concepts and skills 	Teachers	Face to face group	11 weekly lessons, totalling about 1 hour, taught over 2-3 days each week	92% of teachers reported completing all objectives.
SWPBS/N-PALS	Sorlie 2015	<ul style="list-style-type: none"> To prevent and reduce behaviour problems and promote positive student behaviors by altering the school environment through evidence-based interventions 	<ul style="list-style-type: none"> Handbook 	<ul style="list-style-type: none"> School-wide positive behaviour support strategies monitoring of student behaviour collectively applied school-wide corrections time-limited small group instruction or 	Teachers and school behaviour support team	Dependent on intervention	3-5 years duration	75% of the intervention schools had implemented N-PALS with required fidelity

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/intensity	Treatment fidelity
				training in academic or social topics <ul style="list-style-type: none"> • individual interventions and support plans • classroom management skills for teachers • parent information and collaboration strategies 				
Together at School intervention program	Kiviruusu 2016	<ul style="list-style-type: none"> • To promote children's socio-emotional skills in a whole school context. 	Teachers received a 258-page Together at School manual where all the intervention methods and tools are described in detail.	<ul style="list-style-type: none"> • The program employed methods and tools within three areas in order to guarantee the whole school approach 	Teachers	Group	10 months teacher training	2 x 3 hour lessons (for teachers)

Table 4: Whole-school approach components covered by interventions

Brief name	Studies	Curriculum	Ethos and environment	Identifying needs	Targeted support	Parents/carers	Student voice	Staff development	Leadership and management
KiVa antibullying program	Axford 2020 Karna 2011 Karna 2013 Nocentini 2016	<ul style="list-style-type: none"> • Lessons • Computer-game 	<ul style="list-style-type: none"> • Posters around school • Recess supervisors 	None	<ul style="list-style-type: none"> • Occurrences of bullying are addressed 	<ul style="list-style-type: none"> • Parents receive a guide on bullying 	None	None	None
Modified Olweus program	Tsiantis 2013	<ul style="list-style-type: none"> • Workshops • Related group activities (art, drama etc) 	<ul style="list-style-type: none"> • Class rules written during the program 	None	None	<ul style="list-style-type: none"> • Parental meetings to improve parent participation 	None	<ul style="list-style-type: none"> • 2-day training seminar for teachers 	None
Safe and Civil Schools (SCS) Model for Positive Behavioral Interventions	Ward 2013	None	<ul style="list-style-type: none"> • Materials were written to guide various staff members who contribute to the climate of schools 	None	None	None	None	<ul style="list-style-type: none"> • Leadership teams participated in training 	<ul style="list-style-type: none"> • Schools identified a leadership team involving a school administrator, at least three general education teachers, one special education teacher, and one or two other personnel

Brief name	Studies	Curriculum	Ethos and environment	Identifying needs	Targeted support	Parents/carers	Student voice	Staff development	Leadership and management
Steps to Respect (STR)	Brown 2011	<ul style="list-style-type: none"> • Lessons • Included direct instruction, games, skills practice, and small- and large-group discussion 	<ul style="list-style-type: none"> • STR targets multiple areas of the school environment through interventions directed at the school, peer and individual levels. 	None	None	None	None	<ul style="list-style-type: none"> • School staff participated in training 	None
SWPBS/N-PALS	Sorlie 2015	None	<ul style="list-style-type: none"> • School-wide positive behaviour support strategies 	<ul style="list-style-type: none"> • Students who do not profit from the universal level are identified by school behaviour support teams 	<ul style="list-style-type: none"> • Small-group work • Check-in/Check-out • High-risk students received individualised support plan which may include family counselling 	<ul style="list-style-type: none"> • Parent information and collaboration strategies 	None	<ul style="list-style-type: none"> • Teams received local training and supervision from a certified N-PALS coach 	None
Together at School intervention program	Kiviruusu 2016	<ul style="list-style-type: none"> • Circle-time • Do-it-myself lesson 	<ul style="list-style-type: none"> • Planning of Collaborative Time • Staff Meeting 	None	None	<ul style="list-style-type: none"> • Parents materials • Opportunities to meet with parents individually 	None	<ul style="list-style-type: none"> • Teachers participated in training 	None

Brief name	Studies	Curriculum	Ethos and environment	Identifying needs	Targeted support	Parents/carers	Student voice	Staff development	Leadership and management
		<ul style="list-style-type: none"> Do-it-together lesson 	<ul style="list-style-type: none"> Service Station Toolkit Session 						

See [Appendix D](#) or full evidence tables.

1 1.1.6 Summary of the effectiveness evidence

Whole School Approaches (WSA) Bullying (curriculum) compared to usual practice for social, emotional and mental wellbeing

Patient or population: patients with social, emotional and mental wellbeing

Settings: Primary education

Intervention: WSA Bullying (curriculum)

Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk Usual practice	Corresponding risk WSA Bullying (curriculum)				
Student attitudes to bullying (Brown 2011)		The mean student attitudes to bullying (Brown 2011) in the intervention groups was 0.09 higher (1.4 lower to 1.58 higher)		33 (1 study)	⊕⊖⊖⊖ very low ^{1,2}	MD 0.09 (-1.4 to 1.58)
Perpetration (Bullying, % change) (Tsiantis 2013)		See comment ⁴	Not estimable ⁵	NR (1 study)	⊕⊖⊖⊖ very low ^{1,3}	
Bullying victimisation (Brown 2011)		The mean bullying victimisation (Brown 2011) in the intervention groups was 0.07 lower (0.78 lower to 0.64 higher)		33 (1 study)	⊕⊖⊖⊖ very low ^{1,2}	MD 0.07 (-0.78 to 0.64)
Victims (Bullying, % change) (Tsiantis 2013)		See comment ⁴	Not estimable ⁶	NR (1 study)	⊕⊖⊖⊖ very low ^{1,3}	
School climate (Brown 2011)		The mean school climate (Brown 2011) in the intervention groups was 0.09 higher (0.28 lower to 0.46 higher)		33 (1 study)	⊕⊖⊖⊖ very low ^{1,2}	MD 0.09 (-0.28 to 0.46)
School connectedness (Brown 2011)		The mean school connectedness (Brown 2011) in the intervention groups was 0.03 higher (0.43 lower to 0.49 higher)		33 (1 study)	⊕⊖⊖⊖ very low ^{1,2}	MD 0.03 (-0.43 to 0.49)

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval

GRADE Working Group grades of evidence

High quality: Further research is very unlikely to change our confidence in the estimate of effect.

Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.

Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

Very low quality: We are very uncertain about the estimate.

¹ 95% CI crosses line of no effect

² Study rated at high risk of bias due to no information on intervention allocation concealment, number of people who took part in the study or attrition data.

³ Not possible to calculate effect size or 95% CI as study does not report the number of participants.

⁴ Not reported

⁵ Reported as %change in WSA - 55.6% and in control as -15.4%. Classed by paper as significant.

⁶ Reported as % change in WSA -55.4% and in control as -23.3%. Reported as significant by paper

1

WSA Bullying (curriculum plus targeted) compared to usual for social, emotional and mental wellbeing

Patient or population: patients with social, emotional and mental wellbeing

Settings: Primary education

Intervention: WSA Bullying (curriculum plus targeted)

Comparison: usual

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				
	Usual	WSA Bullying (curriculum plus targeted)				
Bullying perpetration (primary school) (Karna 2011b, Karna 2013, Nocentini 2016)		The mean bullying perpetration (primary school) in the intervention groups was 0.13 standard deviations lower (0.19 to 0.06 lower)		3858 (3 studies)	⊕⊕⊕⊖ low ¹	SMD -0.13 (-0.19 to -0.06)
Bullying perpetration (primary school) (Axford 2020)		See comment ³	OR 0.82 (0.61 to 1.28)	3480 (1 study)	⊕⊖⊖⊖ very low ^{8, 9, 10}	
Bullying victimisation (primary school)) (Karna 2011b, Karna 2013, Nocentini 2016)		The mean bullying victimisation (primary school) in the intervention groups was 0.18 standard deviations lower (0.29 to 0.08 lower)		2644 (3 studies)	⊕⊕⊕⊖ low ¹	SMD -0.18 (-0.29 to -0.08)
Well-being at school (Karna 2011b)		The mean well-being at school in the intervention groups was 0.12 higher (0.08 to 0.16 higher)		8166 (1 study)	⊕⊕⊕⊖ moderate ²	MD 0.12 (0.08 to 0.16)
Problem behaviour in common school areas (primary school) (Sorlie 2015)		See comment ³		0 (1 study)	⊕⊖⊖⊖ very low ^{5, 6, 7}	
Problem behaviour in classroom (primary school) (Sorlie 2015)		See comment ⁴		0 (1 study)	⊕⊖⊖⊖ very low ^{5, 6, 7}	
School climate (primary school) (Sorlie 2015)		See comment ⁴		0 (1 study)	⊕⊖⊖⊖ very low ^{5, 6, 7}	

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval;

GRADE Working Group grades of evidence

High quality: Further research is very unlikely to change our confidence in the estimate of effect.

Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.

Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

Very low quality: We are very uncertain about the estimate.

¹ Not clear if the participants were aware of the intervention allocation. One study included 31 schools that were not randomised to the intervention.

² Not clear if participants were aware of intervention allocation

³ Reported as statistically significant

⁴ Reported as not statistically significant

⁵ Not applicable as single study

⁶ NRCT so low confidence to start

⁷ Unable to calculate as data not reported

⁸ Downgraded twice for high attrition and self-reported outcomes

⁹ Unable to assess inconsistency as single study

¹⁰ Downgraded once for crossing MID

1

WSA Bullying (no curriculum) compared to usual practice for social, emotional and mental wellbeing

Patient or population: patients with social, emotional and mental wellbeing

Settings:

Intervention: WSA Bullying (no curriculum)

Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				
	Usual practice WSA Bullying (no curriculum)					
Conduct problems		The mean conduct problems in the intervention groups was 0.01 lower (0.03 lower to 0.01 higher)		8732 (1 study)	⊕⊕⊕⊖ low ^{1,2}	
Family conflict		The mean family conflict in the intervention groups was 0.09 lower (0.15 to 0.03 lower)		9114 (1 study)	⊕⊕⊕⊖ moderate ¹	
Emotional problems		The mean emotional problems in the intervention groups was 0.01 lower (0.03 lower to 0.01 higher)		8746 (1 study)	⊕⊕⊕⊖ low ^{1,2}	
Academic outcomes - Maths		The mean academic outcomes - maths in the intervention groups was		8748 (1 study)	⊕⊕⊕⊖ low ^{1,2}	

	0.4 higher (0.17 lower to 0.97 higher)			
Academic outcomes - Reading	The mean academic outcomes - reading in the intervention groups was 0.3 higher (0.21 lower to 0.81 higher)	8710 (1 study)		⊕⊕⊕⊕ low ^{1,2}
Days absent	The mean days absent in the intervention groups was 0.27 higher (0.1 lower to 0.64 higher)	8978 (1 study)		⊕⊕⊕⊕ low ^{1,2}
Never been hit/pushed (primary school) (Ward 2013)	See comment ⁶	OR 0.92 (0 to 0) ³	0 (1 study)	⊕⊕⊕⊕ very low ^{1,3,4,5}
Never experienced rumours (primary school) (Ward 2013)	See comment ⁶	OR 1.01 (0 to 0) ³	0 (1 study)	⊕⊕⊕⊕ very low ^{1,3,4,5}
Suspension (primary school) (Ward 2013)	See comment ⁶	OR 0.78 (0 to 0) ³	0 (1 study)	⊕⊕⊕⊕ very low ^{1,3,4,5}

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **OR:** Odds ratio;

GRADE Working Group grades of evidence

High quality: Further research is very unlikely to change our confidence in the estimate of effect.

Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.

Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

Very low quality: We are very uncertain about the estimate.

¹ Not clear if participants were aware of intervention allocation

² 95% CI crosses line of no effect

³ No confidence intervals reported

⁴ Potential for contamination identified by study authors

⁵ Single study

⁶ Not reported

1
2
3

WSA Social emotional skills compared to usual for social, emotional and mental wellbeing

Patient or population: patients with social, emotional and mental wellbeing

Settings: Primary education

Intervention: WSA Social emotional skills

Comparison: usual

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk Usual	Corresponding risk WSA Social emotional skills				
Cooperation - Whole sample (Kiviruusu 2016)		The mean cooperation - whole sample in the intervention groups was 0.02 lower (0.23 lower to 0.19 higher)		3576 (1 study)	⊕⊕⊖⊖ low ^{1,2}	MD -0.02 (-0.23 to 0.19)
Cooperation - Male subgroup (Kiviruusu 2016)		The mean cooperation - male subgroup in the intervention groups was 0.1 lower (0.39 lower to 0.19 higher)		1731 (1 study)	⊕⊕⊖⊖ low ^{1,2}	MD -0.1 (-0.39 to 0.19)
Cooperation - Female subgroup (Kiviruusu 2016)		The mean cooperation - female subgroup in the intervention groups was 0.15 higher (0.13 lower to 0.43 higher)		1845 (1 study)	⊕⊕⊖⊖ low ^{1,2}	MD 0.15 (-0.13 to 0.43)
Empathy - Whole sample (Kiviruusu 2016)		The mean empathy - whole sample in the intervention groups was 0.03 lower (0.15 lower to 0.09 higher)		3576 (1 study)	⊕⊕⊖⊖ low ^{1,2}	MD -0.03 (-0.15 to 0.09)
Empathy - Male subgroup (Kiviruusu 2016)		The mean empathy - male subgroup in the intervention groups was 0.13 lower (0.31 lower to 0.05 higher)		1731 (1 study)	⊕⊕⊖⊖ low ^{1,2}	MD -0.13 (-0.31 to 0.05)
Empathy - Female subgroup (Kiviruusu 2016)		The mean empathy - female subgroup in the intervention groups was 0.12 higher (0.04 lower to 0.28 higher)		1845 (1 study)	⊕⊕⊖⊖ low ^{1,2}	MD 0.12 (-0.04 to 0.28)
SDQ total difficulties - Whole sample (Kiviruusu 2016)		The mean sdq total difficulties - whole sample in the intervention groups was 0.02 lower (0.38 lower to 0.34 higher)		3576 (1 study)	⊕⊕⊖⊖ low ^{1,2}	MD -0.02 (-0.38 to 0.34)
SDQ total difficulties - Male subgroup (Kiviruusu 2016)		The mean sdq total difficulties - male subgroup in the intervention groups was 0.58 higher (0.02 to 1.14 higher)		1731 (1 study)	⊕⊕⊕⊖ moderate ¹	MD 0.58 (0.02 to 1.14)
SDQ total difficulties - Female subgroup (Kiviruusu 2016)		The mean sdq total difficulties - female subgroup in the intervention groups was 0.24 lower (0.67 lower to 0.19 higher)		1845 (1 study)	⊕⊕⊖⊖ low ^{1,2}	MD -0.24 (-0.67 to 0.19)

SDQ prosocial - Whole sample (Kiviruusu 2016)	The mean sdq prosocial - whole sample in the intervention groups was 0.25 higher (0.11 lower to 0.61 higher)	3576 (1 study)	⊕⊕⊖⊖ low ^{1,2}	MD 0.25 (-0.11 to 0.61)
SDQ prosocial - Male subgroup (Kiviruusu 2016)	The mean sdq prosocial - male subgroup in the intervention groups was 0.08 lower (0.31 lower to 0.15 higher)	1731 (1 study)	⊕⊕⊖⊖ low ^{1,2}	MD -0.08 (-0.31 to 0.15)
SDQ prosocial - Female subgroup (Kiviruusu 2016)	The mean sdq prosocial - female subgroup in the intervention groups was 0.09 lower (0.28 lower to 0.1 higher)	1845 (1 study)	⊕⊕⊖⊖ low ^{1,2}	MD -0.09 (-0.28 to 0.1)

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval;

GRADE Working Group grades of evidence

High quality: Further research is very unlikely to change our confidence in the estimate of effect.

Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.

Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

Very low quality: We are very uncertain about the estimate.

¹ Not clear if participants were aware of intervention allocation

² 95% CI crosses line of no effect

1

2 See [Appendix F](#) for full GRADE tables

3

1

2 **1.1.7 Economic evidence**

3 A guideline wide search of published cost-effectiveness evidence was carried out for review
4 questions 1.1, 3.1, 4.1, 5.1 and 6.1. There were no eligible studies for RQ 4.1 or 6.1.

5 **1.1.7.1 Included studies**

6 3504 records were assessed against eligibility criteria.

7 3433 records were excluded based on information in the title and abstract. Two reviewers
8 assessed all the records. The level of agreement between the two reviewers was 100%.

9 The full-text papers of 71 documents were retrieved and assessed. 15 papers were
10 assessed as meeting the eligibility criteria. However, this accounted for 13 distinct studies
11 since some papers used the same underlying data. For RQ 1.1a, 2 studies (2 papers) were
12 included. In addition, the economic model produced for the previous guideline (PH20) was
13 included in the economic evidence for completeness. However, this was not identified in the
14 guideline wide search and therefore was not included in the study selection process.

15 .

16 Two reviewers assessed all full-text papers. The level of agreement between the two
17 reviewers was 100%.

18 The study selection process can be found in [Appendix G](#) and economic evidence tables
19 found in [Appendix H](#).

20 **1.1.7.2 Excluded studies**

21 56 full text documents were excluded for this guideline. The documents and the reasons for
22 their exclusion are listed in Appendix J – Excluded studies.

1 1.1.8 Summary of included economic evidence

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
<p>Bowden (2020) An economic evaluation of the costs and benefits of providing comprehensive supports to students in elementary school</p>	Potentially serious limitations ^a	Directly applicable	<p>The study compared the costs and benefits associated with the City Connects programme (six-year intervention, students aged 5-6 to aged 10-11) versus students in non-City Connects schools. ^b</p> <p>It is reported that, on average, each new high school graduate yields social benefits of \$281,120 and an effect size gains in achievement of 0.3 yields social benefits of \$10,250. The references for these estimates are not provided. Assumptions are applied to this estimate to generate cost-effectiveness results.</p>	<p>Present value cost per student (6 years, discounted) ^{c,d}; US\$ (2018) City Connects: 9,200 (£7070 GBP 2020 ^e) Non-City Connects: 3,800 (£2,913 GBP 2020 ^e)</p> <p>Incremental cost: 5,410 (£4,148 GBP 2020^e)</p> <p>Annual cost per person; £: City Connects: 1670 (£1707 GBP 2020^e) Non-City Connects: 690 (£705 GBP 2020^e)</p>	<p>Benefits of the City Connects programme</p> <p>Assumption 1 - yields 7% additional graduates</p> <p>Assumption 2 - each student obtains effect size gains in achievement of 0.3</p>	<p>Monetary societal benefit; US\$</p> <p>Assumption 1: 19,680 (£15,090 GBP 2020^e)</p> <p>Assumption 2: 10,250 (£7,858 GBP 2020 ^e)</p> <p>Average of Assumption 1 & Assumption 2: 14,960 (£11,471 GBP 2020 ^e)</p> <p>Benefit to cost ratio: 3</p>	<p>Results were robust to sensitivity analyses (benefit to cost ratio varied from 1.26 to 6.38).</p> <p>Considering only achievement gains, break even occurred when assuming an effect size of 0.15.</p> <p>Considering only effects on high school graduation, break even occurred when assuming yield of new graduates was 2 per 100 participants (i.e., if graduation rate improved by 3%).</p>

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
<i>Abbreviations: None</i>							
a. The authors consider that their analyses may not have captured the full effects of the intervention. Resource use data were collected via site visits and interviews and whilst authors took steps to minimise bias, the extent to which those steps were effective is not known.							
b. The City Connects programme takes a whole school approach to assess and address the challenges (academic, social/emotional, health and family) that prevent students from reaching their full potential in the classroom.							
c. Costs were primarily driven by personnel, mainly the school co-ordinators, the school's central staff, school administrators and schoolteachers.							
d. It is assumed that costs are rounded. Hence, the city connect costs minus non city connects costs do not give the exact incremental costs reported.							
e. Converted by the reviewer using historical exchange rates and PSSRU inflation indices.							

1

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
Hummel^a (2009) A universal intervention to prevent bullying victimisation (hypothetical) vs. no intervention	Minor limitations ^b	Directly applicable	The study conducted an economic evaluation with a lifetime time horizon from an education, NHS and PSS perspective. Results from published literature were used to estimate the effect of changes in victimisation prevalence on quality-adjusted life-years (QALYs). This estimate was complex and not well reported. It included the effects of bullying on educational attainment and income and the effect these had on mortality as well as the effects of childhood maltreatment (a proxy for bullying) on adult HRQoL.	Costs of the intervention per person; £: 15.48 (£18 GBP 2020 ^c)	Incremental QALYs per person; lifetime: Not reported. Assumed the intervention reduced victimisation by 15%.	ICER; £: 9,600 per QALY gained (£11,354 GBP 2020 ^c)	At a threshold of £20,000 it was 82% probable that the intervention was cost-effective, and at a threshold of £30,000, 92% probable.

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
Abbreviations: HRQoL: health-related quality of life; ICER: incremental cost-effectiveness ratio; NHS: National Health Service; PSS: Personal Social Service; QALY: quality-adjusted life-year							
a. This is the economic report produced for the previous guideline PH20. Data extractions is provided for completeness but the report was not found in the guideline wide search and therefore was not included in the study selection process.							
b. Only costs relating to the intervention were included. An arbitrary baseline effectiveness rate was used due to weak evidence and the resources required to deliver a successful anti-bullying intervention were also uncertain.							
c. Converted by the reviewer using historical exchange rates and PSSRU inflation indices. (Assuming 2009 currency year)							

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Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
Persson (2018) The KiVa program a whole-school approach to reduce and prevent bullying vs. status quo (SQ) i.e. treatment as usual	Minor limitations ^a	Partly applicable ^b	The study conducted cost-effectiveness analysis using a Markov model with a 9-year time horizon and using a payer perspective. The outcomes were the number of victim-free years of bullying and the QALY. All inputs were sourced from published literature.	Incremental intervention costs per person ^c; SEK: KiVa vs SQ 3,686 (£350 GBP 2020 ^f)	Incremental QALYs per person: KiVa vs SQ 0.03 Incremental victim free years per person: KiVa vs SQ 0.47 ^d	ICER; SEK (€): KiVa vs SQ 131,321 (12,484 GBP 2020 ^f) (13,823) per QALY gained 7,789 (829) per victim free year (£740 GBP 2020 ^f)	Deterministic sensitivity analysis found that the discount rate, total cost of the program, cohort size, and initial bullying prevalence rates did not impact the cost-effectiveness by a large magnitude. Assuming KiVa was less effective, with a relative risk of 0.7, the cost per gained QALY and cost per victim-free year increase to 79,664 SEK (€18,912) (£7,573 GBP 2020 ^f) and 10,780 SEK (£1,025 GBP 2020 ^f) (€1135). Assuming that KiVa was implemented over 3 years (grades 7–9) implied a cost per QALY of 604,988 SEK (€63,683) (£57,512 GBP 2020 ^f) and a cost per victim-free year of 36,229 SEK (£3,445 GBP 2020 ^f) (€3814). At a threshold of 500,000 SEK per QALY (£47,532 GBP 2020 ^f) (€52,632), the probability that KiVa

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
							was cost-effective was close to 100%. At thresholds of 100,000 SEK per QALY (£9,506 GBP 2020 ^f) (€10,526) and 200,000 SEK per QALY (£19,012 GBP 2020 ^f) (€21,053), the probability that KiVa was cost-effective was 68% and 96%, respectively.
<i>Abbreviations: ICER: incremental cost-effectiveness ratio; QALY: quality-adjusted life year; SQ: status quo;</i>							
a. The study only considers short-term cost and effects. There was limited research and data on the effectiveness of the KiVa program.							
b. The intervention considered is relevant to the UK context, but caution is required when transferring the results of the study given the difference in prices and healthcare systems between the UK and the Sweden.							
c. The no intervention group were assumed to have no costs since only intervention costs were considered.							
d. The study states that the number of victim free years increases from 8.04 to 8.59 but states an incremental increase of 0.47. Considering an incremental increase of 0.55 (8.59 – 8.04) produces an ICER of 6,702 SEK per victim free year.							
e. Using the incremental costs and effects provided, the reviewer was unable to replicate the stated ICERs. However, the values were similar and did not affect the conclusions.							
f. Converted by the reviewer using historical exchange rates and PSSRU inflation indices.							

1

2 1.1.9 Economic model

3 A bespoke economic model was developed to explore the costs and consequences of an intervention, or combination of interventions, that
4 promote social, emotional and mental wellbeing in children and young people in primary and secondary education. It covers more than 1 evidence
5 review in the guideline so the full write up is contained in a separate document ([Evidence Review J](#)) rather than Appendix I.

6

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
<p>Coote^a (2021) A cost-consequence and cost-benefit analysis of interventions to improve social, emotional and mental wellbeing in schools</p>	<p>Potentially serious limitations^b</p>	<p>Directly applicable</p>	<p>A bespoke model was developed to capture the costs and consequences of an intervention, or combination of interventions, that promote social, emotional and mental wellbeing in children and young people in primary and secondary education.</p> <p>It is recommended that the model is used as a guide to explore the potential economic and wellbeing implications of interventions.</p> <p>The model was pre-populated with evidence from the NICE guideline reviews but it also allows users to adapt the perspective and input values and generate results, specific to the educational environment of interest.</p> <p>A worked example was provided that considered an intervention for transition between schools and its impact on bullying perpetration. The example used a hypothetical cohort of 200 pupils, a 1-year time</p>	<p>Costs of the intervention per person; £: 17.71</p> <p>Total intervention cost; £ 3,542</p>	<p>Relative Risk bullying perpetration 0.98</p> <p>(Assumes the intervention reduces bullying by 2%, 4 out of 200 individuals undergoing the intervention)</p> <p>Utility value assigned to bullying 0.06</p> <p>Length of utility benefit 1 year</p> <p>QALYs; 4 x 0.06 = 0.24</p> <p>Monetary QALY; £: 4,800</p> <p>(using monetary equivalent per</p>	<p>Net benefit; £: 1,258</p>	<p>Sensitivity analyses showed that:</p> <ul style="list-style-type: none"> • an increase in the intervention cost resulted in a reduction of net benefit • an increase in the number of students undergoing the intervention increased the net benefit • a reduction in the change in utility per student attributed to bullying below 0.044 would result in a negative net benefit

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
			horizon and took a societal perspective.		QALY of £20,000)		
<p><i>Abbreviations: ICER: incremental cost-effectiveness ratio; NHS: National Health Service; PSS: Personal Social Service; QALY: quality-adjusted life-year</i></p> <p>a. This economic model was developed for the current guideline update. Full details can be found in the separate economic modelling report.</p> <p>b. Due to substantial variability in the interventions available and heterogeneity across schools it is neither possible, nor judicious, for this model to provide 'generalised' results.</p>							

1

1 **1.1.10 Economic evidence statements**

2 ***Economic evidence statements***

3

4

5 Bowden (2020) found that the City Connects programme, a whole school approach to assess
6 and address the challenges (academic, social/emotional, health and family) that prevent
7 students from reaching their full potential, was cost-effective compared with the comparator
8 (City Connects programme not implemented). The cost-benefit analysis showed that, from a
9 societal perspective, the City Connects programme delivered more benefits than the
10 comparator, but at an additional present value (6 years) cost of US\$5,410 (2018). (£4,148 GBP
11 2020) The cost to benefit ratio was estimated to be 3 and the results were shown to be robust
12 to variation in this value (from 1.26 to 6.38). Considering only achievement gains, break even
13 occurred when assuming an effect size of 0.15 and considering only effects on high school
14 graduation, break even occurred when assuming that the yield of new graduates was 2 per
15 100 participants (i.e., if graduation rate improved by 3%). The authors acknowledged
16 difficulties in estimating resources used by children (intervention and comparator) but
17 considered that their analyses generated conservative results as not all benefits were
18 measured (including those associated with productivity, intra-family effects, benefits accrued
19 whilst in school and the long-term benefits of education). The reviewer highlights that the
20 methods used to estimate benefits are not described/sources are not referenced and,
21 therefore, the validity of these benefits is unclear. The analysis was assessed as directly
22 applicable to the review question, with potentially serious limitations.

23

24 Hummel (2009) found that an intervention to prevent bullying victimisation was cost-effective
25 compared with no intervention. At a WTP threshold of £20,000 per QALY gained there was
26 an 82% probability that the intervention was cost-effective. The estimate of the effectiveness
27 of an anti-bullying intervention is based on very limited evidence, and estimates of victimisation
28 prevalence are highly variable. A sensitivity analysis on these two key parameters show that
29 for a cost-effectiveness threshold of £20,000 an intervention which is 5% effective in reducing
30 victimisation is only cost-effective if initial victimisation prevalence is greater than 35%,
31 whereas an intervention that is 20% effective is cost-effective with victimisation prevalence
32 greater than 10%.

33

34

35 Persson (2018) found that the KiVa program for bullying prevention was cost-effective
36 compared with usual practice at a threshold of 500,000 SEK per QALY. The study conducted
37 cost-effectiveness analysis using a Markov model with a 9-year time horizon and using a payer
38 perspective. The analysis showed an ICER of 131,321 SEK (12,484 GBP 2020) per QALY
39 gained and 7,789 (£740 GBP 2020) (€829) SEK per victim free year. At a threshold of 500,000
40 SEK (£47,532 GBP 2020) per QALY (€52,632), the probability that KiVa was cost-effective
41 was close to 100%. At a threshold of 100,000 SEK per QALY (£9,506 GBP 2020) (€10,526)
42 and 200,000 SEK (£19,012 GBP 2020) per QALY (€21,053), the probability that KiVa was
43 cost-effective was 68% and 96%, respectively. The author noted that the study only considered
44 short-term cost and effects and that there was limited data on the effectiveness of the KiVa
45 program. The analysis was assessed as partly applicable to the review question, with minor
46 limitations.

47

48 Coote (2021) aimed to quantify the costs and effectiveness, and hence the impact, of
49 introducing a range of mental health and wellbeing interventions. The large range of
50 interventions on offer and the circumstances in which an intervention is implemented made it
51 difficult to draw robust conclusions regarding the effectiveness of an intervention and the
52 economic impact.

1

2 Whole-school approaches in secondary and further education

2.1 Review question

What principles or combination of principles of whole-school approaches to promote social, emotional and mental wellbeing in children and young people in secondary and further education are effective and cost-effective?

2.1.1 Introduction

Social and emotional skills are key during children and young people's development and may help to achieve positive outcomes in health, wellbeing and future success. Whole-school approaches aim to nurture these skills at the individual level in the classroom and at the school level through the school environment, policies and community.

2.1.2 Summary of the protocol

Table 5: PICOS Table

Population	<ul style="list-style-type: none"> • Children and young people (including those with SEND) in UK key stages 3 to 4 in secondary education • Young people in post-16 education (further education) <ul style="list-style-type: none"> ○ up to the age of 18 for young people without SEND ○ up to the age of 25 for young people with SEND
Intervention	<p>Whole school-led approaches to social, emotional and mental wellbeing with a combination of at least two of the following principles / components / aspects:</p> <ul style="list-style-type: none"> • Promote mental/ physical health across the curriculum • Ethos and environment • Working with parents/carers and community • Leadership and management • Student voice • Staff development • Identifying need and monitoring impact of interventions • Targeted support
Comparator	Usual practice (can include no intervention or waiting list)
Outcomes	<p>Social and emotional wellbeing outcomes Any validated measure of mental, social, emotional or psychological wellbeing categorised as:</p> <ul style="list-style-type: none"> • Social and emotional skills and attitudes (such as knowledge) • Emotional distress (such as depression, anxiety and stress) • Behavioural outcomes that are observed (such as positive social behaviour, conduct problems) <p>Academic outcomes Academic progression and attainment</p> <p>Secondary outcomes</p>

	<ul style="list-style-type: none">• School/class environment outcomes such as school belonging• School attendance• School exclusions• Unintended consequences (e.g. stigma, reinforcement of negative behaviours)• Quality of life
Study type	Randomised and non-randomised controlled trials

1 **2.1.3 Methods and process**

2 This evidence review was developed using the methods and process described in
3 [Developing NICE guidelines: the manual and in the methods chapter](#). Methods specific to
4 this review question are described in the review protocol in [Error! Reference source not
5 found.](#)

6 Declarations of interest were recorded according to [NICE's conflicts of interest policy](#).

7 **Outcome measures**

8 Where social and emotional outcome measures were reported in a study from multiple
9 sources, the data used followed the following hierarchy of preference:

- 10 1. Child/ young person reported
11 2. Teacher reported
12 3. Parent reported

13 However, for behavioural outcomes, measures reported by teachers were the preferred
14 option as they are generally outcomes that are observed.

15

16 **Meta-analysis and GRADE**

17 Outcome data were meta-analysed and quality of evidence was assessed by GRADE
18 wherever possible in the review. Instances where it was not appropriate to meta-analyse
19 outcome data included studies not reporting the number of participants, standard deviations
20 or number of events used to calculate odds and risk ratios. These data were reported as
21 evidence statements and the quality of evidence was determined by risk of bias rather than
22 GRADE.

23 **2.1.4 Effectiveness evidence**

24 **2.1.4.1 Included studies**

25 In total 47,322 references were identified through systematic searches. Of these, 246
26 references were considered relevant, based on title and abstract, to the protocols for whole-
27 school approach interventions and were ordered. A total of 45 references were included and
28 201 references were excluded.

29 The 45 references provided data on 28 separate studies (17 references were secondary
30 publications).. Of the effectiveness studies, 18 were cluster randomised controlled trials, 5
31 were non-randomised studies and 5 were qualitative studies. Of these, 16 studies provided
32 effectiveness data from secondary school settings. See summary of studies (Table 6)
33 included in this review and a brief outline of the interventions in these studies (Table 7). See
34 Table 8 for details of the whole-school approach components covered by each intervention.
35 See [Appendix D](#) for full evidence tables.

- 1 **2.1.4.2 Excluded studies**
- 2 See [Appendix J](#) for full list of excluded studies.

2.1.5 Summary of studies included in the effectiveness evidence

Table 6: Summary of studies identified

Study [Country]	Study design	Setting	Equivalent UK Key stage	Population (Number of participants [N])	Intervention	Comparator	Outcome(s)
Acosta 2019 [USA]	cRCT	Middle schools	Key stage 3	Pupils in middle school (age range 11-12 years) (N= 2771)	Restorative Practices Intervention	Control (not further described)	<ul style="list-style-type: none"> • Social skill: assertiveness • Social skill: empathy • Physical bullying • Emotional bullying • Cyberbullying • School connectedness
Bonell 2015 [UK]	cRCT	Mainstream secondary schools	Key stage 3	Pupils in secondary school (mean age 12.1 years) (N= 1144)	INCLUSIVE	Control (not further described)	<ul style="list-style-type: none"> • Bullying victimisation • Violence perpetration • Aggression perpetration • QoL • School climate • Truancy • Exclusion • Emotional well-being • Psychological problems
Bonell 2018 [UK]	cRCT	Mainstream secondary schools	Key stage 3	Pupils in secondary school (mean age 11.7 years) (N= 6669)	Learning Together (INCLUSIVE)	Usual practice	<ul style="list-style-type: none"> • Bullying victimisation • Perpetration of aggression • Emotional well-being • Psychological problems • QoL

Study [Country]	Study design	Setting	Equivalent UK Key stage	Population (Number of participants [N])	Intervention	Comparator	Outcome(s)
Cross 2016 [Australia]	cRCT	Metropolitan non-Government secondary schools	Key stage 3	Pupils in Grade 8 (aged 13 years) (N= 3382)	Cyber Friendly schools Project	Usual practice	<ul style="list-style-type: none"> • Cyberbullying Victimization • Cyberbullying Perpetration
Del Rey 2016 [Spain]	NRCT	Secondary schools	Key stage 3-post 16	Pupils in secondary school (age range 11-19 years) (N= 875)	ConRed	Usual practice	<ul style="list-style-type: none"> • Cyberbullying Victimization • Cyber bullying aggression
Ferrer-Cascales 2019 [Spain]	cRCT	Public secondary schools	Key stage 3-4	Pupils in secondary school (age range 11-16 years) (N= 2057)	TEI Program	Control (not further described)	<ul style="list-style-type: none"> • Bullying Behaviour • Bullying victimisation • Frequency of Fighting • Cyberbullying Perpetration • Cyberbullying Victimization • School climate
Gradiger 2015 [Austria]	cRCT	Secondary schools	Key stage 3	Pupils in Grades 5 to 7 (mean age 11.65 years) (N= 2042)	ViSC Social Competence Program	Control (not further described)	<ul style="list-style-type: none"> • Cyberbullying Perpetration • Cyberbullying Victimization
Karna 2013 [Finland]	cRCT	Lower secondary schools	Key stage 3	Pupils in Grades 7-9 (age range 13-15 years old) (N= NR)	KiVa Antibullying Program	Control (not further described)	<ul style="list-style-type: none"> • Victimization • Bullying
Larsen 2019 [Norway]	cRCT	Upper secondary schools	Key stage 4 – post 16	Pupils in upper secondary schools (age range 15 to 19 years) (N= 3003)	<ul style="list-style-type: none"> • The Dream School Program • The Mental Health Support Team 	Control (not further described)	<ul style="list-style-type: none"> • Mental health • Loneliness

Study [Country]	Study design	Setting	Equivalent UK Key stage	Population (Number of participants [N])	Intervention	Comparator	Outcome(s)
Nocentini 2016 [Italy]	cRCT	Middle school	Key stage	Pupils in Grades 6-8 (age 10-12 years) (N= 2042)	KiVa antibullying program	Usual school provision	<ul style="list-style-type: none"> • Victimisation • Bullying
Palladino 2016a [Italy]	NRCT	High schools	Key stage 3	Pupils in 9 th grade (age range 14-18 years) (N= 461)	The NoTrap! Program	Control (not further described)	<ul style="list-style-type: none"> • Victimisation • Bullying • Cyber victimisation • Cyber bullying
Palladino 2016b [Italy]	NRCT	High schools	Key stage 3	Pupils in 9th grade (age range 14-18 years) (N= 622)	The NoTrap! Program	Control (not further described)	<ul style="list-style-type: none"> • Victimisation • Bullying • Cyber victimisation • Cyber bullying
Silvia 2011 [USA]	cRCT	Middle schools	Key stage 3	Pupils in Grade 6-8 (usually aged 11-14 years) (N= 6616)	Responding in Peaceful and Positive Ways and Best Behaviour	Control (not further described)	<ul style="list-style-type: none"> • Violence • Victimisation
Smolkowski 2017 [USA]	cRCT	Middle schools	Key stage 3	Pupils in Grade 6-8 (mean age 11.9 years) (N= 12,912)	Positive Family Support	Delayed implementation condition	<ul style="list-style-type: none"> • Math score • Reading score • Days absent
Wiglesworth 2012 [UK]	NRCT	Secondary schools	Key stage 3	Pupils in year 7 (age range 11 – 12 years) (N= 4351)	SEAL	Usual practice	<ul style="list-style-type: none"> • SDQ Total difficulties • SDQ Prosocial subscale
Yanagida 2019 [Austria]	cRCT	Secondary schools	Key stage 3	Pupils in Grade 5-8 (mean age 11.7 years) (N= 2042)	ViSC Social Competence	Control (not further described)	<ul style="list-style-type: none"> • Change in aggression • Change in victimisation

Table 7: Summary of interventions

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/intensity	Treatment fidelity
ConRed	Del Rey 2016	Designed to cope with cyberbullying by focusing on internet dependence, traditional bullying and empathy	<ul style="list-style-type: none"> Posters, leaflets, bookmarks, stickers for notebooks and tables 	<ul style="list-style-type: none"> 8 training sessions were conducted with the students. The work was carried out in close collaboration with the schools' counselling teams and was made to fit their existing educational projects 	Teachers	Group	3 months	Not reported
Cyber Friendly schools Project	Cross 2016	<ul style="list-style-type: none"> To enhance the capacity of school staff, students, and families to respond effectively to reduce cyberbullying behaviour. 	<ul style="list-style-type: none"> Nine online modules included multi-media and information links 	<ul style="list-style-type: none"> The cyber leaders were trained for 10 hrs The pastoral care team received 6 hr of training The CFSP teaching and learning program, led by classroom teachers, aimed to reduce student harm 	School project coordinator, pastoral care staff and Grade 10 student cyber leaders	Not reported	2 years	Not reported
INCLUSIVE	Bonell 2015	<ul style="list-style-type: none"> To promote mental and emotional well-being, by 	<ul style="list-style-type: none"> Teaching and learning materials were 	<ul style="list-style-type: none"> Student views on the school environment and their experience 	<ul style="list-style-type: none"> Schools were supported by 	Not reported	1 academic year	Assessments showed all schools implement

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/intensity	Treatment fidelity
		combining changes to the school environment with the promotion of social and emotional skills and restorative practices	provided to support delivery of the curriculum	<p>of aggression and bullying were obtained</p> <ul style="list-style-type: none"> • These were used to produce a needs assessment report that was tailored to each intervention school • Report used to determine local priorities and inform decision-making about how to improve the school environment 	an expert facilitator			ed restorative practices such as circle time but only 3 of the 4 intervention schools used restorative conferencing
KiVa Antibullying Program	Karna 2013 Nocentini 2016	<ul style="list-style-type: none"> • Social cognitive theory • KiVa emphasises the need to enhance the empathy, self-efficacy and anti-bullying attitudes of bystanders (neither bullies nor victims) 	<ul style="list-style-type: none"> • Anti-bullying computer game • Parents also receive a guide about bullying and how to prevent it • Schools receive professional prepared materials and activity packs 	<ul style="list-style-type: none"> • Lessons include discussion, group work, role play and short films. • Students play an anti-bullying computer game • Occurrences of bullying are addressed by teams of four school personnel through individual and small-group discussions with 	Classroom teachers	Face to face group sessions	20 hours of KiVa lessons over the academic year	None reported

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/intensity	Treatment fidelity
				victims and bullies				
Learning Together (INCLUSIVE)	Bonell 2018	<ul style="list-style-type: none"> Aims to support students to choose healthier behaviours by promoting their autonomy, motivation and reasoning ability 	<ul style="list-style-type: none"> Manual Findings from baseline survey Lesson plans and slides 	<ul style="list-style-type: none"> All school staff received training on restorative practices Action group meetings were established and held twice per term Teachers delivered lessons on social and emotional skills for students in years 8-10 	<ul style="list-style-type: none"> Teachers were trained by trainers accredited by the UK's Restorative Justice Council Lessons were delivered by school teachers 	Face to face	3 years	Mean fidelity scores were 6 out of 8 for years 1 and 2, and 1 out of 4 for year 3
Positive Family Support	Smolkowski 2017	<ul style="list-style-type: none"> A multilevel intervention that provides family management interventions and academic support, and is a specific subtype of the PBIS approach 	<ul style="list-style-type: none"> A structured implementation manual Digital materials via a DVD Parent engagement materials 	<ul style="list-style-type: none"> Schools were first trained in universal and selected interventions, with subsequent training on indicated interventions delivered once these were in place 	<ul style="list-style-type: none"> 'Project trainers' delivered all intervention training and workshops School staff, administrators and other school personnel delivered the intervention activities 	Not reported	2 years	Not reported
Responding in Peaceful and Positive Ways	Silvia 2011	<ul style="list-style-type: none"> Combines a curriculum-based component: the 	<ul style="list-style-type: none"> Curriculum materials 	<ul style="list-style-type: none"> Lessons include discussion, brainstorming, games, small 	<ul style="list-style-type: none"> Program developers 	Face to face	3 years	<ul style="list-style-type: none"> 61-72% of schools delivered

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/intensity	Treatment fidelity
and Best Behaviour		RIPP program, with a whole-school component: Best Behaviour.	<ul style="list-style-type: none"> Teaching manual Posters Slides 	<p>group work, role playing, rehearsal of specific skills, and didactic learning.</p> <ul style="list-style-type: none"> The Best Behaviour component is implemented by a school management team. 	<ul style="list-style-type: none"> Trained classroom teachers 			<p>all 16 lessons</p> <ul style="list-style-type: none"> Across 6 key practice indicators , between 56-100% of schools achieved each one apart from 'collecting and reviewing discipline data' which showed only 33-44% compliance
Restorative Practices Intervention	Acosta 2019	<ul style="list-style-type: none"> RPI integrates ecological systems theory and psychology of affect theory into a single model 	<ul style="list-style-type: none"> Implementation tools, including sample plans, and identified implementation targets for schools 	<ul style="list-style-type: none"> PPI involves training all school staff on how to enact 11 "Essential Elements" (a continuum of practices that range from informal (e.g using affective 	Restorative Practices coaches	Group	2 years	Not reported

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/intensity	Treatment fidelity
				statements to communicate feelings) to formal (e.g. hosting a restorative "circle")				
SEAL	Wiglesworth 2012	<ul style="list-style-type: none"> SEAL is a whole-school approach designed to positively influence a range of pupil outcomes, including increased social and emotional skills, better behaviour and reduced mental health difficulties. 	<ul style="list-style-type: none"> Curriculum materials 	<ul style="list-style-type: none"> Schools were encouraged to consider how they might develop the learning climate and physical environment as a means of promoting a positive school ethos Curriculum designed to promote SEL 	Not reported	Group	Curricular materials delivered once a week for six weeks	Not reported
TEI Program	Ferrer-Cascales 2019	<ul style="list-style-type: none"> Designed to prevent school violence and cyber bullying by improving the school climate and promoting positive coexistence 	<ul style="list-style-type: none"> Not reported 	<ul style="list-style-type: none"> Coordinating teachers create tutor-tutee pairings, taking into account students' age and interpersonal skills Students with high interpersonal skills were assigned as tutors of 	TEI staff	Face to face	One academic year	Not reported

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/intensity	Treatment fidelity
				vulnerable younger students.				
The Dream School Program	Larsen 2019	<ul style="list-style-type: none"> A universal and whole-school program 	<ul style="list-style-type: none"> Manual Posters 	<ul style="list-style-type: none"> The DSP contains specific core elements that must be conducted for it to be well implemented These are the Dream Class 1 and 2, and the Dream Class poster, which provides guidelines for enabling a good psychosocial class environment 	<ul style="list-style-type: none"> School staff and peer mentors 	Group	Not reported	Not reported
The Mental Health Support Team	Larsen 2019	<ul style="list-style-type: none"> The MHST works both indicative and selective—it targets specific students with known mental health problems or other issues who are at risk of dropping out 	<ul style="list-style-type: none"> None reported 	<ul style="list-style-type: none"> The MHST team has its starting point in the school's student services and thus represents a reorganizing of existing resources within the school to work more systematically with identifying and follow up of students at risk 	<ul style="list-style-type: none"> Each team consists of counselors, school nurses and follow-up services staff. 	Not reported	Not reported	Not reported

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/intensity	Treatment fidelity
The NoTrap! Program	Palladino 2016a; Palladino 2016b	<ul style="list-style-type: none"> Aims to prevent and combat both traditional bullying and cyberbullying designed to involve working both online and offline. 	<ul style="list-style-type: none"> None reported 	<ul style="list-style-type: none"> Teachers took part in a course on digital communication technology and social networks, risks of online communication, bullying and cyberbullying A group of students assume the role of responsibility both in their classroom and online after undergoing training 	<ul style="list-style-type: none"> Psychologists and peers 	Face to face	Not reported	Not reported
ViSC Social Competence	Gradiger 2015; Yanagida 2019	<ul style="list-style-type: none"> Aims to both reduce aggressive behaviour and to foster social and intercultural competencies in schools 	<ul style="list-style-type: none"> Worksheets Group activities Interactive games 	<ul style="list-style-type: none"> The intervention follows a cascaded train-the-trainer model where scientists train multipliers, multipliers train teachers, and teachers train their students. 	ViSC coaches	Not reported	One academic year	Not reported

Table 8: Whole-school approach components covered by intervention

Brief name	Studies	Curriculum	Ethos and environment	Identifying needs	Targeted support	Parents/carers	Student voice	Staff development	Leadership and management
ConRed	Del Rey 2016	Curriculum-based work aimed at developing social competencies	Awareness-raising campaign aimed at the whole school community	None	None	Stresses the importance of cooperation between teachers, students, and parents	None	None	None
Cyber Friendly schools Project	Cross 2016	CFSP teaching and learning program led by classroom teachers	Provided whole-school and student level resources targeting the student cohort, cyber leaders, pastoral care staff, classroom teachers, and parents/carers.	None	None	Online resources were disseminated by the school to increase parents' awareness of technologies used by their children, and the benefits and harms associated with these	Used student cyber leaders	Teachers participated in training	Intervention school pastoral care teams were also trained to implement whole-school policy and practices to discourage cyberbullying.
INCLUSIVE	Bonell 2015	Social and emotional skills curriculum which included teaching on restorative practices, relationships, and social and emotional skills.	Formation of a school action group who reviewed and revised school policies relating to discipline, behaviour management, staff-student communication	None	None	None	Included circle time where staff and students sit in a circle and share ideas, thoughts	Teachers participated in training	None

Brief name	Studies	Curriculum	Ethos and environment	Identifying needs	Targeted support	Parents/carers	Student voice	Staff development	Leadership and management
			and school rules.				and feelings relating to social, emotional or curricular activities.		
INCLUSIVE; Learning Together	Bonell 2018	Social and emotional skills curriculum which included teaching on restorative practices, relationships, and social and emotional skills.	Formation of a school action group who reviewed and revised school policies relating to discipline, behaviour management, staff–student communication and school rules.	None	None	None	Included circle time where staff and students sit in a circle and share ideas, thoughts and feelings relating to social, emotional or curricular activities.	Teachers participated in training	None
KiVa Antibullying Program	Karna 2013	<ul style="list-style-type: none"> • Lessons • Computer-game 	<ul style="list-style-type: none"> • Posters around school • Recess supervisors 	None	Occurrences of bullying are addressed	Parents receive a guide on bullying	None	None	None
Positive Family Support	Smolkowski 2017	None	None	Implementing a school-wide system to facilitate early	<ul style="list-style-type: none"> • Used an enhanced version of the Check- 	Interventions emphasise parents' awareness of school	None	School staff and administrators received training	None

Brief name	Studies	Curriculum	Ethos and environment	Identifying needs	Targeted support	Parents/carers	Student voice	Staff development	Leadership and management
				detection of problems and efficient referral to more intensive support.	In/Check-Out system • Used intensive support for high-risk students using family-centred sessions	expectations, promote student and parent engagement, and improve teacher-parent communication			
Responding in Peaceful and Positive Ways and Best Behaviour	Silvia 2011	Schools were given curriculum materials for each grade	Includes two approaches that are considered complementary as together they target individual- and school-level change mechanisms	None	None	None	None	School staff took part in a whole-school development program	The role of the school principal is considered critical in communicating enthusiasm and commitment to the intervention and supporting implementation
Restorative Practices Intervention	Acosta 2019	School staff are encouraged to use the restorative practices to build relationships and resolve staff issues (restorative staff community), and to interact with parents (restorative approach with families).	Circles can be initiated by students or staff to establish ground rules (proactive circle) or as a planned way to respond to inappropriate behavior affecting a group of students or an entire class	None	Conferences can be an immediate response to low-level conflicts between two people (impromptu conference) or a planned response to serious or repeated patterns of behavior	Includes restorative approach with families	None	Teachers participated in training	None

Brief name	Studies	Curriculum	Ethos and environment	Identifying needs	Targeted support	Parents/carers	Student voice	Staff development	Leadership and management
			(restorative circle)		(restorative conference)				
SEAL	Wiglesworth 2012	Universal SEL	Schools were encouraged to consider how they might develop the learning climate and physical environment	None	None	None	None	Schools were encouraged to provide more opportunities for professional development	None
TEI Program	Ferrer-Cascales 2019	Students undertook specific training activities in tutor-tutee pairings across the school year on specific skills	The intervention aims to promote a positive school climate and uses a peer-tutoring approach	None	None	Families receive information regarding the TEI program and are encouraged to be actively involved with program implementation	Used student tutors	Teachers participated in training	None
The Dream School Program	Larsen 2019	2 classes	Aims to create environments where students are encouraged to participate feel confident and experience a sense of belonging, and where mental health is promoted	None	None	None	Used peer mentors	Teachers participated in training	None
The Mental Health	Larsen 2019	None	None	Identifies and follows up on students who	Provides tailored help for students.	None	None	None	None

Brief name	Studies	Curriculum	Ethos and environment	Identifying needs	Targeted support	Parents/carers	Student voice	Staff development	Leadership and management
Support Team				have patterns of high absence from school.					
The NoTrap! Program	Palladino 2016a; Palladino 2016b	Classes	None	None	None	None	Used peer educators	Teachers participated in training	None
ViSC Social Competence	Gradiger 2015; Yanagida 2019	Class project	Intervention activities are designed to create a friendly, encouraging school environment where bullying behaviours are less likely, rather than aiming to directly change the behaviour of a bullying student	None	None	None	None	Teachers participated in training	None

1 2.1.6 Summary of the effectiveness evidence

WSA Bullying (curriculum) compared to usual practice for social, emotional and mental wellbeing

Patient or population: patients with social, emotional and mental wellbeing

Settings: Secondary education

Intervention: WSA Bullying (curriculum)

Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk Usual practice	Corresponding risk WSA Bullying (curriculum)				
Perpetration (Bullying, aggression, violence) - No parent intervention (Bonell 2015, Bonell 2018, Silvia 2011)		The mean perpetration (bullying, aggression, violence) - no parent intervention in the intervention groups was 0.02 standard deviations higher (0.03 lower to 0.08 higher)		4728 (3 studies)	⊕⊕⊕⊖ low ^{1,2}	SMD 0.02 (-0.03 to 0.08)
Perpetration (Bullying, aggression, violence) - With parent intervention (Ferrer-Cascales 2019)		The mean perpetration (bullying, aggression, violence) - with parent intervention in the intervention groups was 1.43 lower (2.55 to 0.31 lower)		483 (1 study)	⊕⊕⊕⊖ moderate ³	MD -1.43 (-2.55 to -0.31)
Victimisation - No parent intervention (Bonell 2015, Bonell 2018, Silvia 2011)		The mean victimisation - no parent intervention in the intervention groups was 0.12 standard deviations lower (0.41 lower to 0.17 higher)		5583 (3 studies)	⊕⊕⊕⊖ low ^{1,2}	SMD -0.12 (-0.41 to 0.17)
Victimisation - With parent intervention (Ferrer-Cascales 2019)		The mean victimisation - with parent intervention in the intervention groups was 0.71 lower (1.30 to 0.12 lower)		438 (1 study)	⊕⊕⊕⊖ moderate ³	MD -0.71 (-1.30 to -0.12)
Cyberbullying perpetration - With parent intervention (Cross 2016, Ferrer Cascales 2019)		The mean cyberbullying perpetration - with parent intervention in the intervention groups was 0.06 standard deviations lower (0.21 lower to 0.08 higher)		1110 (2 studies)	⊕⊕⊕⊖ low ^{2,4}	SMD -0.06 (-0.21 to 0.08)
Cyberbullying perpetration - No parent intervention (Grading 2016)		The mean cyberbullying perpetration - no parent intervention in the intervention groups was 0.06 lower (0.25 lower to 0.13 higher)		371 (1 study)	⊕⊕⊕⊖ low ^{2,4}	SMD -0.06 (-0.13 to 0.08)

Cyberbullying victimisation - With parent intervention (Cross 2016, Ferrer Cascales 2019)	The mean cyberbullying victimisation - with parent intervention in the intervention groups was 0.13 standard deviations lower (0.27 lower to 0 higher)	1113 (2 studies)	⊕⊕⊕⊖ moderate ⁴	SMD -0.13 (-0.27 to 0)	
Cyberbullying victimisation - No parent intervention (Grading 2016)	The mean cyberbullying victimisation - no parent intervention in the intervention groups was 0.04 lower (0.20 lower to 0.12 higher)	371 (1 study)	⊕⊕⊕⊖ low ^{2,4}	MD -0.04 (-0.20 to 0.12)	
Emotional wellbeing (Bonell 2015, Bonell 2018)	The mean emotional wellbeing in the intervention groups was 0.22 higher (0.79 lower to 1.22 higher)	1016 (2 studies)	⊕⊕⊕⊖ moderate ²	MD 0.22 (-0.79 to 1.22)	
Psychological problems (Bonell 2015, Bonell 2018)	The mean psychological problems in the intervention groups was 0.19 higher (1.67 lower to 2.04 higher)	1016 (2 studies)	⊕⊕⊕⊖ moderate ²	MD 0.19 (-1.67 to 2.04)	
Quality of Life (Bonell 2015)	The mean quality of life in the intervention groups was 2.18 lower (6 lower to 1.64 higher)	168 (1 study)	⊕⊕⊕⊖ moderate ²	MD 2.18 (-6.0 to 1.64)	
School climate - With parent component (Ferrer-Cascales 2019)	The mean school climate - with parent component in the intervention groups was 0.91 higher (0.02 to 1.80 higher)	438 (1 study)	⊕⊕⊕⊖ moderate ⁴	MD 0.91 (0.02 to 1.80)	
School climate - Without parent component (Bonell 2015)	The mean school climate - without parent component in the intervention groups was 0.15 higher (0.02 to 0.28 higher)	168 (1 study)	⊕⊕⊕⊕ high	MD 0.15 (0.02 to 0.28)	
School exclusion (Bonell 2015)	Study population	RR 0.97 (0.61 to 1.56)	1017 (1 study)	⊕⊕⊕⊖ moderate ²	
	65 per 1000				63 per 1000 (40 to 101)
	Moderate				63 per 1000 (40 to 101)
Truancy (Bonell 2015)	Study population	RR 1.11 (0.76 to 1.6)	1017 (1 study)	⊕⊕⊕⊖ moderate ²	
	94 per 1000				105 per 1000 (72 to 151)
	Moderate				

	94 per 1000	104 per 1000 (71 to 150)			
Perpetration (Bullying, NRCT) - Whole sample (Trial 1) (Palladino 2016a)		The mean perpetration (bullying, nrct) - whole sample (trial 1) in the intervention groups was 0 higher (0.02 lower to 0.03 higher)	440 (1 study ⁵)	⊕⊕⊕⊕ very low ^{2,6}	MD 0.0 (0.02 to 0.03)
Perpetration (Bullying, NRCT) - Male subgroup (Trial 2) (Palladino 2016b)		The mean perpetration (bullying, nrct) - male subgroup (trial 2) in the intervention groups was 0.06 lower (0.08 to 0.04 lower)	240 (1 study ⁵)	⊕⊕⊕⊕ low ⁶	MD -0.06 (-0.08 to -0.04)
Perpetration (Bullying, NRCT) - Female subgroup (Trial 2) (Palladino 2016b)		The mean perpetration (bullying, nrct) - female subgroup (trial 2) in the intervention groups was 0.02 lower (0.04 lower to 0 higher)	221 (1 study ⁵)	⊕⊕⊕⊕ low ⁶	MD -0.02 (-0.04 to 0.0)
Victimisation (bullying, NRCT) - Whole sample (Trial 1) (Palladino 2016a)		The mean victimisation (bullying, nrct) - whole sample (trial 1) in the intervention groups was 0.03 lower (0.06 to 0.01 lower)	450 (1 study ⁵)	⊕⊕⊕⊕ low ⁶	MD -0.03 (-0.06 to -0.01)
Victimisation (bullying, NRCT) - Male subgroup (Trial 2) (Palladino 2016b)		The mean victimisation (bullying, nrct) - male subgroup (trial 2) in the intervention groups was 0.03 lower (0.05 to 0.01 lower)	240 (1 study ⁵)	⊕⊕⊕⊕ low ⁶	MD -0.03 (-0.05 to -0.01)
Victimisation (bullying, NRCT) - Female subgroup (Trial 2) (Palladino 2016b)		The mean victimisation (bullying, nrct) - female subgroup (trial 2) in the intervention groups was 0.03 lower (0.06 to 0.01 lower)	221 (1 study ⁵)	⊕⊕⊕⊕ low ⁶	MD -0.03 (-0.06 to -0.01)
Cyberbullying (NRCT) - Whole sample (Trial 1) (Palladino 2016a)		The mean cyberbullying (nrct) - whole sample (trial 1) in the intervention groups was 0.03 lower (0.06 to 0.01 lower)	433 (1 study ⁵)	⊕⊕⊕⊕ low ⁶	MD -0.03 (-0.06 to -0.01)
Cyberbullying (NRCT) - Male subgroup (Trial 2) (Palladino 2016b)		The mean cyberbullying (nrct) - male subgroup (trial 2) in the intervention groups was 0.03 lower (0.04 to 0.02 lower)	240 (1 study ⁵)	⊕⊕⊕⊕ low ⁶	MD -0.03 (-0.04 to -0.02)
Cyberbullying (NRCT) - Female subgroup (Trial 2) (Palladino 2016b)		The mean cyberbullying (nrct) - female subgroup (trial 2) in the intervention groups was	221 (1 study ⁵)	⊕⊕⊕⊕ low ⁶	MD -0.02 (-0.02 to -0.01)

		0.02 lower (0.02 to 0.01 lower)			
Cyberbullying victimisation (NRCT) - Whole sample (Trial 1) (Palladino 2016a)		The mean cyberbullying victimisation (nrct) - whole sample (trial 1) in the intervention groups was 0.03 lower (0.05 to 0.01 lower)	431 (1 study ⁵)	⊕⊕⊕⊖ low ⁶	MD -0.03 (-0.05 to -0.01)
Cyberbullying victimisation (NRCT) - Male subgroup (Trial 2) (Palladino 2016b)		The mean cyberbullying victimisation (nrct) - male subgroup (trial 2) in the intervention groups was 0.03 lower (0.04 to 0.01 lower)	240 (1 study ⁵)	⊕⊕⊕⊖ low ⁶	MD -0.03 (-0.04 to -0.01)
Cyberbullying victimisation (NRCT) - Female subgroup (Trial 2) (Palladino 2016b)		The mean cyberbullying victimisation (nrct) - female subgroup (trial 2) in the intervention groups was 0 higher (0.02 lower to 0.02 higher)	221 (1 study ⁵)	⊕⊖⊖⊖ very low ^{2,6}	MD 0.0 (-0.02 to 0.02)

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio;

GRADE Working Group grades of evidence

High quality: Further research is very unlikely to change our confidence in the estimate of effect.

Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.

Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

Very low quality: We are very uncertain about the estimate.

¹ Some concerns identified in the risk of bias assessments

² 95% CI crosses line of no effect

³ No information on whether participants were aware of intervention allocation where self-reported outcomes were used

⁴ At least one study reported high levels of attrition

⁵ NRCT

⁶ Serious concerns identified in the risk of bias assessment. Study design was NRCT and was downgraded for methodological concerns.

WSA Bullying (curriculum plus targeted) compared to usual for social, emotional and mental wellbeing

Patient or population: patients with social, emotional and mental wellbeing

Settings: Secondary education

Intervention: WSA Bullying (curriculum plus targeted)

Comparison: usual

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				

	Usual	WSA Bullying (curriculum plus targeted)				
Bullying perpetration (secondary school) (Karna 2013, Nocentini 2016)		The mean bullying perpetration (secondary school) in the intervention groups was 0.1 standard deviations lower (0.18 to 0.02 lower)		2298 (2 studies)	⊕⊕⊖⊖ low ¹	SMD -0.1 (-0.18 to -0.02)
Bullying victimisation (secondary school) (Karna 2013, Nocentini 2016)		The mean bullying victimisation in the intervention groups was 0.08 standard deviations lower (0.29 lower to 0.13 higher)		2298 (2 studies)	⊕⊖⊖⊖ very low ^{1,2,3}	SMD -0.08 (-0.29 to 0.13)
Assertiveness, self reported (secondary school) (Acosta 2019)		The mean assertiveness, self reported in the intervention groups was 0.17 standard deviations higher (0.92 lower to 1.26 higher) ¹⁵		2771 (1 study)	⊕⊕⊕⊖ moderate ^{4,7}	SMD 0.51 (-0.9 to 1.26)
Empathy, self-reported (secondary school) (Acosta 2019)		The mean empathy, self-reported in the intervention groups was 0.51 standard deviations higher (0.62 lower to 1.61 higher) ¹⁵		2771 (1 study)	⊕⊕⊕⊖ moderate ^{4,7}	SMD 0.51 (-0.62 to 1.61)
Physical bullying (secondary school) (Acosta 2019)		Event data not available	OR 1.18 (0.72 to 1.93)	2771 (1 study)	⊕⊕⊖⊖ low ^{4,16}	
Emotional bullying (secondary school) (Acosta 2019)		Event data not available	OR 1.06 (0.75 to 1.51)	2771 (1 study)	⊕⊕⊖⊖ low ^{4,16}	
Cyberbullying (secondary school) (Acosta 2019)		Event data not available	OR 0.89 (0.5 to 1.59)	2771 (1 study)	⊕⊕⊖⊖ low ^{4,16}	
School climate (secondary school) (Acosta 2019)		The mean school climate in the intervention groups was 0.64 standard deviations higher (0.5 lower to 1.75 higher)		2771 (1 study)	⊕⊕⊕⊖ moderate ^{4,7}	SMD 0.64 (-0.5 to 1.75)
Cyberbullying victimisation Subgroup: Cyber victims (del Rey 2016)		Event data not available	Reported as significant	188 (1 study)	⊕⊖⊖⊖ very low ^{4,5}	

Cyberbullying victimisation Subgroup: Cyber bullies/victims (del Rey 2016)	Event data not available	Reported as significant	159 (1 study)	⊕⊕⊕⊕ very low ^{4,5}
Cyberbullying aggression Subgroup: Cyber bullies (del Rey 2016)	Event data not available	Reported as non-significant	62 (1 study)	⊕⊕⊕⊕ very low ^{4,5}
Cyberbullying aggression Subgroup: Cyber bullies/victims (del Rey 2016)	Event data not available	Reported as significant	159 (1 study)	⊕⊕⊕⊕ very low ^{4,5}

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval;

GRADE Working Group grades of evidence

High quality: Further research is very unlikely to change our confidence in the estimate of effect.

Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.

Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

Very low quality: We are very uncertain about the estimate.

¹ Not clear if the participants were aware of the intervention allocation. One study included 31 schools that were not randomised to the intervention.

² I² > 50%

³ 95% CI crosses line of no effect

⁴ Not clear if outcome assessors (participants) were aware of intervention allocation where self-reported outcomes were used. No information on accounting for confounding variables

⁵ Standard deviation not reported so not possible to calculate 95% CI

1

WSA Bullying (no curriculum) compared to usual practice for social, emotional and mental wellbeing

Patient or population: patients with social, emotional and mental wellbeing

Settings: Secondary education

Intervention: WSA Bullying (no curriculum)

Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk Usual practice	Corresponding risk WSA Bullying (no curriculum)				
Conduct problems (Smolkowski 2017)		The mean conduct problems in the intervention groups was 0.01 lower (0.03 lower to 0.01 higher)		8732 (1 study)	⊕⊕⊕⊕ low ^{1,2}	MD -0.01 (-0.03 to 0.01)
Family conflict (Smolkowski 2017)		The mean family conflict in the intervention groups was 0.09 lower (0.15 to 0.03 lower)		9114 (1 study)	⊕⊕⊕⊕ moderate ¹	MD -0.09 (-0.15 to -0.03)

Emotional problems (Smolkowski 2017)	The mean emotional problems in the intervention groups was 0.01 lower (0.03 lower to 0.01 higher)	8746 (1 study)	⊕⊕⊕⊖ low ^{1,2}	MD -0.01 (-0.03 to 0.01)
Academic outcomes – Maths (Smolkowski 2017)	The mean academic outcomes - maths in the intervention groups was 0.4 higher (0.17 lower to 0.97 higher)	8748 (1 study)	⊕⊕⊕⊖ low ^{1,2}	MD 0.4 (-0.17 to 0.97)
Academic outcomes – Reading (Smolkowski 2017)	The mean academic outcomes - reading in the intervention groups was 0.3 higher (0.21 lower to 0.81 higher)	8710 (1 study)	⊕⊕⊕⊖ low ^{1,2}	MD 0.3 (-0.21 to 0.81)
Days absent (Smolkowski 2017)	The mean days absent in the intervention groups was 0.27 higher (0.1 lower to 0.64 higher)	8978 (1 study)	⊕⊕⊕⊖ low ^{1,2}	MD 0.27 (0.1 to 0.64)

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval;

GRADE Working Group grades of evidence

High quality: Further research is very unlikely to change our confidence in the estimate of effect.

Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.

Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

Very low quality: We are very uncertain about the estimate.

¹ Not clear if participants were aware of intervention allocation

² 95% CI crosses line of no effect

1
2

WSA Social emotional skills compared to usual for social, emotional and mental wellbeing

Patient or population: patients with social, emotional and mental wellbeing

Settings: Secondary education

Intervention: WSA Social emotional skills

Comparison: usual

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk Usual	Corresponding risk WSA Social emotional skills				
Social and emotional skills (NRCT) (Wigelsworth 2012)		The mean social and emotional skills (nrct) in the intervention groups was 0.51 higher (0.05 lower to 1.07 higher)		3306 (1 study)	⊕⊕⊕⊖ low ^{1,2}	MD 0.51 (-0.05 to 1.07)

SDQ total difficulties (NRCT) (Wigelsworth 2012)	The mean sdq total difficulties (nrct) in the intervention groups was 0.55 lower (0.89 to 0.21 lower)	4459 (1 study)	⊕⊕⊕⊕ moderate ¹	MD -0.55 (-0.89 to -0.21)
SDQ prosocial (NRCT) (Wigelsworth 2012)	The mean sdq prosocial (nrct) in the intervention groups was 0.01 lower (0.12 lower to 0.1 higher)	4506 (1 study)	⊕⊕⊕⊖ low ^{1,2}	MD -0.03 (-0.06 to -0.01)

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval;

GRADE Working Group grades of evidence

High quality: Further research is very unlikely to change our confidence in the estimate of effect.

Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.

Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

Very low quality: We are very uncertain about the estimate.

¹ Participants were aware of intervention allocation. Study design was NRCT and was downgraded for methodological concerns.

² 95% CI crosses line of no effect

1

WSA Promote MH (curriculum) compared to usual for social, emotional and mental wellbeing

Patient or population: patients with social, emotional and mental wellbeing

Settings: Secondary education

Intervention: WSA Promote MH (curriculum)

Comparison: usual

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk Usual	Corresponding risk WSA Promote MH (curriculum)				
Mental Health (Larsen 2019)		The mean mental health in the intervention groups was 0.01 lower (0.15 lower to 0.13 higher)		559 (1 study)	⊕⊕⊕⊖ low ^{1,2}	MD -0.01 (-0.15 to 0.13)
Loneliness (Larsen 2019)		The mean loneliness in the intervention groups was 0.03 lower (0.17 lower to 0.11 higher)		559 (1 study)	⊕⊕⊕⊖ low ^{1,2}	MD -0.03 (-0.17 to 0.11)

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval;

GRADE Working Group grades of evidence

High quality: Further research is very unlikely to change our confidence in the estimate of effect.

Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
Very low quality: We are very uncertain about the estimate.

¹ Not clear if participants were aware of intervention allocation

² 95% CI crosses line of no effect

1

WSA Promote MH (curriculum plus targeted) compared to usual for social, emotional and mental wellbeing

Patient or population: patients with social, emotional and mental wellbeing

Settings: Secondary education

Intervention: WSA Promote MH (curriculum plus targeted)

Comparison: usual

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Usual	WSA Promote MH (curriculum plus targeted)				
Mental Health (Larsen 2019)		The mean mental health in the intervention groups was 0.11 lower (0.25 lower to 0.03 higher)		592 (1 study)	⊕⊕⊖⊖ low ^{1,2}	MD -0.11 (-0.25 to 0.03)
Loneliness (Larsen 2019)		The mean loneliness in the intervention groups was 0.08 lower (0.21 lower to 0.05 higher)		592 (1 study)	⊕⊕⊖⊖ low ^{1,2}	MD -0.08 (-0.21 to 0.05)

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval;

GRADE Working Group grades of evidence

High quality: Further research is very unlikely to change our confidence in the estimate of effect.

Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.

Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

Very low quality: We are very uncertain about the estimate.

¹ Not clear if participants were aware of intervention allocation

² 95% CI crosses line of no effect

2

3

4

See [Appendix F](#) for full GRADE tables.

1

1

2 **2.1.7 Economic evidence**

3

4 A guideline wide search of published cost-effectiveness evidence was carried out for review
5 questions 1.1, 3.1, 4.1, 5.1 and 6.1. There were no eligible studies for RQ 4.1 or 6.1.

6 **2.1.7.1 Included studies**

7 3504 records were assessed against eligibility criteria.

8 3433 records were excluded based on information in the title and abstract. Two reviewers
9 assessed all the records. The level of agreement between the two reviewers was 100%.

10 The full-text papers of 71 documents were retrieved and assessed. 15 papers were
11 assessed as meeting the eligibility criteria. However, this accounted for 13 distinct studies
12 since some papers used the same underlying data. For RQ 1.1b, 3 studies (3 papers) were
13 included. In addition, the economic model produced for the previous guideline (PH20) was
14 included in the economic evidence for completeness. However, this was not identified in the
15 guideline wide search and therefore was not included in the study selection process.

16 Two reviewers assessed all full-text papers. The level of agreement between the two
17 reviewers was 100%.

18 The study selection process can be found in [Appendix G](#) and economic evidence tables
19 found in [Appendix H](#).

20 **2.1.7.2 Excluded studies**

21 56 full text documents were excluded for this guideline. The documents and the reasons for
22 their exclusion are listed in [Appendix J – Excluded studies](#).

1 **2.1.8 Summary of included economic evidence**

2

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
Beckman (2015) The Olweus Bullying Prevention Program (OBPP), a whole-school approach to reduce and prevent bullying vs. no intervention i.e. usual practice	Potentially serious limitations ^a	Partly applicable ^b	The study conducted cost-effectiveness analysis using a decision tree model for a hypothetical Swedish secondary school, using a public payer perspective and 3-year time horizon. The outcome was the number of victim-free years of bullying. All inputs were sourced from published literature. The estimated societal willingness to pay to spare one victim of bullying was 585,000 SEK based on published literature (1 study).	Incremental intervention costs per person ^c; SEK: OBPP vs. no intervention 4,079 (£392 GBP 2020 ^e)	Incremental victim free years per person: OBPP vs. no intervention 0.03	ICER ^d; SEK (€): OBPP vs. no intervention 131,250 (£12,613 GBP 2020 ^e) (14,470) per spared victim of bullying The net monetary benefit was positive (value not reported).	Deterministic sensitivity analysis was conducted for annual proportion of exposure to bullying, relative risk reduction OBPP and total cost of OBPP. Changes to relative risk reduction had the largest effect on the ICER. However, all ICERs were still below the 585,000 SEK threshold. (£56,196 GBP 2020 ^e) In probabilistic sensitivity analysis, there was a 97% probability that OBPP was cost-effective at the 585,000 SEK threshold.

Abbreviations: ICER: incremental cost-effectiveness ratio; OBPP: Olweus Bullying Prevention Program

a. The study only considers short-term cost and effects. The estimate for the efficacy of the OBPP in reducing the risk of being a victim of bullying was derived from a relatively small quasi-experimental study.

b. The intervention considered is relevant to the UK context, but caution is required when transferring the results of the study given the difference in prices and healthcare systems between the UK and the Sweden.

c. The no intervention group were assumed to have no costs since only intervention costs were considered.

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
d. It is assumed that incremental costs and effects are rounded. Hence, the incremental costs divided by the incremental effects do not give the exact ICER reported.							
e. Converted by the reviewer using historical exchange rates and PSSRU inflation indices.							

1

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
Legood (2021) Cost-utility analysis of a complex intervention to reduce school-based bullying and aggression: an analysis of the Inclusive RCT ^a	Minor limitations ^b	Directly applicable	An economic evaluation was conducted using data from the Inclusive trial, a randomised control trial carried out in 40 state secondary schools in the South East of England. The time horizon was 3 years, and the analysis was carried out from a public health perspective. The primary outcome was QALYs ^c .	Incremental total costs at 3 years ^d; mean GB £: Unadjusted 46 Adjusted 28	Incremental total QALYs ^{d, e} at 3 years; mean (95% CI): Unadjusted 0.0240 (-0.0097 to 0.0578) Adjusted 0.0148 (-0.0057 to 0.0353)	ICER per QALY gained at year 3 ^f; £: Unadjusted 1,905 Adjusted 1,875	A cost-effectiveness acceptability curve showed that at 3 years there was a 90% probability that the intervention was cost-effective at a WTP threshold of £20,000 per QALY gained. Further sensitivity analyses (excluding teacher time training, inclusion of NHS costs and inclusion of police costs) had little impact on the results Participants in the intervention arm spent more nights in hospital related to accident or injury than participants in the control arm (24

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
							months: 1.03 and 0.59 respectively; 24-36 months: 0.57 and 0.30 respectively). However, it is not known whether these hospital stays were directly related to bullying
<p><i>Abbreviations: CHU-9D: Childhood Utility Index-9 Dimensions; EQ-5D: EuroQol-5 Dimensions; GB: Great Britain; ICER: incremental cost-effectiveness ratio; QALY: quality-adjusted life year; RCT: randomised controlled trial; SD: standard deviation; WTP: willingness to pay</i></p>							
<p>a. The Inclusive trial assessed the Learning Together intervention versus current service provision. The purpose of the Learning Together intervention was to involve students in efforts to modify their school environment using restorative approaches, student participation in policy, and a social and emotional skills classroom curriculum.</p>							
<p>b. Main limitations identified by authors were: (i) that confidence intervals around QALYs were wide, reflecting the small difference in utility values between the two trial arms and (ii) not known whether control schools were implementing any anti-bullying interventions, so it was not possible to cost any such interventions (leading to potentially conservative results). The authors highlight that causal links between the effect of the intervention on overnight hospital stays is unclear. The reviewer considers that this limitation holds for all reported health and police resource use. The reviewer also highlights that the data used to calculate QALYs were collected using the CHU-9D questionnaire rather than the EQ-5D questionnaire (NICE reference case).</p>							
<p>c. The data used to calculate QALYs were collected using the CHU-9D questionnaire rather than the EQ-5D questionnaire (NICE reference case).</p>							
<p>d. The underlying costs and effects reported for the intervention and control could not be used to calculate the incremental costs and effects i.e. intervention minus control did not give the incremental difference reported.</p>							
<p>e. The outcome measure for this school-based intervention was improvements in health-related quality of life; it is unclear whether school managers would consider this intervention to be within their remit or budget.</p>							
<p>f. It is assumed that incremental costs and effects are rounded. Hence, the incremental costs divided by the incremental effects do not give the exact ICER reported.</p>							

1

2 The data extraction tables for Hummel (2009), the economic model produced for the previous guideline, and Persson (2018) are as reported in
3 Section **Error! Reference source not found.**

1 **2.1.9 Economic model**

2 A bespoke economic model was developed to explore the costs and consequences of an
3 intervention, or combination of interventions, that promote social, emotional and mental
4 wellbeing in children and young people in primary and secondary education. It covers more
5 than 1 evidence review in the guideline so the full write up is contained in a separate
6 document ([Evidence Review J](#)) rather than appendix I.

7 The data extraction table is as reported in Section **Error! Reference source not found.**

8

9

10

11 **2.1.10 Economic evidence statements**

12

13 ***Economic evidence statements***

14

15 • Beckham (2015) found that the Olweus Bullying Prevention Program (OBPP) was cost-
16 effective at reducing and preventing bullying compared with no intervention at a relevant
17 threshold of the societal value of bullying reduction. The study conducted cost-
18 effectiveness analysis using a decision tree for a hypothetical Swedish secondary school,
19 using a public payer perspective and 3-year time horizon. The analysis showed an ICER
20 of 131,250 SEK (£12,613 GBP 2020) (€14,470) per spared victim of bullying. The study
21 used an estimated societal willingness to pay for one spared victim of bullying of 585,000
22 SEK (£56,196 GBP 2020) based on published literature (1 study). In probabilistic
23 sensitivity analysis, there was a 97% that OBPP was cost-effective at the 585,000 SEK
24 threshold. The author noted that the study only considered short-term cost and effects and
25 the estimate for the efficacy of the OBPP in reducing the risk of being a victim of bullying
26 were derived from a relatively small quasi-experimental study. The analysis was assessed
27 as partly applicable to the review question, with potentially serious limitations.

28

29 • Hummel (2009) found that an intervention to prevent bullying victimisation was cost-
30 effective compared with no intervention. At a WTP threshold of £20,000 per QALY
31 gained there was an 82% probability that the intervention was cost-effective. The estimate
32 of the effectiveness of an anti-bullying intervention is based on very limited evidence, and
33 estimates of victimisation prevalence are highly variable. A sensitivity analysis on these
34 two key parameters show that for a costeffectiveness threshold of £20,000 an intervention
35 which is 5% effective in reducing victimisation is only cost-effective if initial victimisation
36 prevalence is greater than 35%, whereas an intervention that is 20% effective is cost-
37 effective with victimisation prevalence greater than 10%.

38

39 • Legood (2021) found that the Learning Together (LT) intervention was cost-effective
40 compared with current service provision. Results from a cost-utility analysis showed that,
41 over a 3-year time horizon, and from a public sector perspective, the LT intervention
42 delivered more QALYs at a higher cost. A cost-effectiveness acceptability curve showed
43 that at 3 years, compared with current service provision, there was a 90% probability that
44 the intervention was cost-effective at a WTP threshold of £20,000 per QALY gained.
45 Sensitivity analyses (excluding teacher time training, including of NHS costs and including
46 of police costs) had little impact on the results. The authors observed that confidence
47 intervals around incremental QALY estimates (at 2 and 3 years) were wide, reflecting the
48 small difference in utility values between the two trial arms. The data used to calculate
49 QALYs were collected using the CHU-9D questionnaire rather than the EQ-5D

- 1 questionnaire (NICE reference case). The authors suggested that the time horizon may
2 not have been long enough to capture all the benefits of the intervention. The outcome
3 measure for this school-based intervention was improvements in health-related quality of
4 life; it is unclear whether school managers would consider this intervention to be within
5 their remit or budget. The analysis was assessed as being directly applicable to the review
6 question, with minor limitations.
7
- 8 • Persson (2018) found that the KiVa program for bullying prevention was cost-effective
9 compared with usual practice at a threshold of 500,000 SEK (£47,532 GBP 2020) per
10 QALY. The study conducted cost-effectiveness analysis using a Markov model with a 9-
11 year time horizon and using a payer perspective. The analysis showed an ICER of
12 131,321 SEK (12,484 GBP 2020) (€13,823) per QALY gained and 7,789 (€829) (£740
13 GBP 2020) SEK per victim free year. At a threshold of 500,000 SEK per QALY (€52,632),
14 the probability that KiVa was cost-effective was close to 100%. At a threshold of 100,000
15 SEK per QALY (£9,506 GBP 2020) (€10,526) and 200,000 SEK per QALY (£19,012 GBP
16 2020) (€21,053), the probability that KiVa was cost-effective was 68% and 96%,
17 respectively. The author noted that the study only considered short-term cost and effects
18 and that there was limited data on the effectiveness of the KiVa program. The analysis
19 was assessed as partly applicable to the review question, with minor limitations.
20
 - 21 • Coote (2021) aimed to quantify the costs and effectiveness, and hence the impact, of
22 introducing a range of mental health and wellbeing interventions. The large range of
23 interventions on offer and the circumstances in which an intervention is implemented
24 made it difficult to draw robust conclusions regarding the effectiveness of an intervention
25 and the economic impact.

3 Acceptability of whole-school approaches

3.1 Review question

Are whole-school approach interventions to promote the social, emotional and mental wellbeing of children and young people acceptable to

- children and young people,
- their parents or carers
- the teacher and professionals delivering the interventions

3.1.1 Introduction

Social and emotional skills are key during children and young people's development and may help to achieve positive outcomes in health, wellbeing and future success. Whole-school approaches aim to nurture these skills at the individual level in the classroom and at the school level through the school environment, policies and community.

3.1.2 Summary of the protocol

Table 9: PICOS Table

Population	<ul style="list-style-type: none"> • Children (including those with SEND) in UK key stages 1 and 2 or equivalent (usually ages 5-11 years of age) • Children and young people (including those with SEND) in UK key stages 3 to 4 in secondary education • Young people in post-16 education (further education) <ul style="list-style-type: none"> ○ up to the age of 18 for young people without SEND ○ up to the age of 25 for young people with SEND • Teachers/practitioners delivering the interventions • Parents/Carers of children and young people receiving the interventions
Intervention	<p>Whole school-led approaches to social, emotional and mental wellbeing with a combination of at least two of the following principles / components / aspects:</p> <ul style="list-style-type: none"> • Promote mental/ physical health across the curriculum • Ethos and environment • Working with parents/carers and community • Leadership and management • Student voice • Staff development • Identifying need and monitoring impact of interventions • Targeted support
Comparator	Not applicable
Outcomes	<p>Views and experiences in terms of acceptability (of the interventions) and barriers and facilitators (to the implementation of interventions) of:</p> <ul style="list-style-type: none"> • teachers and practitioners delivering interventions • children and young people receiving interventions.

	<ul style="list-style-type: none">• parents/carers of children and young people receiving the interventions
Study type	Qualitative studies and surveys

1 For full protocol see Appendix A.

2 **3.1.3 Methods and process**

3 This evidence review was developed using the methods and process described in
4 [Developing NICE guidelines: the manual and in the methods chapter](#). Methods specific to
5 this review question are described in the review protocol in [Error! Reference source not
6 found..](#)

7 Declarations of interest were recorded according to [NICE's conflicts of interest policy](#).

8 **3.1.4 Qualitative evidence**

9 **3.1.4.1 Included studies**

10 In total 47,322 references were identified through systematic searches. Of these, 246
11 references were considered relevant, based on title and abstract, to the protocols for whole-
12 school approach interventions and were ordered. A total of 45 references were included and
13 204 references were excluded.

14 The 45 references incorporated 28 studies. 5 of these were qualitative studies. Of these, 3
15 studies provided qualitative data on acceptability from secondary school settings. There was
16 no qualitative data from primary school settings. See summary of studies (Table 10) included
17 in this review. See [Appendix D](#) for full evidence tables.

18 **3.1.4.2 Excluded studies**

19 See [Appendix J](#) for full list of excluded studies.

20

3.1.5 Summary of studies included in the qualitative evidence

Table 10: Summary of qualitative studies identified for whole school approaches

Study [Country]	Setting	Informants (N)	Intervention	Method	Themes in study
Hampton 2010 [UK]	Primary and secondary schools	<ul style="list-style-type: none"> • Students • Teachers (N= 149) 	<ul style="list-style-type: none"> • Rtime • Promote positive relationships for learning through short (10-15 minute) activities 	Thematic analysis	<ul style="list-style-type: none"> • Impact of Rtime • How successful was Rtime? • Most useful aspects of Rtime
Humphrey 2010 [UK]	Secondary schools	<ul style="list-style-type: none"> • Students • Teachers • SEAL Lead • Local authority (N= NR) 	<ul style="list-style-type: none"> • SEAL • Supports social and emotional development through the whole-school approach and direct and explicit teaching of social and emotional skills 	Thematic analysis	<ul style="list-style-type: none"> • Securing the vision • Leadership, management and managing change • Policy development • Curriculum planning and resourcing • Teaching and learning • Giving pupils a voice • Provision of support services for pupils • Staff CPD, health and welfare • Partnerships with parents, carers and the community • Assessing, recording and reporting feedback • School culture and environment • Preplanning and foundations • Implementation support system • Implementation environment • Implementer factors

Study [Country]	Setting	Informants (N)	Intervention	Method	Themes in study
Wolpert 2013 [UK]	Secondary schools	<ul style="list-style-type: none"> • TaMHS workers • School staff • Pupils • Parents (N= 132)	Prevent poor mental health through a multi-tiered whole-school approach	Not described	<ul style="list-style-type: none"> • Programme characteristics • Factors that facilitated success • Parent acceptability • Pupil acceptability

1 See Appendix D for full evidence tables.

2 **3.1.6 Summary of the qualitative evidence**

3 **Table 11: Summary of themes**

Theme	Brief findings
Implementation of whole school approaches	<ul style="list-style-type: none"> • Vision for the intervention • Expectations of the intervention
Curriculum materials	<ul style="list-style-type: none"> • Acceptability of the programme • Acceptability of the materials
Curriculum integration	<ul style="list-style-type: none"> • Integration into lessons • Integration into the timetable
Ethos and environment	<ul style="list-style-type: none"> • Relationships • School climate
Targeted support approaches	<ul style="list-style-type: none"> • Targeted support approaches
Access to targeted support	<ul style="list-style-type: none"> • Access to targeted support
Parents/carers	<ul style="list-style-type: none"> • Parent involvement • Parent acceptability
Student voice opportunity	<ul style="list-style-type: none"> • Student voice opportunity
Staff development opportunity	<ul style="list-style-type: none"> • Staff development opportunity
Leadership and management	<ul style="list-style-type: none"> • School buy-in • Policy

1

2 **Table 12: Summary of qualitative findings**

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
<p>Implementation of whole school approaches</p> <p>Vision for the intervention In many schools, the vision for SEAL emerged implicitly but there were some cases where explicit efforts were made to ensure that all staff contributed to this vision. The analysis of this data showed that there were a wide range of expectations for SEAL and considerable variability within schools as well as between schools. The authors concluded that there was a limited shared understanding and vision for SEAL.</p> <p>Expectations of the intervention Schools expected changes at the pupil level, staff level and school level following implementation of SEAL. For pupils this included improved attendance, reduction in exclusions and improved attainment of social and emotional skills.</p> <p>Staff expectations included improved social and emotional skills, changes in approaches to teaching, better management of pupil behaviour, increased communication and relationships with other members of staff, and increased job satisfaction, enjoyment, morale and attendance. At the school level, there were expectations about enhancing the ethos of the school.</p>	<p>Humphrey 2010 (Implementation of secondary SEAL)</p>	<p>Moderate confidence</p>	<p><i>"During an early staff INSET day, the SEAL working group decided that the best way to facilitate a shared vision of SEAL was for staff to collectively decide what they wanted to achieve through implementation. This was done by small groups developing a picture of a 'model student'. Most staff contributed to the idea and agreed on the same desired outcomes. Discussion then turned to the importance of staff, and a suggestion was made that the same exercise be repeated for a model member of staff"</i> (Field Notes) [Humphrey 2010]</p> <p><i>"I want the pupils to be motivated to do the best for themselves"</i> (SEAL lead) [Humphrey 2010]</p> <p><i>"That's one of my hopes – that in three years time we are seeing a little bit more consideration to others"</i> (Headteacher) [Humphrey 2010]</p> <p><i>"I think the vision is to build upon what we have at the moment"</i> (SEAL Lead) [Humphrey 2010]</p> <p><i>"Happy staff and happy children... because the right atmosphere pervades the school"</i> (SEAL Lead) [Humphrey 2010]</p>

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
<p>Curriculum materials</p> <p>Acceptability of the programme There was evidence that Rtime had a positive impact on children’s perceptions towards developing relationships. However, some children felt because they already knew everyone in the class they had fewer opportunities to make new friends. Teachers appreciated that the impact on the children was evident and they could clearly see the changes that Rtime was bringing about</p> <p>Acceptability of the materials Teachers appreciated that Rtime was easy to use and had pre-prepared resources that required minimum effort to implement. However, they identified the resources that were least useful which seemed to be because they had to be adapted for children of lower abilities or they took time to prepare.</p> <p>Schools responded positively to the guidance and materials relating to the teaching and learning element of SEAL implementation. This is perhaps because it is amongst the most ‘concrete’ and ‘tangible’ aspect of the SEAL programme</p>	<p>Hampton 2010 (Most useful aspects of Rtime)</p> <p>Humphrey 2010 (Teaching and learning)</p>	<p>High confidence</p>	<p><i>"It tells you how to work with people you don't know how to work with." (Primary student) [Hampton 2010]</i></p> <p><i>"Me and [child] weren't really friends before but now after doing Rtime we are." (Primary student) [Hampton 2010]</i></p> <p><i>"Some activities have been replaced by other activities deemed more appropriate." [Rtime lead teacher] [Hampton 2010]</i></p> <p><i>'Some resources take a little long to prepare.' [Rtime lead teacher] [Hampton 2010]</i></p> <p><i>"Sometimes I will look and think 'I can pretty much take that straight from there'" (Teacher). [Hampton 2010]</i></p>
<p>Curriculum integration</p> <p>Integration into lessons The integration of SEAL into the curriculum varied across school with some concerns around the extent to which it had actually been implemented. SEAL was most commonly implemented in English or Drama but</p>	<p>Humphrey 2010 (Curriculum planning and resourcing)</p>	<p>Moderate confidence</p>	<p><i>"What I could produce and show you would be... the whole of the Year seven schemes of work, areas of study for all the subjects and how they've fitted in and jiggged things around to meet the themes that we're teaching in SEAL. The reality of that – I am honestly not sure if it is happening in reality" (SEAL Lead). [Humphrey 2010]</i></p>

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
<p>less so in the more rationalist subjects such as Maths and Science.</p> <p>Some teachers described not having the necessary time to adapt lessons to accommodate SEAL objectives. There were also some examples of SEAL being integrated into lessons successfully.</p> <p>Integration into the timetable</p> <p>There were differences in how SEAL was delivered across schools. Discrete opportunities for learning social and emotional skills were presented as regular or occasional ‘SEAL lessons’, regular or occasional specific learning opportunities within other lessons (e.g. PSHE), ad-hoc use of SEAL materials, SEAL assemblies, and SEAL-themed days or weeks. There were both positive and negative opinions of the approaches</p>			<p><i>“I don’t feel that we can have a SEAL objective for a lesson... there’s just no way. You’d end up having about ten objectives on the board. It’s got to be manageable” (Teacher). [Humphrey 2010]</i></p> <p><i>“History lesson: Year seven. Learning objectives included: “To empathize with the villagers of Eyam; and “To understand my emotional reaction to situations” (Field Notes) [Humphrey 2010]</i></p> <p><i>““They have made provision for one hour a week in their timetable to do SEAL which... if you’re looking at the philosophy and any implementation and model for SEAL, that’s exactly what you don’t really want. You don’t want it as a bolt-on....” (Local authority) [Humphrey 2010]</i></p> <p><i>“What we definitely don’t want is to be a lesson... of SEAL because the... youngsters and the staff universally value least those subjects as they get older... We needed to have SEAL as something different than ‘Here’s an hour of SEAL’ – that would have just killed it to be honest” (Headteacher) [Humphrey 2010]</i></p>
<p>Ethos and environment</p> <p>Relationships</p> <p>Rtime lead teachers reported a positive impact on the relationships and friendships of children and on the perception of bullying. Teachers reported staff relationships were generally positive and reflected a sense of community after the implementation of SEAL. However, they were concerned about pupils’ relationships for one another.</p>	<p>Hampton 2010 (Impact of Rtime; How successful was Rtime)</p> <p>Humphrey 2010 (School culture and environment)</p>	<p>Moderate confidence</p>	<p><i>“Random pairing has made a positive impact upon friendship groups.” [Rtime lead teacher] [Hampton 2010]</i></p> <p><i>“Children much more caring towards others.” [Rtime lead teacher] [Hampton 2010]</i></p> <p><i>“Manners, collaboration, willingness to work with a variety of pupils.” [Rtime lead teacher] [Hampton 2010]</i></p>

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
<p>School climate</p> <p>Teachers responded that Rtime made a positive impact on classes using the programme. Schools implementing SEAL felt that they had the necessary culture to allow SEAL to develop as intended. The presence of SEAL could be seen through wall charts and displays across all schools, even during early visits.</p>			<p><i>“The great difficulty... it’s not particularly their behaviour towards their teacher, it’s their behaviour towards each other” (Teacher) [Humphrey 2010]</i></p> <p><i>“Finally getting the class to work and cooperate.” [Rtime lead teacher] [Hampton 2010]</i></p> <p><i>“We’ve always had a great pastoral rapport with the kids... our strength is that our staff care passionately about the children” (Teaching Assistant) [Humphrey 2010]</i></p>
<p>Targeted support approaches</p> <p>Mentoring was the most commonly utilised method adopted by the school including more informal types of mentoring. These were typically in line with SEAL aims and objectives and often delivered on a ‘drop in basis’.</p>	Humphrey 2010 (Provision of support services for pupils)	Moderate confidence	<p><i>“We have learning mentors, we have emotional mentors, we have...people in place for peer mentoring” (Teacher) [Humphrey 2010]</i></p> <p><i>“There’s like a mentor room where if you’re lonely you can go there and Year eights will look after you” (Pupil) [Humphrey 2010]</i></p> <p><i>“If they’re walking on their own then we just go up to them to see they’re alright” (LTS) [Humphrey 2010]</i></p> <p><i>“It makes you like reassured that you know that you can talk to someone if you have a problem” (Pupil) [Humphrey 2010]</i></p> <p><i>“They’re dealing with emotional issues of students, but also behavioural issues as well” (SEAL Lead) [Humphrey 2010]</i></p>
<p>Access to targeted support</p> <p>Most pupils indicated they had access to mental health support in schools, with those with more difficulties having accessed more help. Pupils also showed an</p>	Wolpert 2013	Moderate confidence	<p><i>“Remember it isn’t just for people who are getting bullied it is also for people who want to improve their behaviour.” (Primary pupil) [Wolpert 2013]</i></p>

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
awareness of a range of approaches available in their schools and an appreciation of the ways these could help.			
<p>Parents/carers</p> <p>Parent involvement There was very limited evidence of schools directly involving parents/carers in their SEAL implementation. In some schools, parents were actively cited as a negative influence upon children’s behaviour. Some schools were reluctant to involve parents as they felt that attempts to engage parents would not have been well received. Other schools saw parental involvement as necessary, but had decided to focus first upon pupils and staff, opting to ‘go beyond the school’ at an unspecified future date.</p> <p>Parent acceptability Parents revealed that they regarded schools as the key point of contact for concerns about mental health issues and regarded teachers as the key group to turn to when worried about their child’s mental health. Parents also saw teachers as the persons most helpful in these situations. Parents were generally positive about TaMHS and particularly stressed the importance of good communication in working with schools on mental health issues for their children</p>	<p>Humphrey 2010 (Partnerships with parents, carers and the community)</p> <p>Wolpert 2013 (Parent acceptability)</p>	High confidence	<p><i>“I think some of our parents wouldn’t be that understanding - they would think it would be a direct attack on their parenting skills” (SEAL Lead) [Humphrey 2010]</i></p> <p><i>“I wonder how much some of them are missing out on it at home” (Teacher) [Humphrey 2010]</i></p> <p><i>“We had to be careful because we didn’t want to seem to be patronizing the parents” (SEAL Lead) [Humphrey 2010]</i></p> <p><i>“We haven’t explicitly involved the parents yet to my knowledge... that’s certainly somewhere where we should go next perhaps” (SEAL Lead) [Humphrey 2010]</i></p> <p><i>“I mean every teacher that I’ve spoken to or associate. . . . They seem to have endless amounts of time to talk to you. They never hurry you. It’s lovely.” (Parent) [Wolpert 2013]</i></p>
<p>Student voice opportunity There was clear evidence of pupil voice across all schools involved. However, it was not always clear how much of a voice pupils were given in relation to SEAL as opposed to general matters relating to school development</p>	Humphrey 2010 (Giving pupils a voice)	Moderate confidence	<i>“Making the students part of the process - so giving a student voice I think, very much that. It’s about how we involve students as leaders of learning, rather than having a model that’s...you know, they’re receivers of our wisdom. They are a crucial part of the whole process, so if you get them on board, I think we’re more</i>

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
			<p><i>than half way towards achieving our goals” (Teacher). [Humphrey 2010]</i></p> <p><i>“We’re also going to ask students to do detective walks, you know where they have a sheet with them during the day and not necessarily to spy on staff but make a journal for maybe a day or maybe a week of what SEAL’s discussed during their lessons but they’ll need training for that” (SEAL Lead) [Humphrey 2010]</i></p> <p><i>“Student Voice groups have been consulted on the Attendance Policy and Behaviour Policy, providing views which have influenced decisions on numerous areas, e.g. lunchtime activities and anti-bullying systems” (Document analysis)” [Humphrey 2010]</i></p>
<p>Staff development opportunities Staff in all nine schools engaged in some kind of initial CPD relating to SEAL. In most schools, this training was fairly comprehensive in terms of the range of individuals involved, with both teaching and non-teaching staff present. This initial training session tended to be an INSET session delivered by or with Local Authority consultants. However, more focused, in-depth follow-up training was not given high priority in many schools.</p>	<p>Humphrey 2010 (Staff CPD, health and welfare)</p>	<p>Moderate confidence</p>	<p><i>“I’ve already trained up our cleaners. This term I will be training up our administrative staff and our catering staff” (SEAL Lead) [Humphrey 2010]</i></p> <p><i>“We had a day for staff dedicated to looking at the new curriculum. And what we used our time for was mapping... SEAL learning outcomes against the new Year seven curriculum. I think what that exercise actually did was make people actually focus on what SEAL really is” (SEAL Lead) [Humphrey 2010]</i></p> <p><i>“They have needed training and certainly we delivered an INSET day, and that INSET day was very important. Now I don’t think our staff need any more formal training” (SEAL Lead) [Humphrey 2010]</i></p> <p><i>“I don’t think it needs more training. I just think it needs more time spent encouraging staff” (SEAL Lead) [Humphrey 2010]</i></p>

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
<p>Leadership and management</p> <p>School buy-in SEAL needed to be seen as a school priority embraced by the headteacher and school management team. This was particularly the case for the headteacher role. It was also considered crucial to have the support of the management team to generate any action.</p> <p>Policy Schools varied in their policy development. Some schools did not show evidence of SEAL in any policy but reported intentions to include it at a later date. Other schools provided clear evidence of the integration of SEAL aims, objectives and principles into policy documentation. Some schools also felt that their existing policies were already in line with SEAL principles.</p>	<p>Humphrey 2010 (Leadership, management and managing change; Policy development)</p>	<p>Moderate confidence</p>	<p><i>“It needs to be absolutely from the top otherwise its just not going to work” (Teacher) [Humphrey 2010]</i></p> <p><i>“The people at the top need to know what they want from it really, what they’re expecting... because otherwise its just going to be me standing up in front there. With the best will in the world, no-one’s going to take a lot of notice” (Teacher) [Humphrey 2010]</i></p> <p><i>“None of this is going to work if the head teacher doesn’t secure a vision and actually get it out there to all the staff... and make it as important to all the staff and all the children that this is a SEAL school. If the head isn’t saying it and making sure that everybody goes with it, it’s...not going to happen” (SEAL Lead) [Humphrey 2010]</i></p> <p><i>“Obviously I’m further down [the management chain] and it’s a bit hard to move something when you’re there” (SEAL Lead) [Humphrey 2010]</i></p> <p><i>“Whenever any new policies are coming up or policies are being rewritten, SEAL is being written into them. Its written into job descriptions now... and I think that really if its going to become the ethos, its got to come into those areas as well” (SEAL Lead) [Humphrey 2010]</i></p> <p><i>“Is this something new when we’ve been doing this for years?” (Acting SEAL Lead) [Humphrey 2010]</i></p>

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2 See [Appendix F](#) for full GRADE-CERQual tables.

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3 **3.1.7 Economic evidence**

4 A health economic evidence review was not undertaken due to the qualitative nature of the question.

4 Barriers and facilitators to whole-school approaches

4.1 Review question

What are the barriers and facilitators to using the whole-school approach to promote social, emotional and mental wellbeing in children and young people?

4.1.1 Introduction

Social and emotional skills are key during children and young people's development and may help to achieve positive outcomes in health, wellbeing and future success. Whole-school approaches aim to nurture these skills at the individual level in the classroom and at the school level through the school environment, policies and community.

4.1.2 Summary of the protocol

Table 13: PICOS Table

Population	<ul style="list-style-type: none"> • Children (including those with SEND) in UK key stages 1 and 2 or equivalent (usually ages 5-11 years of age) • Children and young people (including those with SEND) in UK key stages 3 to 4 in secondary education • Young people in post-16 education (further education) <ul style="list-style-type: none"> ○ up to the age of 18 for young people without SEND ○ up to the age of 25 for young people with SEND • Teachers/practitioners delivering the interventions • Parents/Carers of children and young people receiving the interventions
Intervention	<p>Whole school-led approaches to social, emotional and mental wellbeing with a combination of at least two of the following principles / components / aspects:</p> <ul style="list-style-type: none"> • Promote mental/ physical health across the curriculum • Ethos and environment • Working with parents/carers and community • Leadership and management • Student voice • Staff development • Identifying need and monitoring impact of interventions • Targeted support
Comparator	Not applicable
Outcomes	<p>Survey findings e.g. proportion of people reporting on a specific barrier or facilitator</p> <p>Views and experiences in terms of acceptability (of the interventions) and barriers and facilitators (to the implementation of interventions) of:</p> <ul style="list-style-type: none"> • teachers and practitioners delivering interventions • children and young people receiving interventions.

	<ul style="list-style-type: none">• parents/carers of children and young people receiving the interventions
Study type	Qualitative studies and surveys

1 **4.1.3 Methods and process**

2 This evidence review was developed using the methods and process described in
3 [Developing NICE guidelines: the manual and in the methods chapter](#). Methods specific to
4 this review question are described in the review protocol in [Error! Reference source not
5 found..](#)

6 Declarations of interest were recorded according to [NICE's conflicts of interest policy](#).

7 **4.1.4 Qualitative evidence**

8 **4.1.4.1 Included studies**

9 In total 47,322 references were identified through systematic searches. Of these, 246
10 references were considered relevant, based on title and abstract, to the protocols for whole-
11 school approach interventions and were ordered. A total of 45 references were included and
12 204 references were excluded.

13 The 45 references incorporated 28 studies. Of the effectiveness studies, 18 were cluster
14 randomised controlled trials, 5 were non-randomised studies. and 5 were qualitative studies.
15 Of these, 1 study provided qualitative data on barriers and facilitators from primary school
16 settings and 3 studies provided qualitative data from secondary school settings. See
17 summary of studies (Table 14) included in this review. See [Appendix D](#) for full evidence
18 tables.

19 **4.1.4.2 Excluded studies**

20 See [Appendix J](#) for full list of excluded studies.

21

4.1.5 Summary of studies included in the qualitative evidence

Table 14: Summary of qualitative studies reporting barriers and facilitators to whole school approaches

Study [Country]	Setting	Informants (N)	Intervention	Method	Themes in study
Hudson 2020	Secondary schools	<ul style="list-style-type: none"> • School staff (N= 15) 	<ul style="list-style-type: none"> • Whole School Mindfulness 	Analysis was guided by The Consolidated Framework for Implementation Research (CFIR)	<ul style="list-style-type: none"> • Leadership engagement • Relative priority • Networks and communications • Formally appointed internal implementation leaders • Knowledge and beliefs about the innovation • Executing
Humphrey 2010 [UK]	Secondary schools	<ul style="list-style-type: none"> • Students • Teachers • SEAL Lead • Local authority (N= NR) 	<ul style="list-style-type: none"> • SEAL Supports social and emotional development through the whole-school approach and direct and explicit teaching of social and emotional skills 	Thematic analysis	<ul style="list-style-type: none"> • Implementation support system • Implementation environment • Implementer factors • Programme characteristics
O'Hare 2018	Primary schools	<ul style="list-style-type: none"> • Pupils • Teachers (N= NR) 	<ul style="list-style-type: none"> • Positive Action 	Qualitative data was analysed based on the emerging quantitative results	<ul style="list-style-type: none"> • Which pupil-level implementation factors (pupil engagement and pupil-teacher relationship) had a significant association with outcome change? • Which school- and class-level implementation factors were associated with outcome change?
Wolpert 2013 [UK]	Secondary schools	<ul style="list-style-type: none"> • TaMHS workers • School staff 	<ul style="list-style-type: none"> • Prevent poor mental health through a multi- 	Not described	<ul style="list-style-type: none"> • Factors that facilitated success

Study [Country]	Setting	Informants (N)	Intervention	Method	Themes in study
		<ul style="list-style-type: none"> • Pupils • Parents (N= 132)	tiered whole-school approach		

1 See Appendix D for full evidence tables .

2 **4.1.6 Summary of the qualitative evidence**

3 **Table 15: Summary of themes**

Theme	Findings
School staff: Barriers	<ul style="list-style-type: none"> • Lack of staff awareness • Lack of staff buy in • Staff with poor emotional literacy • Staff resistance
School staff: Facilitators	<ul style="list-style-type: none"> • Staff involvement • Emotionally literate staff • Having appropriate professionals involved
Implementation: Barriers	<ul style="list-style-type: none"> • Insufficient support • Limited leadership team investment • Presenting the programme as a separate initiative • Time and funding • Changes to whole-school policy
Implementation: Facilitators	<ul style="list-style-type: none"> • Training and support available on a continuous basis • Presenting the programme as being integrated into existing initiatives • The school as a setting • Prioritisation in the curriculum • Leadership engagement • Consistency
Programme characteristics: Barriers	<ul style="list-style-type: none"> • Unfeasible or inaccurate materials • Materials were not age appropriate • Materials were not 'out of the box' • Context of sessions
Programme characteristics: Facilitators	<ul style="list-style-type: none"> • Programme materials provide structure • Materials were age appropriate

Theme	Findings
	<ul style="list-style-type: none"> Activity type

1

2 **Table 16: Summary of qualitative evidence**

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
<p>School staff: Barriers</p> <ul style="list-style-type: none"> Lack of staff awareness of the programme is a stumbling block. Where initial staff buy-in is weak, the amount of staff involved in the initial implementation suffers which leads to SEAL groups working in isolation, which makes effecting whole-school change a difficult process. Where there are staff members who lack emotional intelligence or who have limited self-awareness skills could be a barrier to implementation. Persuading resistant members of staff to become involved in implementing SEAL becomes a challenge especially when considering other pressures such as workload. Some staff also are less willing to change especially those with established routines. 	<p>Humphrey 2010 (Preplanning and foundations; Implementer factors)</p>	<p>Moderate confidence</p>	<p><i>"We've had a couple of interviews on it, I am a little bit... still wondering what it is"</i> (Form Tutor) [Humphrey 2010]</p> <p><i>"You get the... 'isn't it just another one of these ideas from the government that will fade out? We'll do it for a couple of years and then it'll be.. we've forgot that. We've got another idea now'... there is a little cynicism from people [who are] a bit weary of initiative after initiative"</i> (Acting SEAL Lead) [Humphrey 2010]</p> <p><i>"I've got fifty minutes and my priority is that they leave the room... knowing about particle theory, you know, the fact that they're emotionally illiterate, well really...it's not your problem is it?"</i> (Teacher) [Humphrey 2010]</p> <p><i>"Staff is another problem really, because if the staff aren't emotionally intelligent then the children are going to struggle and I think training the staff is going to be a big problem because obviously...by the time you get to be an adult you've got your own ideas of how things go and how you are and what you like and you can't suddenly make somebody emotionally intelligent by telling them they've got to be"</i> (Teacher) [Humphrey 2010]</p> <p><i>"And the last meeting that we had where four people turned up – that's the first time that's happened and I think its because of the workload that the school has given the staff "</i> (SEAL Lead) [Humphrey 2010]</p>

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
			<p><i>"[Some teachers have] probably taught the same scheme of work for ten years, fifteen years, twenty years and don't really want to change because they think there is no need for them to change because they've always been successful – so why change something that's good?" (SEAL Lead) [Humphrey 2010].</i></p>
<p>School staff: Facilitators</p> <ul style="list-style-type: none"> • Where there are high levels of staff involvement from the outset the implementation appeared to be greatly facilitated. • Where staff members were recognized as being emotionally literate, the benefits were seen not just in the context of SEAL implementation, but more generally in effective classroom management. • One of the key facilitators identified included having specialist mental health workers based in schools. 	<p>Humphrey 2010 (Preplanning and foundations; Implementer factors)</p> <p>Wolpert 2013 (Factors that facilitated success)</p>	<p>High confidence</p>	<p><i>"The more people you can get involved, the better...so if you're getting a few people together and facilitating them and feeling ownership of an idea or initiative and then getting them to work with their peers on it too, [then] they too feel a sense of ownership, some kind of power and control... its much more likely to succeed" (SEAL Lead) [Humphrey 2010].</i></p> <p><i>"So I would say the awareness of SEAL in this school is one hundred per cent and enthusiasm for SEAL, I would say we're getting near seventy five per cent" (SEAL Lead) [Humphrey 2010].</i></p> <p><i>that naturally have the 'ethos of SEAL'. You can tell that and those teachers are usually the teachers that have the least ...problems of discipline for instance because...they kind of have an empathy as well with the children, so... you don't have to teach them SEAL... you know, they have it, it's a natural thing" (Teacher) [Humphrey 2010]</i></p> <p><i>"Putting staff into schools, it's as simple as that. That is the significant difference, having somebody that you can quickly speak to without a long rigmarole of referral and a long waiting time with a perhaps you will, perhaps you won't get some support is actually people that you can say, xx, I've</i></p>

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
			<i>got a problem with this child, can you help us out?" (School staff member) [Wolpert 2013]</i>
<p>Implementation: Barriers</p> <ul style="list-style-type: none"> Support needs to be substantial, consistent and offered on an ongoing basis. Some schools found that Local authority support significantly reduced over time because of restructuring or change in priorities. Where leadership support is limited or absent, the implementation of the programme can suffer. If the programme is given the 'stamp of approval' by the leadership team, it means it will be taken seriously by other members of staff. The way in which SEAL is presented to staff clearly impacts upon how easily they feel it can be integrated into other aspects of the school and/or curriculum. Where it is presented as a separate initiative, there are often discussions around time constraints and priorities. A lack of time to engage in implementation interacts strongly with the resources allocated for different kinds of activity. Teachers and headteachers reported they were reluctant to change whole-school policy, which may have been exacerbated by an upcoming Ofsted inspection. 	<p>Humphrey 2010 (Implementation support system; Implementation environment)</p> <p>O'Hare 2018 (Which school- and class-level implementation factors were associated with outcome change?)</p>	<p>Moderate confidence</p>	<p><i>"We could do with more time to help implement SEAL... it isn't going to be her [LA SEAL co-ordinator] because she only works part-time. So we're going to end up with a difficulty there where... someone comes in who doesn't know the school that well" (Headteacher) [Humphrey 2010]</i></p> <p><i>"None of this is going to work if the head teacher doesn't secure a vision and actually get it out... and make it as important to all the staff and all the children that this is a 'SEAL school'. If the head isn't saying it and making sure that everybody goes with it, its not going to happen" (Local Authority) [Humphrey 2010]</i></p> <p><i>"Obviously I'm further down [the management chain] and it's a bit hard to move something when you're there" (SEAL Lead) [Humphrey 2010]</i></p> <p><i>"I know that maths, English and science will take priority and I know SEAL... is going to be the bottom of the pile" (SEAL Lead) [Humphrey 2010]</i></p> <p><i>"There is so much else coming into school and you can only ask people to do so many things. People are pulled in different directions and dedicated staff are pulled in different directions and that's hard" (SEAL Lead)</i></p> <p><i>"The amount of money that is given to SEAL, for us to be in this project as a school is minute and is nowhere near enough to cover the amount of time that is actually needed to make it good quality" (SEAL Lead)</i></p> <p><i>'Did launch assemblies [...] but didn't do as frequently as the programme suggested. Hard to judge if whole-school</i></p>

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
			<i>approach would really work as we didn't change the behaviour policy as much as we could have.'</i> (Teacher) [O'Hare 2018]
<p>Implementation: Facilitators</p> <ul style="list-style-type: none"> • Training was an element of the LA support that was considered useful as long as it was provided on a consistent and continuous basis. • Some teachers could draw links between aspects of SEAL and various ongoing or new initiatives, preferring to see them as related strands of activity that were all designed to lead toward the main goals outlined in Every Child Matters. • There was positive feedback on integrating the programme aims with existing school initiatives. For example bringing all mental health support activities into the school setting, building on previous initiatives and being sensitive to the existing context in terms of understanding what has already worked, what issues need addressing and what current ways of working look like. • School staff identified prioritisation in the curriculum and effective networks of communication as effective facilitators to intervention implementation. • Leadership engagement was fundamental to successful implementation, including formal appointment of intervention implementation leaders. • Maintaining consistency across years and classes in terms of which topics they are covering at a given time improved best practice. 	<p>Humphrey 2010 (Implementation support system; Implementation environment)</p> <p>Wolpert 2013 (Factors that facilitated success)</p> <p>Hudson 2020 (Relative priority; Leadership engagement)</p> <p>O'Hare 2018 (Which school- and class-level implementation factors were associated with outcome change?)</p>	<p>High confidence</p>	<p><i>So far... we have had initial training from [SEAL consultant] and that kind of got us excited about SEAL"</i> (SEAL Lead).</p> <p><i>"I think its because we haven't given up on the training. The training is consistent and it's always about SEAL"</i> (SEAL Lead). [Humphrey 2010]</p> <p><i>"I do find there is quite a lot of overlap between those things, so... its not created too much extra work"</i> (Teacher). [Humphrey 2010]</p> <p><i>"I think one of the principles was around the idea of not replicating what was already there, but finding out what was already there and building on that, and building capacity and starting with interventions that people had already valued, rather than trying to find something totally new and starting afresh."</i> (TaMHS management team, interview) [Wolpert 2013]</p> <p><i>"It's about that whole system approach, and it's about driving it forward and making everybody realise that this is definitely part of us, so it's here to stay, it's not something that's just going to be a flash in the pan"</i> (Deputy Head) [Hudson 2020]</p> <p><i>"Because it does take a commitment from her [head teacher] because she is the only person who can make it happen timetable-wise."</i> (Assistant Head) [Hudson 2020]</p>

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
<p>Programme characteristics: Barriers</p> <ul style="list-style-type: none"> Some teachers found that the objectives in some of the materials available on the programme website were not feasible. There were also some inaccuracies which meant they were unsure if they could rely on them. There was a feeling among staff in some schools that the materials were not pitched at the appropriate level for the children in their school, meaning that significant adaption was required before they were considered fit for purpose. Some staff members preferred materials that were ready to use as they found they had to adapt a lot of them. Certain pupils inability to relate to the context of some sessions was identified as a barrier to engagement. 	<p>Humphrey 2010 (Programme characteristics)</p> <p>O'Hare 2018 (Which pupil-level implementation factors (pupil engagement and pupil-teacher relationship) had a significant association with outcome change?)</p>	<p>Moderate confidence</p>	<p><i>"I mean one of the negative things about that particular lesson plan was ... seven objectives that were supposed to be...being achieved and that's not realistic - it's impossible to get that across"</i> (Form tutor) [Humphrey 2010]</p> <p><i>"I have had a complaint from the science department this week about some of the Year seven materials... [that they are] not particularly accurate with regards to science or historical facts, so that's something to look into. I think this is the danger... highly trained specialists delivering things as form tutors, they are starting to pick up on things. And it does sort of make people think, 'Oh well does that mean we can rely on all of the materials?'"</i> (Teacher) [Humphrey 2010]</p> <p><i>"The characters that go with it, is just a little bit too cartoonish and baby like in my eyes"</i> (Teacher) [Humphrey 2010]</p> <p><i>'If you don't have a sister or brother right now you aren't learning anything.'</i> (Pupil) [O'Hare 2018]</p>
<p>Programme characteristics: Facilitators</p> <ul style="list-style-type: none"> Staff members liked the idea of having materials for the programme as it gives more of a structure and provides useful information. Some teachers felt that the material were age appropriate for their pupils and where this was the case they found that the pupils could relate more to the characters and themes in the materials. Pupils reported the presence of more 'doing'-based activities and opportunities to input into lessons were facilitators for pupil engagement. 	<p>Humphrey 2010 (Programme characteristics)</p> <p>O'Hare 2018 (Which pupil-level implementation factors (pupil engagement and pupil-teacher relationship)</p>	<p>Moderate confidence</p>	<p><i>"The good thing about SEAL is that it gives us a format"</i> (Assistant Head Teacher) [Humphrey 2010]</p> <p><i>"The website... there is more than enough out there... it is now improving and I think people are finding it more accessible"</i> (SEAL Lead) [Humphrey 2010]</p> <p><i>"The pupils have liked following that theme through and carrying the same characters through and they can sort of empathize with the characters doing these things because they're sort of their age, they're in their situation, so that's been nice"</i> (Teacher) [Humphrey 2010].</p>

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
	had a significant association with outcome change?)		

1

2 See [Appendix F](#) for full GRADE-CERQual tables.

3

4 **4.1.7 Economic evidence**

5 A health economic evidence review was not undertaken due to the qualitative nature of the question.

5 Integration and discussion of the evidence

5.1 Mixed methods integration

The JBI methodology for mixed methods systematic reviews was used to guide the convergent segregated approach to integrating the quantitative and qualitative evidence. The following questions were used to inform this integration:

Are the results/findings from individual syntheses supportive or contradictory?

The findings from the syntheses are broadly supportive. The committee agreed that the themes identified by the qualitative reviews mapped well onto the framework provided by [Public Health England working with the Department for Education](#) for whole-school approaches and provided insight into why various aspects of those approaches may succeed or fail. In turn, the quantitative effectiveness evidence showed that whole-school approaches could be effective in some circumstances, for example sense of wellbeing at school, or rates of bullying and victimisation. The quantitative data did not show an impact on other outcomes however and the committee agreed that the qualitative data also highlighted problems that could crop up in whole school approaches that might impact the approaches ability to deliver on those outcomes.

Does the qualitative evidence explain why the intervention is/is not effective?

The quantitative data found an improvement in behaviour in both primary and secondary education in terms of bullying and victimisation and in improvement in the school climate in terms of wellbeing. Qualitative data report that whole school approaches were found to have a positive effect on classroom and school culture but reports that relationships between pupils were not improved. The positive effect on school culture and sense of wellbeing could in part explain the reduction in bullying and victimisation, as could the finding that pupils were more aware of the support that was available to them within the whole school approach. The lack of improvement in relationships between pupils might also partly explain the lack of impact detected by the intervention studies on emotional distress and social and emotional skills.

Does the qualitative evidence explain differences in the direction and size of effect across the included quantitative studies?

The qualitative data provided a good level of information about the perceived barriers to the implementation of whole school approaches, both from the perspective of pupils and teachers. and although it is not possible to attribute a causal relationship, it seems likely that the barriers identified are part of the reasons that whole school approaches may be less effective than they could be. The qualitative evidence highlighted areas that could contribute to making whole-school approaches unsuccessful such as lack of staff buy in, lack of leadership investment etc. These factors could be partially responsible for some of the interventions that did not show an effect. The data from the qualitative studies also identified some perceived facilitators that may contribute to the success of whole school approaches. These included training and support for staff, leadership buy-in and consistency.

Which aspects of the quantitative evidence were/were not explored in the qualitative studies and which aspects of the qualitative evidence were/were not tested in the quantitative studies?

The overlap between the quantitative and qualitative findings for this review does not make much meaningful integration possible. This is predominantly because the qualitative evidence is

very much focussed on process related understanding. The themes are very useful in understanding why the WSA worked (or did not work), but other than at a very superficial level they unable (without substantial speculation) to explain the pupil level outcomes such as reduction in bullying or lack of improvement in social and emotional skills that was found by the quantitative studies.

1 **5.2 The committee’s discussion and interpretation of the** 2 **evidence**

3 **5.2.1 The outcomes that matter most**

4 The committee categorised outcomes of interest as social and emotional wellbeing (SEW)
5 outcomes, school climate outcomes and academic outcomes. They agreed that more weight
6 should be given to the school climate outcomes and social and emotional outcomes. This is
7 because, in theory, improvement in school climate can provide a favourable environment for
8 promoting social and emotional wellbeing. This may lead to improvements in academic
9 progression and attainment. Ultimately, an improvement in social and emotional outcomes
10 may lead to overall improvement in quality of life. Within the category of social and emotional
11 wellbeing outcomes, the committee agreed that these could be sub-categorised into social
12 and emotional skills, behavioural outcomes and emotional distress.

13 When measuring the effects of the whole-school approach, the committee agreed that a
14 measure of behavioural outcomes associated with the school environment such as bullying
15 were the most important. This is because these behaviours can be indicative of the current
16 school environment. Where there is a favourable school environment, there may be a
17 reduction in bullying. Furthermore, a reduction in bullying is likely to have an immediate
18 impact on the child’s wellbeing, reduce the chance of developing poor mental health and may
19 also help the child or young person to concentrate better in class and achieve their academic
20 goals for that school year. The committee acknowledged that social and emotional skills are
21 very important in order to build the resilience needed to help manage adverse circumstances
22 that might otherwise lead to emotional distress.

23 As poor social, emotional and mental wellbeing can impact on outcomes such as poor school
24 attendance and school exclusions, the committee agreed they may serve as a proxy for
25 identifying mental health-related problems. School exclusions are often a result of
26 behavioural problems linked with emotional distress. The consequences of school exclusions
27 often include family distress which may have a negative impact on mental wellbeing of both
28 the child or young person and their family.

29 **5.2.2 The quality of the evidence**

30 **Quantitative evidence**

31 There were 9 studies identified that evaluated interventions that incorporated the whole-
32 school approach in primary education and 16 studies in secondary education. Of these
33 studies in primary education, 2 were carried out in the USA, 3 in Finland, and 1 in Italy,
34 Greece, Norway and the UK. Similarly, for secondary education, 3 studies were carried out in
35 the USA, UK, and Italy, 2 studies in both Spain and Austria and 1 study in Australia, Finland
36 and Norway. The committee considered the generalisability of the evidence and
37 acknowledged that because there can be variation in the structure of education environments
38 and in the delivery of interventions outside of the UK, this may factor into the generalisability
39 of the evidence. Social and mental health constructs also vary across countries due to
40 cultural differences. However, the use of standardised tools to measure SEW outcomes
41 across studies may help to mediate this.

42 The committee discussed the duration of the interventions and the follow-up time noting that
43 the majority of the studies only implemented the intervention for one school year before
44 findings were reported. They were concerned that this was too short to assess the effects of
45 the intervention on the school environment. However, the committee thought that short-term
46 improvement can be of benefit considering the developmental stage of the students. Also,
47 the committee discussed that school leaders would be interested in short-term findings as

1 they are inclined to support interventions that will enable students to learn and progress
2 throughout the school year.

3 The majority of the evidence evaluated whole-school approaches as a means to reduce
4 bullying. The remaining studies evaluated a whole-school approach either to promote social
5 and emotional skills or to promote mental wellbeing.

6 The committee acknowledged that it is best practice in the UK that whole-school approaches
7 feature the 8 principles detailed in the Public Health England Guidance for [Promoting](#)
8 [children and young people's emotional health and wellbeing, 2015](#). However, the
9 interventions identified varied in the number of these principles that were reported as being
10 present. The main combinations of principles featured were universal curriculum combined
11 with targeted approaches, universal curriculum combined with other principles but not
12 targeted approaches, or a combination of principles that did not have a clear universal
13 curriculum. The interventions also varied in terms of levels of parental involvement.

14 The studies used usual support, a waiting list or other undefined control interventions as the
15 comparator but did not always explain in detail what the students received. The committee
16 would have liked to have had this detail, to enable a better interpretation of the findings and
17 how it might apply to or differ from the UK setting.

18 The majority of the evidence came from cluster randomised controlled trials (cRCTs). In a
19 cluster design, participant data cannot be assumed to be independent of one another and
20 should be accounted for in the analysis of the cRCT. Failure to do so leads to a unit of
21 analysis error and over-estimation in the results. Whilst this is a known concern about
22 analysing data in cRCTs, most of the included studies adjusted their analyses for clustering
23 or could be adjusted through statistical methods and calculating the intraclass correlation
24 coefficient (ICC). The committee determined that any cRCTs that were not or could not be
25 adjusted, did not meaningfully affect the quality of the overall evidence base.

26 Some of the studies were non-randomised trials which carry an increased risk of bias.
27 However, the committee noted that the findings were similar across study designs, so this is
28 less of concern (although this was not determined by sensitivity analysis). The committee
29 also identified limitations in study conduct. In most studies, it was possible that participants
30 could have known which intervention they were allocated to. This may introduce bias in
31 outcome reporting especially where the outcomes are self-reported. All of the outcomes
32 reported in this review were self-reported.

33 None of the included studies reported on adverse effects or unintended consequences.

34 **Qualitative evidence**

35 There were 5 studies from the UK that contributed to the qualitative findings for this review.
36 Of these studies, 2 were set in primary education and 3 were set in secondary education.
37 The aims of the whole-school approaches described in these studies were to promote social
38 and emotional skills (2 primary education studies and 1 secondary education study) or to
39 promote mental wellbeing (2 secondary education studies. Out of the 5 studies, 3 studies
40 contributed to acceptability outcomes and 4 studies contributed to barriers and facilitators.
41 One study was particularly focused on the principles of the whole-school approach. The
42 quality of the evidence was rated moderate to high confidence. However, the findings of
43 these themes reflected the committee's experience.

44 **5.2.3 Benefits and harms**

45 Overall, the committee agreed that there was moderate to low confidence evidence to
46 support the use of whole-school approaches, but this evidence was bolstered by their
47 expertise and experience and by the testimony of invited expert witnesses.

1 The qualitative evidence provided moderate to high confidence evidence that helped the
2 committee to extrapolate the evidence about whole school approaches and contextualise it
3 so that they could make a series of recommendations about how best to implement these
4 approaches in schools.

5 **Quantitative evidence**

6 The quantitative evidence on whole-school approaches encompassed evidence on whole
7 school approaches without universal curriculum content, with universal curriculum content
8 and with universal and targeted curriculum content. Overall, the evidence was moderate to
9 very low-quality evidence with most of the evidence being low or very low. The evidence was
10 strongest for bullying, which the committee had agreed was an important outcome. Meta-
11 analysis found a positive effect of whole school approaches on bullying perpetration in both
12 primary and secondary schools and on bullying victimisation in primary schools. However
13 one study reported subgroup differences by gender that suggests that the intervention
14 significantly reduced bullying perpetration in the male subgroup but showed no difference for
15 the female subgroup. The non-randomised studies however did show a significant reduction
16 in bullying victimisation for both male and female subgroups. This includes cyberbullying.
17 There was however little evidence to support any non-behavioural outcomes. A meta-
18 analysis of cRCTs evaluating secondary school interventions with or without parent
19 involvement, showed no difference in cyberbullying perpetration. Evidence from non-
20 randomised studies however found significant reductions in cyberbullying perpetration. A
21 meta-analysis of the same interventions showed a significant reduction in cyberbullying
22 victimisation overall, but a subgroup analysis of this data showed that there was no
23 difference for an intervention without parent involvement but a reduction in cyberbullying
24 victimisation for interventions with parent involvement.

25 Overall whole-school approaches aimed at improving social and emotional wellbeing showed
26 no difference in social and emotional skills or behavioural outcomes in both primary and
27 secondary education. However, subgroup analyses in one study suggested a worsening in
28 teacher-reported SDQ total difficulties in the male subgroup in the primary school setting. A
29 whole-school approach to promoting mental wellbeing in secondary school showed no
30 difference for mental health and loneliness outcomes.

31 There was no evidence identified for academic outcomes or adverse and unintended
32 consequences. However, there was also no evidence of harm identified in the studies.

33 **Qualitative evidence**

34 The qualitative evidence suggests that one of the key moderators for successful
35 implementation of whole-school approaches is staff “buy-in” from the start. Barriers to this
36 include limited leadership investment. School staff were less likely to feel able to implement
37 programmes if they were not fully supported by the leadership team. This was linked with the
38 training that was available. School staff felt that they required continuous training in order to
39 be able to implement the intervention, but the general experience was that the training was
40 only offered at the start of the programme.

41 School staff reported they preferred to have pre-prepared materials and resources because
42 they found them to be the most tangible aspect of the programme. These were more
43 acceptable where they were ‘out of the box’ and did not need modifying. They found
44 materials less useful when they needed to be adapted to make them more age appropriate
45 or remove any inaccuracies. Teachers found it easier to meet the objectives of a whole-
46 school programme where it was able to be integrated into existing initiatives. If it was
47 considered as a separate item on the curriculum, it was considered as something additional
48 to be included in an already busy timetable.

1 Another key moderator is relationships within the school between the staff, pupils, their
2 parents and their teachers and the relationships between the pupils. This can be affected by
3 the attitudes and behaviours of those involved. Where teachers and other school staff were
4 considered to have good emotional literacy skills, they were less likely to be resistant to
5 accommodating the objectives of the programme whereas those who were less emotionally
6 literate did not think it was their responsibility. Parents valued the communication between
7 them and the school in order to understand the support available to their child. However,
8 when it came to actively involving parents and carers in the intervention, school staff were
9 more reluctant to do this. These findings reflected the committee experience which also
10 added that in some cases parents do not want their children to be part of certain
11 interventions.

12 Staff favoured having access to more specialist staff especially with regards to more targeted
13 approaches needed for pupils who need more support. Likewise, pupils were more aware of
14 the extra support available to them should they need it which often took the form of formal or
15 informal mentoring. The committee agreed that specialist staff bring a blend of expertise to
16 the school.

17 There was very little evidence from pupils identified in the qualitative studies although this
18 may be because of the nature of the interventions and how they were evaluated. However,
19 the committee considered pupil voice to be important in informing school practice.

20 ***The whole school approach***

21 Although the evidence was not as strong as they would have liked, the committee stated that
22 whole-school approaches were the current standard for best practice, however they also
23 acknowledged that it is not always implemented in all schools. Therefore they made a strong
24 recommendation that all schools should take this approach. They agreed that the most
25 relevant guidance for achieving this was The 8 principles to promoting a whole-school and
26 college approach to mental health and wellbeing which are set out in [Public Health England's
27 guidance on promoting children and young people's mental health and wellbeing](#).

28 The committee agreed that although they were not reflected in the evidence, whole-school
29 relational approaches were a key area of practice currently and that there was a gap in the
30 published evidence about these. They invited the headteacher from a primary school that
31 had implemented a relational whole-school approach to provide expert testimony about it and
32 its' impact on social, emotional and mental wellbeing. They heard that relational approaches
33 aim to build resilience within the school community as a whole and help children better
34 express their unmet emotional needs within trusted relationships. Conversely, behavioural
35 approaches are very limited and do not take into account human cognition. The committee
36 discussed the expert testimony and agreed that it was in line with their beliefs and expertise
37 and with the views of young people expressed in focus groups that were conducted to
38 underpin this guideline (see the [focus group report](#)). On that basis, the committee
39 recommended a relational approach be taken at whole school level. The committee
40 recognised the importance relational approaches put on psychological safety for children and
41 staff.

42 Children and young people who participated in the focus group research perceived benefits
43 of whole school approaches, so long as they were genuinely embedded across the school.
44 Collective decision-making and consistency for pupils and teachers were highlighted as
45 areas of importance. Additionally, they identified a need to consider varied opportunities to
46 engage, discuss and reflect upon values in a whole school approach and how they link into
47 actions and daily life for promoting wellbeing. For these approaches to be successful, the
48 committee drew on their expertise in implementing systems in schools and agreed that the
49 overall culture and ethos of the school is the basis of a successful whole-school approach,
50 and this needs to be reflected consistently in school policies and procedures (including the
51 schools accessibility plan), which should be reviewed regularly along with the monitoring and
52 review of the whole school approach.

1 ***Supporting the whole-school approach***

2 When the committee discussed the expert testimony about relational approaches, they
3 agreed that by focussing on the wellbeing of staff, parents and children, this promoted
4 connectivity with the school's policy in practice and the values that underpin it. The
5 committee noted that children can form trusted relationships with any adult in a school
6 environment and there is often no way of predicting which adult this will be. Therefore,
7 ensuring all staff were trained in nurture and trauma principles was highly important to
8 successfully meeting children and young people's social, emotional and mental wellbeing
9 needs. They discussed the implications of this and agreed that the way schools engaged
10 with external partners was also key to the success of the whole school approach. They
11 agreed it should be part of the implementation of the whole school approach and made a
12 recommendation detailing some of the key actions. The committee felt that the principle of
13 community was hidden within the PHE 8 principles of the whole-school approach. They
14 agreed that having this as part of the approach would allow for links with specialist staff
15 either in situ or external to schools, or links with other agencies including the voluntary
16 sector, ideally working towards multi-hub agencies and having agreed referral pathways.
17 This would also help facilitate the education and involvement of parents and carers.

18 The committee discussed the role of school governors and how they could support the
19 whole school approach. They agreed that the expert testimony was correct when it
20 highlighted the importance of leadership buy-in and the need for the whole school approach
21 to be reflected in the schools governance structures (1.1.7).

22 ***Supporting staff***

23 The committee agreed that commitment to continuous professional development and
24 emotional literacy were key to implementing these approaches and considered that teachers
25 would need additional training in relational approaches and trauma-informed practice as well
26 as understanding neurodiversity to be able to properly support a whole school approach,
27 although the evidence base for much of this is relatively immature. They agreed that this
28 CPD should also include training in recognising young peoples' pastoral needs and that they
29 should be able to access up-to-date information about the local early help offer so that they
30 know which external organisations might be able to help support children and young people
31 with social, emotional or mental wellbeing needs.

32 They heard from expert testimony how crucial staff were to the success of whole-school
33 approaches, and how important it was to ensure staff wellbeing and how effective peer
34 supervision could be for helping staff to feel supported. As a result, the committee
35 recommended peer supervision and also signposted people to the [Department for
36 Education's education staff wellbeing charter](#), which they agreed was a key resource. They
37 also recognised the importance of staff having protected time for supervision and for
38 continuous professional development.

39 ***Involving families and pupils***

40 The evidence included some approaches that involved parents. The committee agreed that
41 involving parents was very important, however they noted that the evidence did not describe
42 approaches that involved carers. Whilst there will be broadly similar approaches for both
43 parents and carers, the committee noted there will be some nuanced differences for
44 individual schools to consider.

45 Focus group research with children and young people also highlighted that whole school
46 approaches should be discussed and agreed with them and care should be taken to ensure
47 that all voices are captured and not just those of a select group.

1 ***Implementing the whole-school approach***

2 The committee agreed that, in their experience, leadership investment is needed. This is
3 reflective of the findings from the qualitative evidence. They suggested this leadership could
4 come from one person in the management team that had responsibility for resources and for
5 the universal curriculum.

6 The committee acknowledged that although most of the evidence was focused on bullying,
7 the whole-school approach aims to introduce a culture shift within the school. They also
8 noted that the outcomes were related to the school environment which can be considered as
9 a way to measure the cultural shift. The committee discussed that a whole-school approach
10 would have a culture that is universal, provides psychological safety for staff and pupils, and
11 embraces neurodiversity but also offers a “step up, step down” approach where additional
12 support is needed. This is similar to the TaMHS model evaluated in the qualitative evidence
13 and nationally by the [Department for Education, 2011](#). The committee also noted the
14 importance of staff understanding and having the right support to implement such an
15 approach.

16 ***Local support***

17 Although they did not consider evidence directly related to this, the committee agreed with
18 the implications from expert testimony that the success of whole school approaches is also
19 dependent on external support. In their experience and based on their expertise, they agreed
20 that if local agencies were responsive to the social, emotional and mental wellbeing of
21 children and young people and built it into local planning processes (like the joint strategic
22 needs assessment for example) then schools would have more success. They agreed to
23 make recommendations for the local health economy based on expert testimony and their
24 expertise to ensure that the local health system is aware of its responsibility to listen and be
25 responsive to school needs.

26 **5.2.4 Cost effectiveness and resource use**

27 The committee discussed evidence from 4 studies, the first was a cost effectiveness analysis
28 of the Olweus Bullying Prevention Program (OBPP) - a whole-school, systems-change
29 program operating at four different levels: schoolwide, classroom, individual, and community
30 (Beckham 2015). The second was a cost effectiveness analysis of the KiVa program to
31 reduce and prevent bullying (Persson 2018). KiVa consists of universal actions targeted at
32 every student along with specified actions taking place when acute cases of bullying are
33 detected. The third was a cost benefit analysis of a US City Connects programme which
34 aimed to assess and address the challenges (academic, social/emotional, health and family)
35 that prevent students from reaching their full potential (Bowden 2020). The fourth was a cost
36 utility analysis of the Learning Together programme which aims to address youth bullying
37 and aggression (Legood 2021).

38 Beckham (2015) constructed a decision-tree model for a Swedish secondary school, using a
39 public payer perspective and 3-year time horizon. The outcome was the number of victim-
40 free years. Data on costs and effects were obtained from the published literature.
41 Probabilistic sensitivity analysis to reflect the uncertainty in the model was conducted. The
42 base-case analysis showed a cost of 131 250 Swedish kronor (€14 470) per victim spared of
43 bullying. The PSA showed the program had a 97% probability of being cost effective at the
44 threshold of 585,000SEK threshold.

45 Persson (2018) constructed a Markov model with a 9-year time horizon and using a payer
46 perspective. The outcomes were the number of victim-free years of bullying and the QALY.
47 All inputs were sourced from the published literature. After 9 months of implementation the
48 program had significantly reduced victimisation and bullying of others. The base-case
49 analysis showed a cost of 131,321 Swedish kronor (€13,823) per QALY gained and 7,789

1 SEK (€829) per victim free year. At a threshold of 500,000SEK the PSA showed the program
2 had a probability close to 100% of being cost effective.

3 Bowden (2020) compared the costs and benefits associated with the City Connects
4 programme (six-year intervention, students aged 5-6 to aged 10-11) versus students in non-
5 City Connects schools. From a societal perspective, the City Connects programme delivered
6 more benefits than the comparator, but at an additional present value (6 years) cost of
7 US\$5,410 (2018). The cost to benefit ratio was estimated to be 3 and the results were shown
8 to be robust to variation in this value (from 1.26 to 6.38).

9 Legood (2021) found that the Learning Together (LT) intervention was cost-effective
10 compared with current service provision. Results from a cost-utility analysis showed that,
11 over a 3-year time horizon, and from a public sector perspective, the LT intervention
12 delivered more QALYs at a higher cost. The cost-effectiveness acceptability curve showed
13 that at 3 years, compared with current service provision, there was a 90% probability that the
14 intervention was cost-effective at a WTP threshold of £20,000 per QALY gained.

15 The committee noted several limitations of the evidence including the short time horizons
16 adopted for considering costs and effects and the limited research and data on the
17 effectiveness of the programmes. They considered the interventions relevant to the UK
18 context but were mindful of transferring the results given differences between the UK and
19 Sweden/US in the costs and healthcare systems. The committee had concerns about the
20 comparator adopted in the Beckham study, they considered usual practice more appropriate
21 than “no intervention”. They also commented that in Sweden the payer perspective is defined
22 locally and is likely therefore to differ around the country. In addition, for interventions
23 involving parents they thought a societal perspective would be more appropriate. Regarding
24 the Bowden study, the committee noted the methods used to estimate benefits were not
25 described and sources were not referenced and agreed that this made the validity of the
26 benefits unclear. They also agreed that implementing the intervention as described would
27 require a big investment in time and resources. Despite the limitations, the committee
28 thought the findings were consistent in showing that the programmes were cost-effective and
29 that differences in the nature of the interventions, populations, cost-perspectives and follow-
30 up periods strengthened their conclusions. This was further strengthened by the sensitivity
31 analyses which showed that the findings of cost effectiveness were robust to changes in the
32 value of inputs, and as a result the committee were reasonably confident in the outcomes.
33 Moreover, they considered the positive findings in line with their experience and practice.

34 Given the limited availability of published evidence the committee agreed it would be
35 informative to develop a bespoke economic model to support decision makers understanding
36 of the potential economic and wellbeing implications of introducing a new intervention. The
37 model adopted cost consequences analysis as well as cost benefit analysis out of concern
38 that the QALY is limited with regard to capturing the wide variety of outcomes relevant to
39 childhood current and future wellbeing. Expert views were taken into account in the model.
40 The committee noted that data paucity considerably limited the assessment of impact and
41 cost effectiveness.

42 The committee considered the findings of the model which showed the interventions could be
43 cost effective and what the key drivers of cost effectiveness were. However, they were
44 mindful that the outcomes used in the model are associated with great uncertainty. They
45 observed that children and young people’s outcomes could be positive or negative or a
46 combination of the two. and that there was no evidence available to know the combined
47 effect of an intervention across different outcomes. For positive outcomes they considered
48 the model may over-estimate the overall benefit whereas for negative outcomes it may
49 underestimate the total benefit. The committee believed it crucially important schools and
50 other education settings take account of any potential adverse consequences in deciding
51 whether to fund an intervention.

1 The committee were particularly concerned by the lack of studies on the long-term impact of
2 intervening. They agreed that improvement in social and emotional wellbeing could lead to
3 improvements in quality of life as well as improvements in academic progression and
4 attainment. They also agreed there were likely to be benefits to the wider system including
5 helping young people to become happy and successful adults, prepared for the
6 opportunities, responsibilities and experiences of adult life. That the model was unable to
7 capture these potential benefits due to an absence of data was considered a major limitation.
8 From this view, the model could underestimate the benefit of all interventions. Other
9 limitations noted include an oversimplification of the effect of an intervention by dichotomising
10 continuous variables above and below a determined threshold and the lack of evidence on
11 utility values. This could result in either underestimates or overestimates of the cost
12 effectiveness outcomes.

13 They were also aware that the lack of data meant it had not been possible to adopt a holistic
14 approach which captures the importance of a supportive and secure environment (e.g.
15 supportive peers, role models, personal feelings of safety - to feel safe from being bullied,
16 safe to report things without fear of stigma) and an ethos that avoids stigma and
17 discrimination in relation to mental health and social and emotional difficulties.

18 The committee agreed that the potential cost effectiveness of an intervention is impacted by
19 a myriad of factors including those relating to the intervention such as the local cost of
20 delivery and who delivers the intervention as well as external factors such as family and peer
21 relationships. It was also acknowledged by some that this is a relatively new field of science
22 by which very minor changes in context or circumstance can dramatically impact the findings.
23 Taken together with the substantial variability in the interventions available, the heterogeneity
24 across schools and the limitations of the evidence the committee considered, it unwise to
25 draw broad conclusions from the model. Rather the committee agreed decision makers
26 should make use of the economic model to understand the potential economic and wellbeing
27 implications when considering the introduction of a new intervention in school and help
28 identify any gaps in current research. The committee believe this could also help guide future
29 research with the aim of improving the mental health and wellbeing of children and young
30 people.

31 The committee highlighted that schools and higher educational settings have a statutory duty
32 to address mental health issues – by teaching about and promoting mental well-being and
33 ways to prevent negative impacts on mental well-being.

34 Finally, whilst the committee considered that implementing interventions might incur
35 additional costs where these are not already in place, they believe that an integrated
36 approach, using universal, whole school, targeted and transition interventions could prevent
37 outcomes which can lead to costly consequences for wider system including the NHS, social
38 services and the criminal justice system.

39 **5.3 Recommendations supported by this evidence review**

40 This evidence review supports recommendations 1.1.1 to 1.1.23.

41 **5.4 References – included studies**

42 **4.1.11.1 Effectiveness**

Acosta, JD, Chinman, M, Ebener, P et al. (2016) A Cluster-Randomized Trial of Restorative Practices: An Illustration to Spur High-Quality Research and Evaluation. *Journal of educational and psychological consultation : the official journal of the Association for Educational and Psychological Consultants* 26(4): 413-430

- Acosta, Joie, Chinman, Matthew, Ebener, Patricia et al. (2019) Evaluation of a Whole-School Change Intervention: Findings from a Two-Year Cluster-Randomized Trial of the Restorative Practices Intervention. *Journal of youth and adolescence* 48(5): 876-890
- Ahtola, Annarilla, Haataja, Anne, Karna, Antti et al. (2012) For children only? Effects of the KiVa antibullying program on teachers. *Teaching and Teacher Education* 28(6): 851-859
- Axford, N, Bjornstad, G, Clarkson, S et al. (2020) The Effectiveness of the KiVa Bullying Prevention Program in Wales, UK: results from a Pragmatic Cluster Randomized Controlled Trial. *Prevention science*
- Björklund K, Liski A, Samposalo H et al. (2014) "Together at school"--a school-based intervention program to promote socio-emotional skills and mental health in children: study protocol for a cluster randomized controlled trial. *BMC public health* 14: 1042
- Bonell, C, Allen, E, Warren, E et al. (2018) Effects of the Learning Together intervention on bullying and aggression in English secondary schools (INCLUSIVE): a cluster randomised controlled trial. *Lancet (london, england)* 392(10163): 2452-2464
- Bonell, C, Fletcher, A, Fitzgerald-Yau, N et al. (2015) Initiating change locally in bullying and aggression through the school environment (INCLUSIVE): a pilot randomised controlled trial. *Health technology assessment (winchester, england)* 19(53): 1-109vii
- Bonell, Chris, Allen, Elizabeth, Warren, Emily et al. (2019) No title provided.
- Brown, Eric C., Low, Sabina, Smith, Brian H. et al. (2011) Outcomes from a School-Randomized Controlled Trial of Steps to Respect: A Bullying Prevention Program. *School Psychology Review* 40(3): 423-433
- Cross, D, Shaw, T, Hadwen, K et al. (2016) Longitudinal impact of the Cyber Friendly Schools program on adolescents' cyberbullying behavior. *Aggressive behavior* 42(2): 166-180
- Cross, Donna and Barnes, Amy (2018) If it's about me, why do it without me? Genuine student engagement in school cyberbullying education. Special Issue: 10th anniversary edition of the *International Journal of Emotional Education*. 10(2): 139-145
- Del Rey, Rosario; Casas, Jose A; Ortega, Rosario (2016) Impact of the ConRed program on different cyberbullying roles. *Aggressive behavior* 42(2): 123-35
- Ferrer-Cascales, Rosario, Albaladejo-Blazquez, Natalia, Sanchez-SanSegundo, Miriam et al. (2019) Effectiveness of the TEI Program for Bullying and Cyberbullying Reduction and School Climate Improvement. *International journal of environmental research and public health* 16(4)
- Gradinger, Petra, Yanagida, Takuya, Strohmeier, Dagmar et al. (2015) Prevention of cyberbullying and cyber victimization: Evaluation of the ViSC Social Competence Program. *Journal of School Violence* 14(1): 87-110

- Hampton, Elizabeth, Roberts, Will, Hammond, Nick et al. (2010) Evaluating the impact of Rtime: An intervention for schools that aims to develop relationships, raise enjoyment and reduce bullying. *Educational and Child Psychology* 27(1): 35-51
- Hudson, Kristian G; Lawton, Rebecca; Hugh-Jones, Siobhan (2020) Factors affecting the implementation of a whole school mindfulness program: a qualitative study using the consolidated framework for implementation research. *BMC health services research* 20(1): 133
- Humphrey, Neil, Lendrum, Ann and Wigelsworth, Michael (2010) Social and emotional aspects of learning (SEAL) programme in secondary schools : national evaluation Research Report DFE-RR049. Education: 2009-2011
- Juvonen, Jaana, Schacter, Hannah L, Sainio, Miia et al. (2016) Can a school-wide bullying prevention program improve the plight of victims? Evidence for risk x intervention effects. *Journal of Consulting and Clinical Psychology* 84(4): 334-344
- Karna, A, Voeten, M, Little, TD et al. (2011) A large-scale evaluation of the KiVa antibullying program: grades 4-6. *Child development* 82(1): 311-330
- Karna, Antti, Voeten, Marinus, Little, Todd D et al. (2013) Effectiveness of the KiVa Antibullying Program: Grades 1-3 and 7-9. *Journal of Educational Psychology* 105(2): 535-551
- Kaufman, Tessa M L, Kretschmer, Tina, Huitsing, Gijs et al. (2018) Why Does a Universal Anti-Bullying Program Not Help All Children? Explaining Persistent Victimization During an Intervention. *Prevention science : the official journal of the Society for Prevention Research* 19(6): 822-832
- Kiviruusu, Olli, Bjorklund, Katja, Koskinen, Hanna-Leena et al. (2016) Short-term effects of the "Together at School" intervention program on children's socio-emotional skills: a cluster randomized controlled trial. *BMC psychology* 4(1): 27
- Larsen, T. B., Urke, H., Tobro, M. et al. Promoting Mental Health and Preventing Loneliness in Upper Secondary School in Norway: Effects of a Randomized Controlled Trial. *Scandinavian Journal of Educational Research*
- Lendrum, A.; Humphrey, N.; Wigelsworth, M. (2013) Social and emotional aspects of learning (SEAL) for secondary schools: Implementation difficulties and their implications for school-based mental health promotion. *Child and Adolescent Mental Health* 18(3): 158-164
- Low, Sabina and Van Ryzin, Mark (2014) The Moderating Effects of School Climate on Bullying Prevention Efforts. *School Psychology Quarterly* 29(3): 306-319
- Nocentini, Annalaura and Menesini, Ersilia (2016) KiVa Anti-Bullying Program in Italy: Evidence of Effectiveness in a Randomized Control Trial. *Prevention science : the official journal of the Society for Prevention Research* 17(8): 1012-1023

Nocentini, Annalaura; Palladino, Benedetta Emanuela; Menesini, Ersilia (2019) For Whom Is Anti-Bullying Intervention Most Effective? The Role of Temperament. *International journal of environmental research and public health* 16(3)

O'Hare L (2018) *Positive Action: Pilot report and executive summary.*

Palladino BE; Nocentini A; Menesini E (2016) Evidence-based intervention against bullying and cyberbullying: Evaluation of the NoTrap! program in two independent trials. ****TRIAL 2****. *Aggressive behavior* 42(2): 194-206

Palladino, Benedetta E; Nocentini, Annalaura; Menesini, Ersilia (2016) Evidence-based intervention against bullying and cyberbullying: Evaluation of the NoTrap! program in two independent trials. ****TRIAL 1****. *Aggressive behavior* 42(2): 194-206

Salmivalli, C.; Karna, A.; Poskiparta, E. (2011) Counteracting bullying in Finland: The KiVa program and its effects on different forms of being bullied. *International Journal of Behavioral Development* 35(5): 405-411

Silvia, Suyapa, Blitstein, Jonathan, Williams, Jason et al. (2011) Impacts of a Violence Prevention Program for Middle Schools: Findings after 3 Years of Implementation. Executive Summary. NCEE 2011-4018.: 1-24

Silvia, Suyapa, Blitstein, Jonathan, Williams, Jason et al. (2010) Impacts of a Violence Prevention Program for Middle Schools: Findings from the First Year of Implementation. NCEE 2010-4007.: 1-159

Silvia, Suyapa, Blitstein, Jonathan, Williams, Jason et al. (2011) Impacts of a Violence Prevention Program for Middle Schools: Findings after 3 Years of Implementation. NCEE 2011-4017.: 1-217

Smolkowski, Keith, Seeley, John R., Gau, Jeffery M. et al. (2017) Effectiveness evaluation of the Positive Family Support intervention: A three-tiered public health delivery model for middle schools. *Journal of school psychology* 62: 103-125

Sorlie, Mari-Anne and Ogden, Terje (2015) School-Wide Positive Behavior Support--Norway: Impacts on Problem Behavior and Classroom Climate. *International Journal of School & Educational Psychology* 3(3): 202-217

Tsiantis, Alkis Constantine J., Beratis, Ion N., Syngelaki, Eva M. et al. (2013) The Effects of a Clinical Prevention Program on Bullying, Victimization, and Attitudes toward School of Elementary School Students.: 243-257

Ward, Bryce and Gersten, Russell (2013) A Randomized Evaluation of the Safe and Civil Schools Model for Positive Behavioral Interventions and Supports at Elementary Schools in a Large Urban School District. *School Psychology Review* 42(3): 317-333

Wigelsworth, Michael; Humphrey, Neil; Lendrum, Ann (2012) A national evaluation of the impact of the secondary Social and Emotional Aspects of Learning (SEAL) programme. *Educational Psychology* 32: 213-238

Wigelsworth, Michael; Humphrey, Neil; Lendrum, Ann (2013) Evaluation of a school-wide preventive intervention for adolescents: The secondary social and emotional aspects of learning (SEAL) programme. *School Mental Health: A Multidisciplinary Research and Practice Journal* 5(2): 96-109

Williford, A, Elledge, LC, Boulton, AJ et al. (2013) Effects of the KiVa antibullying program on cyberbullying and cybervictimization frequency among Finnish youth. *Journal of clinical child and adolescent psychology* 42(6): 820-833

Williford, Anne, Boulton, Aaron, Noland, Brian et al. (2012) Effects of the KiVa anti-bullying program on adolescents' depression, anxiety, and perception of peers. *Journal of abnormal child psychology* 40(2): 289-300

Wolpert, Miranda, Humphrey, Neil, Belsky, Jay et al. (2013) Embedding Mental Health Support in Schools: Learning from the Targeted Mental Health in Schools (TaMHS) National Evaluation. *Emotional & Behavioural Difficulties* 18(3): 270-283

Wolpert, Miranda, Humphrey, Neil, Deighton, Jessica et al. (2015) An evaluation of the implementation and impact of England's mandated school-based mental health initiative in elementary schools. *School Psychology Review* 44(1): 117-138

Yanagida, T; Strohmeier, D; Spiel, C (2019) Dynamic Change of Aggressive Behavior and Victimization Among Adolescents: effectiveness of the ViSC Program. *Journal of clinical child and adolescent psychology* 48: 90-s104

1 **4.1.11.2 Economic**

2 Beckman L, Svensson M. The cost-effectiveness of the Olweus Bullying Prevention
3 Program: Results from a modelling study. *Journal of Adolescence*. 2015;45:127-37.

4 Bowden AB, Shand R, Levin HM, Muroga A, Wang A. An Economic Evaluation of the Costs
5 and Benefits of Providing Comprehensive Supports to Students in Elementary School.
6 *Prevention science : the official journal of the Society for Prevention Research*.
7 2020;21(8):1126-35

8 Legood R, Opondo C, Warren E, Jamal F, Bonell C, Viner R, et al. Cost-Utility Analysis of a
9 Complex Intervention to Reduce School-Based Bullying and Aggression: An Analysis of the
10 Inclusive RCT. *Value in health : the journal of the International Society for*
11 *Pharmacoeconomics and Outcomes Research*. 2021;24(1):129-35.

12 Persson M, Wennberg L, Beckman L, Salmivalli C, Svensson M. The Cost-Effectiveness of
13 the Kiva Antibullying Program: Results from a Decision-Analytic Model. *Prevention science :*
14 *the official journal of the Society for Prevention Research*. 2018;19(6):728-37.

15

1 Appendices

2 Appendix A – Review protocols

3 Review protocol for Whole school approaches

Field	Content
PROSPERO registration number	CRD42020175166
Review title (50 Words)	Whole school-led approaches for the promotion of social, emotional and mental wellbeing.
Review question (250 words)	<p>Quantitative (effectiveness)</p> <p>1.1a What principles or combination of principles of whole-school approaches to promote social, emotional and mental wellbeing in children in primary education are effective and cost-effective?</p> <p>1.1b What principles or combination of principles of whole-school approaches to promote social, emotional and mental wellbeing in children and young people in secondary and further education are effective and cost-effective?</p> <p>Qualitative (views and experiences)</p> <p>1.2 Are whole-school approach interventions to promote the social, emotional and mental wellbeing of children and young people acceptable to children and young people, their parents or carers the teacher and professionals delivering the interventions</p> <p>Quantitative and qualitative (survey data and views and experiences)</p> <p>1.3 What are the barriers and facilitators to using the whole-school approach to promote social, emotional and mental wellbeing in children and young people?</p>
Objective	Quantitative (effectiveness)

Field	Content
	<p>To evaluate the effectiveness and cost-effectiveness of whole-school approaches (principles or combinations of principles) in terms of the social, emotional and mental wellbeing of children and young people at UK key stages 3 to 4 and post-16 primary, secondary or further education or equivalent</p> <p>Qualitative To understand the views and experiences of the whole school approach from the following groups children and young people in UK key stages 1 to 4 and post-16 education Parent and carers children Teachers or other school staff</p> <p>Quantitative and Qualitative To identify the barriers and facilitators of the whole-school approach and what proportion of schools report the barriers and facilitators</p> <p>Overarching objective The purpose of the review is to identify which interventions work best. The associated reviews (acceptability, views and experiences and barriers/facilitators) will complement the findings of the effectiveness review to help to understand how and why interventions work or do not work in different contexts.</p>
Searches (300 words)	<p>The following databases will be searched: Medline and Medline in Process (OVID) Embase (OVID) CENTRAL (Wiley)) Cochrane Database of Systematic Reviews (Wiley) PsycINFO (Ovid) Social Policy and Practice (OVID) ERIC (Proquest) Web of Science</p>

Field	Content
	<p>Database functionality will be used, where available, to exclude:</p> <ul style="list-style-type: none"> non-English language papers animal studies editorials, letters and commentaries conference abstracts and posters registry entries for ongoing or unpublished clinical trials dissertations duplicates <p>Searches will be restricted by:</p> <ul style="list-style-type: none"> January 2007 to date Study design – No filter needed <p>Secondary Databases</p> <p>A simple keyword-based search approach will be taken in the following databases:</p> <ul style="list-style-type: none"> DARE (legacy database - records up to March 2014 only) (CRD) National Guidelines Clearinghouse (US Dept. of Health and Human Services) Bibliomap (epicentre) Dopher (epicentre) Troph (epicentre) <p>Citation searching</p> <p>Depending on initial database results, forward citation searching on key papers may be conducted, if judged necessary, using Web of Science (WOS). Only those references which NICE can access through its WOS subscription would be added to the search results. Duplicates would be removed in WOS before downloading.</p>

Field	Content
	<p>The reference list of current (within 2 years) systematic reviews will be checked for relevant studies</p> <p>Websites</p> <p>Web searches will also be conducted. Google and Google Scholar will be searched for some key terms and the first 50 results examined to identify any UK reports or publications relevant to the review that have not been identified from another source.</p> <p>Searches will also be conducted on key websites for relevant UK reports or publications:</p> <p>Websites</p> <p>PSHE association</p> <p>Public Health England</p> <p>Department of Health</p> <p>Department for Education</p> <p>Public Health Institute</p> <p>Mentor-Adepis</p> <p>OFSTED</p> <p>National Foundation for Educational Research</p> <p>Research in Practice</p> <p>Education Endowment Foundation</p> <p>Office for Children's Commissioner</p> <p>Council for disabled children</p> <p>Results will be saved to EPPI Reviewer 5. A record will be kept of</p> <p>The number of records found from each database and of the strategy used in each database.</p> <p>the number of duplicates found and</p> <p>The total results provided to the Public Health team.</p>

Field	Content
	<p>The searches will be re-run 6 weeks before final submission of the review and further studies retrieved for inclusion.</p> <p>The full search strategies for MEDLINE database will be published alongside the final review</p>
Condition or domain being studied (200 words)	Social, emotional and mental wellbeing in education
Population (200 words)	<p>Quantitative and qualitative</p> <p>Population</p> <p>Children (including those with SEND) in UK key stages 1 and 2 or equivalent (usually ages 5-11 years of age)</p> <p>Children and young people (including those with SEND) in UK key stages 3 to 4 in secondary education</p> <p>Young people in post-16 education (further education)</p> <p>up to the age of 18 for young people without SEND</p> <p>up to the age of 25 for young people with SEND</p> <p>Qualitative only</p> <p>Teachers/practitioners delivering the interventions</p> <p>Parents/Carers of children and young people receiving the interventions</p> <p>Setting</p> <p>The following educational settings will be included:</p> <p>Schools providing secondary education including maintained schools, schools with a sixth form, academies, free schools, independent schools, non-maintained schools, and alternative provision including pupil referral units (see Department for Education's Types of school).</p> <p>Special schools.</p> <p>Further education colleges for young people, generally between the ages of 16 and 18.</p> <p>Young offender institutions.</p> <p>Secure children's homes.</p>

Field	Content
	<p>Secure training centres. Secure schools.</p> <p>Exclusion: Population Children in early years foundation stage (EYFS) (Where the studies define the population by age/UK key stage, we will only exclude if more than 50% of the population is in EYFS.) Children in early years foundation stage (EYFS) (Where the studies define the population by age/UK key stage, we will only exclude if more than 50% of the population is in EYFS.) Young people not in education. Young people in higher education.</p> <p>Setting: Private homes</p>
Intervention (200 words)	<p>Whole school-led approaches to social, emotional and mental wellbeing with a combination of at least two of the following principles / components / aspects:</p> <p>Promote mental/ physical health across the curriculum Ethos and environment Working with parents/carers and community Leadership and management Student voice Staff development Identifying need and monitoring impact of interventions</p>

Field	Content
	Targeted support
Comparator (200 words)	<p>Quantitative (effectiveness) Usual practice (this could include no intervention, delayed start of intervention or control group)</p> <p>Quantitative (survey) Not applicable</p> <p>Qualitative Not applicable</p>
Types of study to be included (150 words)	<p>Quantitative (effectiveness) We will include the following types of studies:</p> <p>Systematic reviews Randomised controlled trials If no randomised controlled trials are available for a particular subgroup then non-randomised comparative studies (sometimes called quasi-randomised studies) will be considered</p> <p>Quantitative (Survey) Mixed-method studies with a quantitative component Survey or other cross-sectional studies that report on barriers and facilitators to these interventions.</p> <p>Qualitative (views and experiences) Qualitative studies of interventions for example focus groups and interview-based studies or mixed-methods studies with a qualitative component</p>

Field	Content
Other exclusion criteria (no separate section for this to be entered on PROSPERO – it gets included in the section above so within that word count)	<p>Quantitative (effectiveness) Papers published in languages other than English will be excluded. Studies from countries outside of OECD list (n=36) will be excluded. Studies published before the year 2007 will be excluded. Studies not published in full text (e.g. protocols or summaries) will be excluded. Studies that do not have a control group.</p> <p>Quantitative (survey) Studies from outside the UK will be excluded. Papers published in languages other than English will be excluded. Studies not published in full text (e.g. protocols or summaries) will be excluded. Studies published before the year 2007 will be excluded</p> <p>Qualitative (views and experiences) Studies from outside the UK will be excluded. Papers published in languages other than English will be excluded.</p>
Context (250 words)	<p>Population and setting: Unselected population of children and young people in UK key stages 1 to 4 and post-16 education or equivalent in primary, secondary and further education. Within this, there may be differences in context depending on type of school, geographical location or socioeconomic status as well as subgroups of children such as those with special educational needs and disabilities.</p> <p>Intervention:</p>

Field	Content
	<p>Whole-school approach to promoting positive social, emotional and mental wellbeing which encourages a partnership between pupils, parents and carers, school and community.</p> <p>Social and emotional skills can be taught in the classroom but can be further nurtured in a supportive environment that a school can provide.</p>
<p>Primary outcomes (critical outcomes) (200 words)</p> <p>A separate mandatory box for Timing and Measures of these outcomes needs to be completed within PROSPERO. Please list these under timing and measures heading (200 words)</p>	<p>Quantitative (effectiveness)</p> <p>Social and emotional wellbeing outcomes</p> <p>Any validated child or young person, parent or teacher measure of mental, social, emotional or psychological wellbeing categorised as:</p> <p>Social and emotional skills and attitudes (such as knowledge and self-esteem)</p> <p>Emotional distress (such as depression, anxiety and stress)</p> <p>Behavioural outcomes that are observed (such as positive social behaviour; conduct problems)</p> <p>Academic outcomes</p> <p>Academic progress and attainment</p> <p>Other outcomes</p> <p>Quality of life</p> <p>Quantitative (surveys)</p> <p>Survey findings e.g. proportion of people reporting on a specific barrier or facilitator</p> <p>Qualitative (views and experiences)</p> <p>Views and experiences in terms of acceptability (of the interventions) and barriers and facilitators (to the implementation of interventions) of:</p> <ul style="list-style-type: none"> • teachers and practitioners delivering interventions • children and young people receiving interventions.

Field	Content
	<ul style="list-style-type: none"> • parents/carers of children and young people receiving the interventions <p>We will include SEW outcomes measured in the home, community as well as school</p> <p>We will provide a descriptive statistics of the outcomes from each study included in each of the categories.</p>
Timing and measures	<p>Quantitative (effectiveness) At least 3 months</p> <p>Studies that report outcomes at less than 3 months will be downgraded for indirectness.</p> <p>Quantitative (survey) Not applicable</p> <p>Qualitative (views and experiences) Not applicable</p>
<p>Secondary outcomes (important outcomes) (200 words)</p> <p>As above a separate entry for the timing and measures of these additional outcomes (200 words)</p>	<p>Quantitative</p> <p>School/class environment outcomes such as school belonging</p> <p>School attendance</p> <p>School exclusions</p> <p>Unintended consequences (e.g. stigma, reinforcement of negative behaviours)</p> <p>Qualitative</p> <p>Not applicable</p>
Data extraction (selection and coding) (300 words)	All references identified by the searches and from other sources will be uploaded into EPPI-R5 and de-duplicated.

Field	Content
	<p>This review will use the EPPI-R5 priority screening functionality.</p> <p>At least 50% of the identified abstracts (or 1,000 records, if that is a greater number) will be screened. After this point, screening will only be terminated if a pre-specified threshold is met for a number of abstracts being screened without a single new include being identified. This threshold is set according to the expected proportion of includes in the review (with reviews with a lower proportion of includes needing a higher number of papers without an identified study to justify termination) and is always a minimum of 500. A random 10% sample of the studies remaining in the database when the threshold is met will be additionally screened, to check if a substantial number of relevant studies are not being correctly classified by the algorithm, with the full database being screened if concerns are identified.</p> <p>The full text of potentially eligible studies will be retrieved and will be assessed in line with the eligibility criteria outlined above (see sections 6-10).</p> <p>A standardised EPPI-R5 template will be used when extracting data from studies (this is consistent with the Developing NICE guidelines: the manual section 6.4).</p> <p>Details of the intervention will be extracted using the TIDieR checklist in EPPI-R5.</p> <p>Outcome data will be extracted into EPPI-R5 as reported in the full text.</p> <p>Study investigators may be contacted for missing data where time and resources allow.</p>
Risk of bias (quality) assessment (200 words)	<p>Quantitative (effectiveness)</p> <p>Risk of bias will be assessed on an outcome basis using the following NICE preferred study design appropriate checklists for intervention studies as described in Developing NICE guidelines: the manual (Appendix H).</p> <p>Individual RCTs: Cochrane risk of bias tool 2.0</p> <p>Cluster RCTs: Cochrane risk of bias tool 2.0</p> <p>NRCTs: Cochrane ROBINS-I</p>

Field	Content
	<p>Quantitative (Survey) Risk of bias will be assessed on an outcome basis using the NICE preferred study design appropriate checklist for surveys as described in Developing NICE guidelines: the manual (Appendix H) CEBM checklist</p> <p>Qualitative (views and experiences) Risk of bias will be assessed on an outcome basis using the following NICE preferred study design appropriate checklist for qualitative studies as described in Developing NICE guidelines: the manual (Appendix H) CASP qualitative checklist</p> <p>For mixed methods studies we will use the Mixed Methods Appraisal Tool (MMAT)</p>
Strategy for data synthesis (300 words)	<p>Quantitative (effectiveness) The outcomes will be categorised at data extraction into four categories: social and emotional skills emotional distress behavioural outcomes and academic outcomes.</p> <p>Where meta-analysis is appropriate, the data will be pooled within the categories above using a random effects model to allow for the anticipated heterogeneity. Dichotomous data will be pooled where appropriate and the effect size will be reported using risk ratios in a standard pair-wise meta-analysis. Continuous outcomes reported on the same scale will be pooled in a standard pair-wise meta-analysis using mean difference where possible.</p>

Field	Content
	<p>Continuous outcomes not reported on the same scale will be pooled using a standardised mean difference in a standard pair-wise meta-analysis.</p> <p>Methods for pooling cluster randomised controlled trials will be considered where appropriate. Unit of analysis issues will be dealt with according to the methods outlined in the Cochrane Handbook.</p> <p>Methods for pooling cluster randomised controlled trials will be considered where appropriate. Unit of analysis issues will be dealt with according to the methods outlined in the Cochrane Handbook.</p> <p>Unexplained heterogeneity will be examined where appropriate with a sensitivity analysis.</p> <p>Where appropriate, the quality or certainty across all available evidence will be evaluated for each outcome using an the 'Grading of Recommendations Assessment, Development and Evaluation (GRADE) toolbox' developed by the international GRADE working group http://www.gradeworkinggroup.org/</p> <p>If the studies are found to be too heterogeneous to be pooled statistically, a narrative approach will be conducted.</p> <p>A meta-regression looking components of interventions will be undertaken if there are a sufficient number of studies identified for each variable (at least n=10),</p> <p>Quantitative (survey) Where appropriate, the quality or certainty across all available evidence will be evaluated for each outcome using the GRADE approach.</p> <p>Qualitative (views and experiences) The key themes and supporting statements from the studies will be categorised into themes relevant to the review across all studies using a thematic analysis.</p>

Field	Content
	<p>Where appropriate, the quality or certainty across all available evidence will be evaluated for each outcome using the GRADE CERQual approach.</p> <p>Integration of data As we have included different types of data from different sources as follows: Quantitative effectiveness data from intervention studies (RQ 1.1a and 1.1b) cross-sectional data from surveys on barriers and facilitators (RQ 1.3) Qualitative acceptability data related to interventions (RQ 1.2) barriers and facilitators (RQ 1.3)</p> <p>An inductive convergent segregated approach will be undertaken to combine findings from each review. Where possible qualitative and quantitative data will be integrated using tables.</p> <p>Where quantitative and qualitative data comes from the same study, the technical team will present the qualitative analytical themes next to quantitative effectiveness data for the committee to discuss. different studies, the committee will be asked to interpret both sets of finding using a matrix approach for the committee discussion section.</p>
Analysis of sub-groups (250 words)	<p>Quantitative</p> <p>Where evidence allows subgroup analyses may be conducted. as follows:</p> <p>age (UK key stage) socioeconomic status ethnicity geographical area</p>

Field	Content
	<p>children with special educational needs and disabilities (SEND)</p> <p>other groups for consideration listed in EIA</p> <p>type of school setting e.g. mainstream, alternative provision, secure settings</p> <p>aim of the intervention</p> <p>Quantitative (survey)</p> <p>Not applicable</p> <p>Qualitative (views and experiences)</p> <p>Not applicable</p>
Type of method of review	Intervention
Language	English
Country	England
Named contact	<p>5a. Named contact</p> <p>Public Health Guideline Development Team</p> <p>5b Named contact e-mail</p> <p>PHAC@nice.org.uk</p> <p>5c Named contact address</p> <p>National Institute for Health and Care Excellence</p> <p>Level 1A City Tower</p> <p>Piccadilly Plaza</p> <p>Manchester</p> <p>M1 4BD</p> <p>5d Named contact phone number</p> <p>+44 (0)300 323 0148</p>

Field	Content
	5e Organisational affiliation of the review National Institute for Health and Care Excellence (NICE) and NICE Public Health Guideline Development Team.
Review team members	From the Centre for Guidelines: Hugh McGuire, Technical Adviser Sarah Boyce, Technical Analyst Lesley Owen, Health economist Rachel Adams, Information Specialist Chris Carmona, Technical Adviser Giacomo De Guisa, Technical Analyst Adam O'Keefe, Project Manager
Funding sources/sponsor	This systematic review is being completed by the Centre for Guidelines which receives funding from NICE.
Conflicts of interest	All guideline committee members and anyone who has direct input into NICE guidelines (including the evidence review team and expert witnesses) must declare any potential conflicts of interest in line with NICE's code of practice for declaring and dealing with conflicts of interest. Any relevant interests, or changes to interests, will also be declared publicly at the start of each guideline committee meeting. Before each meeting, any potential conflicts of interest will be considered by the guideline committee Chair and a senior member of the development team. Any decisions to exclude a person from all or part of a meeting will be documented. Any changes to a member's declaration of interests will be recorded in the minutes of the meeting. Declarations of interests will be published with the final guideline.
Collaborators NB: This section within PROSPERO does not have free text option. Names of committee members to be inserted individually by the project manager and any additional collaborators	Development of this systematic review will be overseen by an advisory committee who will use the review to inform the development of evidence-based recommendations in line with section 3 of Developing NICE guidelines: the manual. Members of the guideline committee are available on the NICE website.

Field	Content	
Other registration details (50 words)	None	
Reference/URL for published protocol	None	
Dissemination plans	<p>NICE may use a range of different methods to raise awareness of the guideline. These include standard approaches such as:</p> <p>notifying registered stakeholders of publication publicising the guideline through NICE's newsletter and alerts issuing a press release or briefing as appropriate, posting news articles on the NICE website, using social media channels, and publicising the guideline within NICE.</p>	
Keywords	Social, emotional and mental wellbeing, whole-school approaches, children and young people	
Details of existing review of same topic by same authors (50 words)	None	
Current review status	<input checked="" type="checkbox"/>	Ongoing
	<input type="checkbox"/>	Completed but not published
	<input type="checkbox"/>	Completed and published
	<input type="checkbox"/>	Completed, published and being updated
	<input type="checkbox"/>	Discontinued
Additional information	None	
Details of final publication	https://www.nice.org.uk/	

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Appendix B – Literature search strategies

Database name: Medline

Please see below for Medline strategy. For full search strategies refer to the searches document on the [guideline webpage](#). Database: Ovid MEDLINE(R) <1946 to September 22, 2019>

Search Strategy:

-
- 1 ((Social or emotional or social-emotional or socio or socio-emotional or pro-social or prosocial) and (wellbeing or well-being or wellness or learn* or competenc* or skills)).ti,ab. (70714)
 - 2 ((SEL or SEAL or SEBS or EWB or EMHWB) and (school* or class* or curricul* or intervention* or program*)).ti,ab. (1517)
 - 3 ("social learner*" or "social learning").ti,ab. (2298)
 - 4 (resilien* or coping).ti,ab. (62350)
 - 5 Adaptation, Psychological/ or Resilience, Psychological/ (94777)
 - 6 (self-control or "emotional regulation" or self-aware* or self-efficacy or self-regulat* or self-confiden* or self-management or self-esteem or self-concept or "emotional intelligence" or mindful*).ti,ab. (76417)
 - 7 Emotional Intelligence/ (1909)
 - 8 exp Self Concept/ (105384)
 - 9 Emotional Adjustment/ or Social Adjustment/ (23549)
 - 10 ((social or interpersonal or communication or relationship*) adj2 (skill* or competence* or attribute*)).ti,ab. (18474)
 - 11 (friendship* or friends).ti,ab. (24474)
 - 12 ((social or peer or peers) adj2 (group* or network*)).ti,ab. (23799)
 - 13 empathy.ti,ab. (8945)
 - 14 ("social awareness" or socialisation or socialization or "social interaction*" or "social inclusion").ti,ab. (21692)
 - 15 Social Skills/ or Social Behavior/ or Social Values/ (70243)
 - 16 ("personal development" or "youth development").ti,ab. (2043)
 - 17 ("decision making" or "problem solv*" or problem-solv*).ti,ab. (112957)
 - 18 Decision Making/ (90526)
 - 19 Problem Solving/ (24255)
 - 20 (bully* or bullies or anti-bully* or "anti bully*" or antibully* or cyber-bully* or "cyber bully*" or cyberbully* or victimis* or victimiz* or stigma or anti-stigma or "anti stigma" or antistigma or prejudice*).ti,ab. (30754)

- 21 (delinquen* or anti-social or "anti social" or antisocial or "conduct disorder*" or "risky behavio*" or "problem behavio*" or (behavio* adj problem*)).ti,ab. (34445)
- 22 (((substance or drug* or alcohol) adj3 ("use" or abuse or misuse)) and (prevent* or reduc*)).ti,ab. (46764)
- 23 ((exclu* or expulsion or expel* or absent* or truant* or truancy or conflict or violent or violence or disengage*) and school*).ti,ab. (12142)
- 24 bullying/ or cyberbullying/ or problem behavior/ (5249)
- 25 ((school* or academic) adj2 (achieve* or attain* or engage* or progress* or motivat* or connectedness or belonging)).ti,ab. (7370)
- 26 Mental Health/ (34943)
- 27 (mental adj2 (health or wellbeing or well-being or "well being" or wellness)).ti,ab. (109607)
- 28 ((psychological or "psycho social" or psycho-social or psychosocial) adj2 (wellbeing or "well being" or well-being)).ti,ab. (9525)
- 29 (anxiety or anxious or depression or depressed or depressive or stress).ti,ab. (978914)
- 30 or/1-29 (1654021)
- 31 ("Aban Aya" or "Academic and Behavioural Competency Program*" or "Active Citizens in Schools" or ACIS or "Adolescent Decision Making Program*" or "ALERT plus" or "Alcohol Education Package" or "Alcohol Education Program*" or "Alcohol Screening and Brief Intervention" or "All Stars" or "Al's Pals" or "Alternatives to Trouble" or "Amazing Alternatives" or "Anti-bullying Program*" or "Attention Academy" or "Aussie Optimism" or BARR or "BBBS Ireland" or "Be the Best You can Be" or "Beat Bullying" or Beatbullying or "Befriending Intervention" or BeyondBlue or "Big Brothers Big Sisters" or "Bounce Back" or "Boys and Girls Club" or "Breathing Awareness Meditation" or "Building Assets Reducing Risks" or "Building Resiliency and Vocational Excellence" or "Bully Proofing" or Bullyproofing or "Bullying Eliminated from Schools Together").ti,ab. (30633)
- 32 (CAPSLE or CASEL or "Caring School Community" or CharacterPlus or "Child Development Initiative" or "Circle Time" or "Classroom Centred Intervention" or "Classroom Centred Program*" or "Class-wide Function-based Intervention" or "Climate Schools" or Climb-UP or CMCD or "Coalition for Youth Quality of Life" or "Comer School Development Program*" or "Communities that Care" or "Community of Caring" or "Competence Support Program*" or "Competent Kids Caring Communities" or "Conscious Coping" or "Consistency Management and Cooperative Discipline" or "Coping Koala" or "Coping Power" or "Counsellor Peers" or "Creating a Peaceful School Learning Environment" or Cues-ed or CSRP or "Cultivating Awareness and Resilience in Education").ti,ab. (466)
- 33 ("Early Risers" or "EiE-L" or "Empathic Discipline" or "Empower Youth" or "Engage in Education" or "Expect Respect" or "Expeditionary Learning" or "Facing History and Ourselves" or "Families and Schools Together" or "Family Check-up" or "Family School Partnership" or "Family SEAL" or "Fast Track" or "FearNot*" or "First Steps to Success" or "Formalised Peer Mentoring" or "Foundations of Learning" or "Fourth R-Skills" or "Fourth Step" or "Friendly Schools" or "FRIENDS program*" or FSP or "Gang Resistance Education and Training" or Gatehouse or GBG or "Get Wise" or "Girls First" or "Going for Goals" or "Going Places" or "Good Behaviour Game" or "Grades Attendance and Behaviour" or "Guided Self-change" or HASSP or "Head Start" or "healthy active peaceful playgrounds" or "Healthy for Life" or "Healthy Futures" or "Healthy Lifestyles" or "Healthy Minds in Teenagers" or "Healthy Relationships Training Program*" or "Healthy Schools and Drugs" or "Here's Looking at You" or HighScope or "Home and School Support Program*" or "How to Thrive" or "I Can Problem Solve" or ICPS or "ICAN Kids" or "Improving Social Awareness" or "Incredible Years" or

"Inner Explorer" or InnerKids or "Inspiring Futures" or "Interpersonal Cognitive Problem Solving Skills" or "In:tuition" or "ISA-SPS" or Jigsaw).ti,ab. (12904)

34 ("Keepin* It REAL" or "Kia Kaha" or KiVa or "klar bleiben" or "Knighly Virtues" or "Know Your Body" or "Learning for Life" or "Learning to BREATHE" or "Lessons for Living" or "Lessons in Character" or "Life Skills Program*" or "Life Skills Training" or Lift or "Linking the Interests of Families and Teachers" or "Lions Quest" or "Living with a Purpose" or "Love in a Big World" or LST or "Master Mind" or "Match Model" or "Michigan Model for Health" or "Middle School Success" or "Midwest* Prevention Project" or "Millennium Volunteers" or "Million Dollar Machine" or "Mind Up" or MindUP or MindfulKids or "Mindfulness in Schools" or MISP or "Mood Gym" or "My Character" or "My Teaching Partner" or "New Beginnings" or Narconon or OBPP or Olweus or "Open Circle" or "Op Volle Kracht" or "Over to You").ti,ab. (10509)

35 (Paths or PATHstoPAX or "Paws B" or "Peace Builders" or "Peace Works" or "Peacemaking Skills for Little Kids" or "Peer Mentoring" or "Peer Acceleration Social Network" or "Penn Resiliency Program*" or "Personality Risk Factors" or PESSOA or Playworks or Ploughshares or "Positive Action" or "Positive Alternative Learning Support" or "Positive Adolescent Life Skills" or "Positive Youth Development Program*" or "Preparation through Responsive Education" or "Primary SEAL" or "Prime for Life" or "Proactive Classroom" or Pro-ACT or "Problem Solving Program*" or Progetto or "Project A.T.T.E.N.D." or "project ALERT" or "project CHARLIE" or "Project Northland" or "Project Pride" or "project SMART" or "Project Based Learning" or "Project STAR" or "Promoting Alternative Thinking Strategies" or "Puppets for Peace" or "Pyramid Project" or "Raising Healthy Children" or RCCP or ReachOut or "Reaching Adolescents for Prevention" or "Reading Apprenticeship" or "Reading, Writing, Repect and Resolution" or "Recognizing, Understanding, Labeling, Expressing and Regulating Emotions" or "Reconnecting Youth" or REDI or "Resilience Program*" or "Resilient Families" or "Resolving Conflict Creatively" or "Respect Program*" or "Responsive Classroom" or "Risk Training Skills" or "Rochester Resilience Program*" or "Resourceful Adolescent Program*" or "Roots of Empathy" or Rtime or Ruler).ti,ab. (18072)

36 ("Safe and Civil Schools" or "Safe Dates" or "SafERteens" or "Say Yes First" or SBIRT or "School-based Resilience Intervention" or "School Health and Alcohol Harm Reduction Project" or "School-wide Positive Behavioural Interventions and Support" or "Second Step" or SS-SSTP or "Secondary SEAL" or "Seattle Social Development Project" or "SEED Scotland" or "Self-determination Program*" or "Self-management and Resistance Training" or "Service Learning" or "SFP10-14" or SHAHRP or "Siblings are Special" or SIBS or "Skills for Adolescence" or "Skills for Change" or "Skills for Success" or SingUp or "Social Competence Training" or "Social Decision Making" or "Social Norms" or "Social Problem Solving Skills" or "Social Skills Group Intervention*" or "Social Skills Training" or "South Carolina Program*" or "Smart Moves" or "S.S.GRIN" or SST or "Steg fur Steg" or STAMPP or "STARS for Families" or "Start Taking Alcohol Risks Seriously" or "Staying Calm" or "Step II" or "Steps towards Alcohol Misuse Prevention" or "Talk about Alcohol" or "Step-by-Step" or "Steps to Respect" or "Stop Breathe Be" or "Strengthening Families Program*" or "Strengths Gym" or "Stress Inoculation Training" or "Stress Management Intervention" or "Student Success Skills" or "Student Success through Prevention" or "Student Threat Assessment" or "Success for Kids" or SWPBIS or SWPBS or "Teach Team" or "Teen Outreach Program*" or "Teen Talk" or "Theatre in Education" or "The GOOD life" or "The Incredible Years" or "Think Feel Do" or "Think Well, Do Well" or "Too Good for Violence" or "Tools for Getting Along" or "Tools of the Mind" or "Towards no drug abuse" or "Transition Mentoring" or "Tribes Learning Communities" or "UK Resilience Program*" or "Unique Minds" or ViSC or "Wise Mind" or Woodrock or YogaKid* or "Yo Puedo" or "You Can Do It!" or "Youth Development Project" or "Youth Matters" or "Zippy's Friends" or "21st Century Community Learning" or "4Rs").ti,ab. (30473)

37 (PSHE or "personal social health" or PSE or "personal and social education" or SMSC or "spiritual moral social and cultural").ti,ab. (2145)

- 38 ("positive behavior* intervention*" or "positive behavior* support" or PBIS).ti,ab. (165)
- 39 ("school-wide positive behavior* support*" or SWPBS).ti,ab. (3)
- 40 "relationships and sex education".ti,ab. (4)
- 41 or/31-40 (104761)
- 42 30 and 41 (13501)
- 43 (mindful* or meditat* or yoga).ti,ab. (11384)
- 44 Mindfulness/ or Meditation/ or Yoga/ (6881)
- 45 "life skills".ti,ab. (849)
- 46 "motivational interview*".ti,ab. (3043)
- 47 Motivational Interviewing/ (1591)
- 48 ((brief or opportunist* or concise or short or direct) adj3 (counsel* or advice* or advise* or advisor* or therap* or support* or guide* or guidance* or intervention*)).ti,ab. (29852)
- 49 ((behaviour* or behavior* or cognitive) adj3 (technique* or therap* or chang* or modify or modifies or modifying or support* or intervention* or session* or program* or workshop*)).ti,ab. (110815)
- 50 counseling/ or directive counseling/ or child guidance/ or psychology, adolescent/ (50585)
- 51 Behavior Therapy/ or Cognitive Behavioral Therapy/ (50088)
- 52 (skills adj1 (train* or teach* or educat* or develop*)).ti,ab. (8859)
- 53 ((peer or pastoral or teacher*) adj2 (educat* or support* or group* or led)).ti,ab. (10670)
- 54 (prevent* and (intervention* or program*)).ti,ab. (194684)
- 55 "intervention program*".ti,ab. (12935)
- 56 "social and emotional learning program*".ti,ab. (17)
- 57 "play therap*".ti,ab. (365)
- 58 ("mental health" adj3 (intervention* or program*)).ti,ab. (4974)
- 59 ((Wellbeing or "well being" or well-being) adj3 (intervention* or therap*)).ti,ab. (906)
- 60 ((HIIT or fitness or "physical activity") adj2 (intervention or program*)).ti,ab. (4337)
- 61 ((questionnaire* or survey* or self-report* or "self report*" or assessment*) adj3 (school* or class or classroom* or pupil* or student* or teach*)).ti,ab. (23046)
- 62 or/43-61 (451022)
- 63 (classroom* or "whole class*" or whole-class*).ti,ab. (13301)
- 64 ((multi*-component or multicomponent or "multi* component" or universal or brief or "group based" or group-based or groupbased or "group work*" or group-work* or groupwork* or "small group*" or small-group* or targeted) and (intervention* or program* or project* or pilot* or initiative* or approach* or activit* or lesson* or curricul*)).ti,ab. (190743)

- 65 ("whole school*" or whole-school* or wholeschool* or "school wide" or school-wide or schoolwide or "school based" or school-based or schoolbased).ti,ab. (10802)
- 66 (school* adj3 (ethos or culture or life or environment or governance or policy or policies or leadership or SLT)).ti,ab. (5547)
- 67 (school* and (intervention* or program*)).ti,ab. (62493)
- 68 or/63-67 (264354)
- 69 62 and 68 (57035)
- 70 30 and 69 (24013)
- 71 (school* or pupil* or student* or teach* or curricul* or lesson* or learner* or learning or syllabus).ti,ab. (744877)
- 72 (((city or technical) and (academy or academies or college*)) or sixth-form* or "sixth form*" or "6th form*" or "lower six*" or "upper six*" or "post 16" or post-16 or "further education").ti,ab. (4591)
- 73 ("secure children* home*" or "young offender* institution*" or "secure training cent*" or "secure school*").ti,ab. (50)
- 74 ("year one" or "year 1" or "year two" or "year 2" or "year three" or "year 3" or "year four" or "year 4" or "year five" or "year 5" or "year six" or "year 6" or "year seven" or "year 7" or "year eight" or "year 8" or "year nine" or "year 9" or "year ten" or "year 10" or "year eleven" or "year 11" or "year twelve" or "year 12" or "year thirteen" or "year 13" or "key stage one" or "key stage 1" or "key stage two" or "key stage 2" or "key stage three" or "key stage 3" or "key stage four" or "key stage 4" or "key stage five" or "key stage 5" or KS1 or KS2 or KS3 of KS4 or KS5 or "grade one" or "grade 1" or "grade two" or "grade 2" or "grade three" or "grade 3" or "grade four" or "grade 4" or "grade five" or "grade 5" or "grade six" or "grade 6" or "grade seven" or "grade 7" or "grade eight" or "grade 8" or "grade nine" or "grade 9" or "grade ten" or "grade 10" or "grade eleven" or "grade 11" or "grade twelve" or "grade 12" or "first grade" or "1st grade*" or "second grade*" or "2nd grade*" or "third grade*" or "3rd grade*" or "fourth grade*" or "4th grade*" or "fifth grade*" or "5th grade*" or "sixth grade*" or "6th grade*" or "seventh grade*" or "7th grade*" or "eighth grade*" or "8th grade*" or "ninth grade*" or "9th grade*" or "tenth grade*" or "10th grade*" or "eleventh grade*" or "11th grade*" or "twelfth grade*" or "12th grade*").ti,ab. (98924)
- 75 curriculum/ or schools/ or teaching/ or school health services/ or school nursing/ or school teachers/ (161359)
- 76 or/71-75 (874883)
- 77 (medical or medicine or dental or dentist* or doctor* or physician* or nursing or "teaching hospital*" or undergraduate* or graduate* or postgraduate* or preschool* or pre-school* or nursery or "higher education" or university or universities).ti,ab. (2136781)
- 78 76 not 77 (561635)
- 79 exp Child/ or exp Child Behavior/ or Child Health/ or Child Welfare/ or Child Development/ (1866009)
- 80 Adolescent Behavior/ or Adolescent/ or Adolescent Health/ or Adolescent Development/ (1957161)
- 81 (child* or adolescen* or kid or kids or youth* or youngster* or minor or minors or underage* or under-age* or "under age*" or "young person*" or "young people" or pre-adolescen* or

preadolescen* or pre-teen* or preteen* or teen or teens or teenager* or juvenile* or boy or boys or boyhood or girl or girls or girlhood or schoolchild* or student* or pupil* or "school age*" or school-age* or schoolage*).ti,ab. (1870299)

82 or/79-81 (3597925)

83 78 and 82 (273336)

84 42 or 70 (35928)

85 83 and 84 (11518)

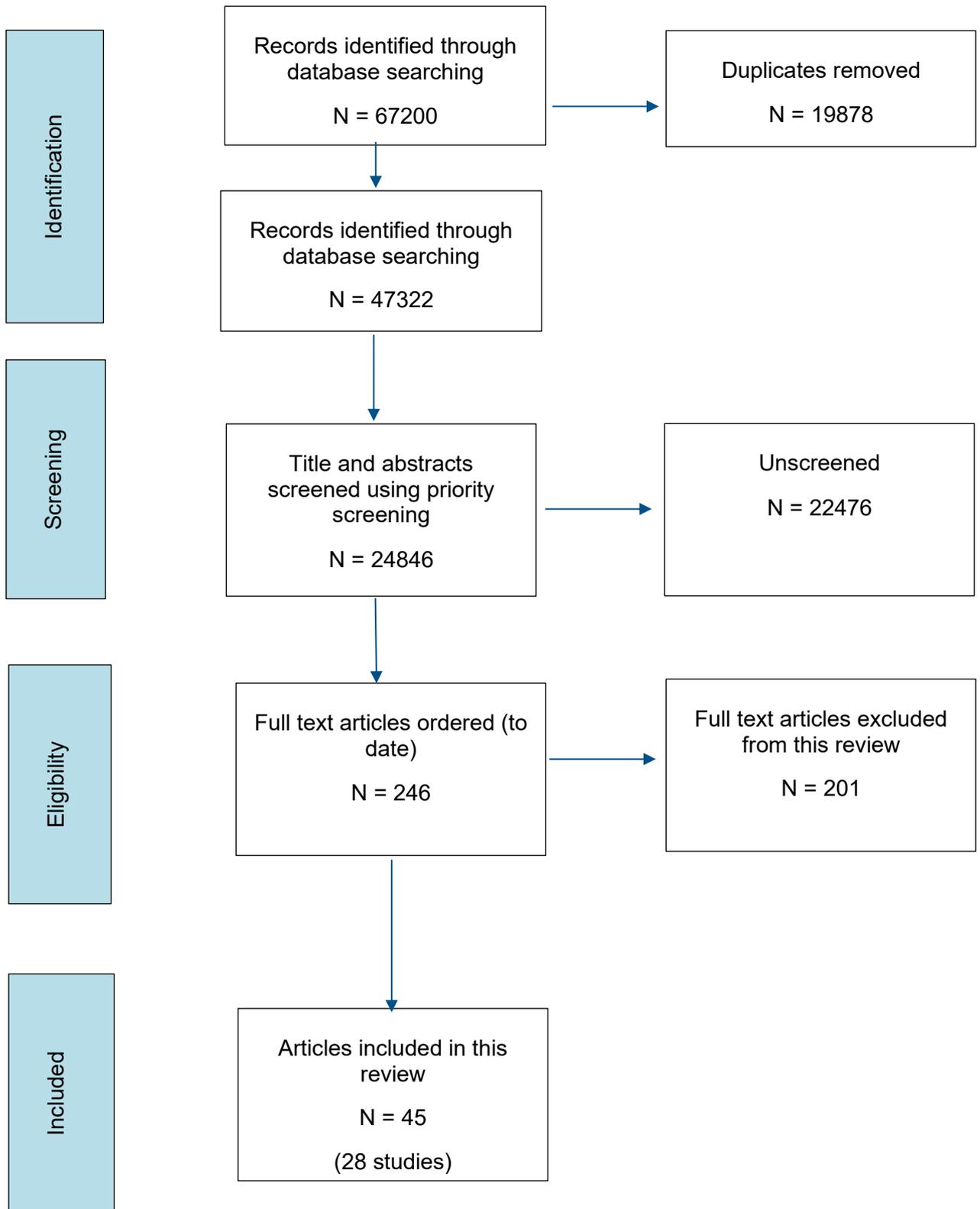
86 limit 85 to english language (10979)

87 limit 86 to (letter or historical article or comment or editorial or news or case reports) (174)

88 86 not 87 (10805)

89 limit 88 to yr="2007 -Current" (7243)

Appendix C – Effectiveness and qualitative evidence study selection



Appendix D – Effectiveness and qualitative evidence

D.1 Effectiveness evidence

D.1.1 Acosta, 2019

Bibliographic Reference	Acosta, Joie; Chinman, Matthew; Ebener, Patricia; Malone, Patrick S; Phillips, Andrea; Wilks, Asa; Evaluation of a Whole-School Change Intervention: Findings from a Two-Year Cluster-Randomized Trial of the Restorative Practices Intervention.; Journal of youth and adolescence; 2019; vol. 48 (no. 5); 876-890
Secondary publication(s)	Acosta, Joie, Chinman, Matthew, Ebener, Patricia et al. (2019) Evaluation of a Whole-School Change Intervention: Findings from a Two-Year Cluster-Randomized Trial of the Restorative Practices Intervention. Journal of youth and adolescence 48(5): 876-890

Study details

Study design	Cluster randomised controlled trial
Trial registration number	Not reported
Aim	To assess whether RPI impacts both positive developmental outcomes and problem behaviors and whether the effects persist during the transition from middle to high school.
Country/geographical location	USA
Setting	14 middle schools in Maine
Inclusion criteria	Not reported
Exclusion criteria	Not reported
Method of randomisation	Randomisation methods not reported

Method of allocation concealment	Not reported
Unit of allocation	Schools
Unit of analysis	Individual
Statistical method(s) used to analyse the data	<ul style="list-style-type: none"> • Intention to treat analysis • tested as a series of two-level (school and student) linear regression models predicting student outcomes (school climate, school connectedness, peer attachment, and social skills) and two-level logistic regression models for students' binary reports of the three categories of bullying with experimental condition as the predictor. • Imputed missing data • Adjusted for clustering (See Acosta 2016)
Attrition	Not reported
Study limitations (author)	<ul style="list-style-type: none"> • Relied on self-reported data from students • Collected limited measures of intervention • Bullying victimisation was measured by three single items
Study limitations (reviewer)	No additional
Source of funding	Grant from the National Institute of Child Health and Human Development (R01#1HD072235)

Study arms

RPI (N = 977)

Cluster N = 6

Control (N = 1794)

Cluster N= 7

Characteristics

Study-level characteristics

Characteristic	Study (N = 2771)
Age (years)	11 to 12
Range	

Arm-level characteristics

Characteristic	RPI (N = 977)	Control (N = 1794)
Male	n = 508 ; % = 52	n = 897 ; % = 50
No of events		
Female	n = 169 ; % = 48	n = 897 ; % = 50
No of events		
Hispanic or Latino	n = 39 ; % = 4	n = 54 ; % = 3
No of events		
American Indian or Alaska Native	n = 88 ; % = 9	n = 126 ; % = 7
No of events		
Asian	n = 10 ; % = 1	n = 54 ; % = 3
No of events		

Characteristic	RPI (N = 977)	Control (N = 1794)
Black or African American	n = 20 ; % = 2	n = 36 ; % = 2
No of events		
Native Hawaiian or other Pacific Islander	n = 10 ; % = 1	n = 18 ; % = 1
No of events		
White	n = 860 ; % = 88	n = 1561 ; % = 87
No of events		
Other	n = 88 ; % = 9	n = 126 ; % = 7
No of events		

Outcomes

Study timepoints

- 2 year (Postintervention)

Social and emotional skills

Outcome	RPI vs Control, 2 year, N2 = 977, N1 = 1794
Social skill: assertiveness The Social Skills Improvement System-Rating Scale (SSISRS)	0.17 (-0.92 to 1.26)
Standardised Mean (95% CI)	

Outcome	RPI vs Control, 2 year, N2 = 977, N1 = 1794
Social skill: empathy The Social Skills Improvement System-Rating Scale (SSISRS)	0.51 (-0.62 to 1.61)
Standardised Mean (95% CI)	

Social skill: assertiveness - Polarity - Higher values are better

Social skill: empathy - Polarity - Higher values are better

Behavioural outcomes

Outcome	RPI vs Control, 2 year, N2 = 977, N1 = 1794
Physical bullying Communities That Care Survey	1.18 (0.72 to 1.93)
Odds ratio/95% CI	
Emotional bullying Communities That Care Survey	1.06 (0.75 to 1.51)
Odds ratio/95% CI	
Cyberbullying Communities That Care Survey	0.89 (0.5 to 1.59)
Odds ratio/95% CI	

Physical bullying - Polarity - Lower values are better

Emotional bullying - Polarity - Lower values are better

Cyberbullying - Polarity - Lower values are better

School environment outcomes

Outcome	RPI vs Control, 2 year, N2 = 977, N1 = 1794
School connectedness National Adolescent Health Study five-item scale Standardised Mean (95% CI)	0.64 (-0.5 to 1.75)

School connectedness - Polarity - Higher values are better

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Social and emotional skills: Social skill - assertiveness

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Social and emotional skills: Social skill - empathy

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Behavioural outcomes: Physical bullying

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Behavioural outcomes: Emotional bullying

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Behavioural outcomes: Cyber bullying

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

School environment outcomes: School connectedness-

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Study arms

RPI (N = NA)

Brief name	Page 878 Restorative Practices Intervention (RPI)
Rationale/theory/Goal	Page 878 <ul style="list-style-type: none"> RPI integrates ecological systems theory and psychology of affect theory into a single model
Materials used	p 880 <ul style="list-style-type: none"> After the first year of this study at the request of schools, the research team developed several implementation tools, including sample plans, and identified implementation targets for schools
Procedures used	p878 <ul style="list-style-type: none"> RPI involves training all school staff on how to enact 11 "Essential Elements" (a continuum of practices that range from informal (e.g using affective statements to communicate feelings) to formal (e.g. hosting a restorative "circle"). (see Table 1 on page 879) Circles can be initiated by students or staff to establish ground rules (proactive circle) or as a planned way to respond to inappropriate behavior affecting a group of students or an entire class (restorative circle). Conferences can be an immediate response to low-level conflicts between two people (impromptu conference) or a planned response to serious or repeated patterns of behavior (restorative conference). Some of the 11 practices are meant to be used in other intervention practices, so all school staff are trained in them. Groups of 8–12 staff members convene regularly (typically monthly) for participatory learning groups to review educational resources and discuss their proficiency in the 11 Essential Elements. School staff are encouraged to use the restorative practices to build relationships and resolve staff issues (restorative staff community), and to interact with parents (restorative approach with families).

Provider	p880 <ul style="list-style-type: none"> • Training, monthly consultation, and ongoing participatory learning groups are used to support and monitor RPI implementation, and International Institute of Restorative Practices coaches visit campuses twice per year to troubleshoot on-site • Staff receive typically four days of training over two school years to learn how to use restorative practices and participate in interactive exercises focused on building the skills needed to run effective circles and conferences • Other optional trainings promote leadership development for school administrators and “train-the-trainer” instruction • International Institute of Restorative Practices facilitators consult with the school monthly by phone for 60–90 min to discuss implementation progress, solve issues, and answer questions that may arise • The International Institute of Restorative Practices facilitator will meet with staff to introduce the process and online tools but staff are responsible for facilitating the ongoing meetings.
Method of delivery	P878 Mostly group
Setting/location of intervention	P878 School
Intensity/duration of the intervention	p881 2 years
Tailoring/adaptation	None reported
Unforeseen modifications	P880 Schools requested implementation tools (see Materials)
Planned treatment fidelity	Acosta 2016 (page 7) <ul style="list-style-type: none"> • RPI was assessed along four dimensions of fidelity—dosage, adherence, quality of delivery, and participant response

	<ul style="list-style-type: none"> Every Fall and Spring during the two year intervention period, and also during a third year following the removal of the active intervention support, all staff were asked to answer an online implementation survey of ten questions about how many circles and conferences they ran per month or week and to what extent they used other restorative practices (1 = Not at all to Always = 5)
Actual treatment fidelity	Not reported
Other details	None

Control (N = NA)

Brief name	p881 Control (not further described)
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	Not reported
Provider	Not reported
Method of delivery	Not reported
Setting/location of intervention	Not reported
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported

Actual treatment fidelity	Not reported
Other details	Not reported

D.1.2 Axford, 2020

Bibliographic Reference Axford, N; Bjornstad, G; Clarkson, S; Ukoumunne, OC; Wrigley, Z; Matthews, J; Berry, V; Hutchings, J; The Effectiveness of the KiVa Bullying Prevention Program in Wales, UK: results from a Pragmatic Cluster Randomized Controlled Trial; Prevention science; 2020

Study details

Study design	Cluster randomised controlled trial
Trial registration number	ISRCTN23999021
Study start date	2012
Study end date	2014
Aim	To test the effectiveness of KiVa, measure the fidelity of its implementation, find out what teachers thought of the program (likes and dislikes, facilitators of and barriers to implementation), examine factors predicted to affect the scalability of the program, and calculate delivery costs.
Country/geographical location	United Kingdom (mainly Wales)
Setting	Primary schools
Inclusion criteria	All key stage 2 students
Exclusion criteria	Not reported

Method of randomisation	Schools (clusters) were randomly allocated on a 1:1 basis to the intervention and control conditions. Complete list randomization using the dynamic adaptive algorithm (Russell et al. 2011) was implemented by a validated computer system, with stratification by size of school (“large” versus “small” split by the median) and proportion of children eligible for free school meals (“high” versus “low” split by the median).
Method of allocation concealment	<ul style="list-style-type: none"> • Researchers were unable to remain blind to school allocation, as the implementation evaluation was undertaken with schools when they were delivering the program. • The trial statistician was blind to allocation status and a statistical analysis plan was written in advance of the analysis. • Schools were informed of their assignment (intervention or control arm) in May 2013.
Unit of allocation	Cluster (school)
Unit of analysis	Individual (pupil)
Statistical method(s) used to analyse the data	<ul style="list-style-type: none"> • The analysis estimated differences at 12-month follow-up between the two trial arms, adjusting for baseline data. • Comparison of outcomes at follow-up was based on the intention-to-treat (ITT) principle with schools (clusters) and students analyzed according to the trial arm they were allocated to, irrespective of the level of intervention actually received. • Trial arms were compared using multiple imputation to impute data for participants with missing values. • Binary outcomes were compared between trial arms using marginal logistic regression models using Generalized Estimating Equations (GEEs). • The absenteeism rate was compared between trials arms using the GEE method specifying the Poisson distribution and log link function. • Continuous outcomes were compared using random effects linear regression.
Attrition	<p>KiVa arm: 1378/1588 = 13.2% attrition</p> <p>Control arm: 1274/1892 = 32.7% attrition</p>
Study limitations (author)	<ul style="list-style-type: none"> • There was large amount of missing data on lesson implementation. • The authors were unable to analyse the relationship between fidelity and outcomes because we do not know which classes students were in when KiVa was delivered. • There appeared to be variation in how the student survey was implemented, although its impact on results is unclear. • Not clear what non-KiVa bullying prevention activities were delivered by schools in either trial arm.

	<ul style="list-style-type: none"> The authors did not investigate program impact on different types of bullying. Data on victimisation and perpetration were only collected from children (not peers or teachers)
Study limitations (reviewer)	Lack of information of exclusion criteria
Source of funding	Big Lottery Wales (Award Number B/1/1/010430196) funded the costs of the trial, including recruitment conferences, provision of program resources for schools, translation of resources into Welsh, support and feedback sessions, and central organizational meetings.

Study arms

KiVa (N = 1588)

11 schools consisting of 1588 pupils

Control (N = 1892)

11 schools consisting of 1892 pupils

Characteristics

Arm-level characteristics

Characteristic	KiVa (N = 1588)	Control (N = 1892)
Age (years)	n = 1578 ; % = 99.4	n = 1636 ; % = 86.5
Sample size		

Characteristic	KiVa (N = 1588)	Control (N = 1892)
Age (years)	8.8 (1.1)	8.9 (1.2)
Mean (SD)		
Gender	n = 1578 ; % = 99.4	n = 1636 ; % = 86.5
Sample size		
Male	n = 711 ; % = 45.1	n = 725 ; % = 44.3
Sample size		
Female	n = 717 ; % = 45.4	n = 684 ; % = 41.8
Sample size		
Ethnicity	n = 1578 ; % = 99.4	n = 1636 ; % = 86.5
Sample size		
White	n = 1176 ; % = 74.5	n = 1018 ; % = 62.2
Sample size		
Asian	n = 78 ; % = 4.9	n = 15 ; % = 0.9
Sample size		
Black	n = 18 ; % = 1.1	n = 6 ; % = 0.4
Sample size		
Mixed	n = 65 ; % = 4.1	n = 39 ; % = 2.3
Sample size		

Characteristic	KiVa (N = 1588)	Control (N = 1892)
Other	n = 2 ; % = 0.1	n = 26 ; % = 1.6
Sample size		
Refused	n = 6 ; % = 0.4	n = 10 ; % = 0.6
Sample size		
Missing	n = 233 ; % = 14.8	n = 522 ; % = 31.9
Sample size		
Socioeconomic status Proxy used - Eligible for free school meals (FSM)	n = 1578 ; % = 99.4	n = 1636 ; % = 86.5
Sample size		
SEND	n = 1578 ; % = 99.4	n = 1636 ; % = 86.5
Sample size		
No SEN	n = 1025 ; % = 65	n = 756 ; % = 46.2
Sample size		
School Action	n = 180 ; % = 11.4	n = 220 ; % = 13.4
Sample size		
School Action Plus	n = 121 ; % = 7.7	n = 171 ; % = 10.5
Sample size		
Statement	n = 27 ; % = 1.7	n = 4 ; % = 0.2
Sample size		

Characteristic	KiVa (N = 1588)	Control (N = 1892)
Missing	n = 225 ; % = 14.3	n = 485 ; % = 29.6
Sample size		

Outcomes

Study timepoints

- 12 month (Follow-up)

Outcomes

Outcome	KiVa, 12 month, N = 1588	Control, 12 month, N = 1892
Victimisation (at least twice a month in the last couple of months) Measured using the Bully/Victim Questionnaire (BVQ) (self-reported)	n = 1578 ; % = 99.4	n = 1636 ; % = 86.5
Sample size		
Victimisation (at least twice a month in the last couple of months) Measured using the Bully/Victim Questionnaire (BVQ) (self-reported)	aOR 0.76 (95%CI: 0.55 to 1.06)	NA
Custom value		
Bullying perpetration Measured using the Bully/Victim Questionnaire (BVQ) (self-reported)	n = 1578 ; % = 99.4	n = 1636 ; % = 86.5
Sample size		

Outcome	KiVa, 12 month, N = 1588	Control, 12 month, N = 1892
Bullying perpetration Measured using the Bully/Victim Questionnaire (BVQ) (self-reported)	aOR 0.82 (95%CI: 0.61 to 1.28)	NA
Custom value		
Absenteesim Measured by school records of authorised and unauthorised half-day absences for participating students	n = 1578 ; % = 99.4	n = 1636 ; % = 86.5
Sample size		
Absenteesim Measured by school records of authorised and unauthorised half-day absences for participating students	aRR 1.04(95%CI: 0.95 to 1.14)	NR
Custom value		

Victimisation (at least twice a month in the last couple of months) - Polarity - Lower values are better

Bullying perpetration - Polarity - Lower values are better

Absenteesim - Polarity - Lower values are better

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Social and emotional skills - Peer relationship problems - KiVa vs Control

Section	Question	Answer
Overall bias	Risk of bias judgement	High <i>(Self-reported outcomes and high attrition)</i>

Behavioural outcomes - Prosocial behaviour - KiVa vs Control

Section	Question	Answer
Overall bias	Risk of bias judgement	High <i>(Self-reported outcomes and high attrition)</i>

Study arms

KiVa (N = NA)

Brief name	KiVa. p. 618
Rationale/theory/Goal	The program teaches children to recognize bullying and how to respond if they see bullying occur. It is based on research showing that bullies tend to behave aggressively to attain higher status and are reinforced by onlookers' apathy or encouragement, and that when bystanders do intervene bullying tends to stop. p. 616
Materials used	Posters in the school building, and high-visibility vests for staff to wear in the playground during breaks. p. 618
Procedures used	Film clips, group discussions, exercises, online games. p. 618
Provider	Class teachers. p. 618
Method of delivery	Group. p. 618
Setting/location of intervention	In school with some at home elements (online games). p. 618

Intensity/duration of the intervention	10 × 90-min lessons to be delivered monthly over a full academic year (September to July, 39 weeks), although they can also be delivered as 20 × 45-min lessons fortnightly over the same period. p. 618
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	<p>Teachers used online record books to document the following: time spent preparing each lesson; time spent delivering each lesson; which parts of the lesson were delivered; their view on lesson content suitability; and the proportion of students engaging positively in the lesson. p. 619</p> <p>School-wide program implementation was assessed by independent observation (one per school) in May/June 2014. Two members of the research team who understood the main aims, theory, and components of the intervention scored seven items on a 3-point scale. p. 619</p>
Actual treatment fidelity	<ul style="list-style-type: none"> Lesson records were completed for at least one of the 20 lessons (across two units) for 65 identifiable classes in the intervention arm (96% of classes), although reporting diminished over the course of units. Lesson records were missing for over half of many lessons (58% of data missing overall). Visits were completed in all 11 intervention schools. The mean (M) total score for the school observation measure was 8.0 out of 14 (standard deviation (SD) = 2.2), and on average schools scored just above 1 out of 2.0 per item (M (SD) = 1.2 (0.3)). p. 620

Control (N = NA)

Brief name	Usual practices (Personal and Social Education). p. 618
Rationale/theory/Goal	Personal and Social Education curriculum aims to develop and explore the students' values and attitudes, equip them to live safe and healthy lives, promote self-respect, celebrate diversity, and empower participation in school and community life as responsible citizens. p. 618
Materials used	Not reported

Procedures used	Not reported
Provider	Not reported
Method of delivery	Not reported
Setting/location of intervention	Not reported
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

D.1.3 Bonell, 2018

Bibliographic Reference	Bonell, C; Allen, E; Warren, E; McGowan, J; Bevilacqua, L; Jamal, F; Legood, R; Wiggins, M; Opondo, C; Mathiot, A; et, al.; Effects of the Learning Together intervention on bullying and aggression in English secondary schools (INCLUSIVE): a cluster randomised controlled trial; Lancet (london, england); 2018; vol. 392 (no. 10163); 2452-2464
Secondary publication(s)	Bonell, Chris, Allen, Elizabeth, Warren, Emily et al. Modifying the secondary school environment to reduce bullying and aggression: the INCLUSIVE cluster RCT; Public Health Research; 2019; vol 7 (no 18)

Study details

Study design	Cluster randomised controlled trial
Trial registration number	ISRCTN10751359
Study start date	Mar-2014
Study end date	Jun-2017
Aim	To test the impact of the Learning Together intervention on rates of bullying and aggression in secondary schools.
Country/geographical location	Southeast England
Setting	Mainstream secondary schools
Inclusion criteria	None reported
Exclusion criteria	There were no exclusion criteria for students
Method of randomisation	Randomisation was stratified by key school-level determinants of violence (single vs. mixed sex school; school-level deprivation measured by percent eligibility for free school meals; and student attainment measured by GCSE results). Sequence allocation was generated by the Clinical Trials Unit at The London School of Hygiene & Tropical Medicine using Stata's ralloc command.
Method of allocation concealment	Sequence allocation was concealed from schools and the wider evaluation and intervention teams.
Unit of allocation	Schools
Unit of analysis	Individuals
Statistical method(s) used to analyse the data	The primary analysis of outcomes was by intention to treat, including all randomly assigned schools and students. Each measure was analysed using a separate mixed model with the outcomes from each timepoint treated as a repeated measures. Fixed effects of group (intervention vs control), time (baseline, 24 months, 36 months), and the treatment x time interaction were specified, and the estimated baseline measures were constrained to be identical in the two groups of the trial. Analyses used random effects for school and participants to allow for correlations within schools and repeated measures within participants.
Attrition	Not reported

Study limitations (author)	<ul style="list-style-type: none"> • Students that were absent at baseline or follow-up assessment points could have introduced bias, although the authors note that if non-responders are more likely to have experienced bullying or behaviour problems, this limitation is likely to have underestimated the intervention effect. • The large number of secondary outcomes investigated necessitated multiple statistical testing • Some control group schools implemented activities that resembled some elements of Learning Together intervention. However, it was noted that only five control schools implemented activities that resembled the three key elements of the intervention (restorative practice, social and emotional skills education, and student participation in decision making), and additional analyses excluding these control schools found similar intervention effects.
Study limitations (reviewer)	As above
Source of funding	National Institute for Health Research, Educational Endowment Foundation

Study arms

Learning Together (INCLUSIVE) (N = 3320)

Cluster N = 20

Control (N = 3349)

Cluster N = 20

Characteristics

Arm-level characteristics

Characteristic	Learning Together (INCLUSIVE) (N = 3320)	Control (N = 3349)
Age	11.76 (0.43)	11.75 (0.44)
Mean (SD)		
Male	n = 1464 ; % = 44.88	n = 1639 ; % = 49.85
No of events		
Female	n = 1804 ; % = 55.2	n = 1649 ; % = 50.15
No of events		
White British	n = 1221 ; % = 37.32	n = 1391 ; % = 41.47
No of events		
White Other	n = 273 ; % = 8.34	n = 291 ; % = 8.78
No of events		
Asian / Asian British	n = 786 ; % = 24.02	n = 859 ; % = 25.92
No of events		
Black / Black British	n = 535 ; % = 16.35	n = 384 ; % = 11.59
No of events		
Chinese / Chinese British	n = 35 ; % = 1.07	n = 11 ; % = 0.33
No of events		

Characteristic	Learning Together (INCLUSIVE) (N = 3320)	Control (N = 3349)
Mixed ethnicity	n = 224 ; % = 6.85	n = 238 ; % = 7.18
No of events		
Other	n = 198 ; % = 6.05	n = 140 ; % = 4.22
No of events		
Socioeconomic status	6 (1.8)	6 (1.8)
Family affluence scale		
Mean (SD)		

Outcomes

Study timepoints

- Baseline
- 24 month
- 36 month

Social and emotional skills

Outcome	Learning Together (INCLUSIVE), Baseline, N =	Learning Together (INCLUSIVE), 24 month, N =	Learning Together (INCLUSIVE), 36 month, N =	Control, Baseline, N =	Control, 24 month, N =	Control, 36 month, N =
Not reported						

Not reported

Behavioural outcomes

Outcome	Learning Together (INCLUSIVE), Baseline, N = 3320	Learning Together (INCLUSIVE), 24 month, N = 3095	Learning Together (INCLUSIVE), 36 month, N = 2281	Control, Baseline, N = 3347	Control, 24 month, N = 3195	Control, 36 month, N = 3087
Self-reported bullying victimisation Gatehouse Bullying Scale Mean (SE)	NR (NR)	0.37 (0.02)	0.29 (0.02)	NR (NR)	0.42 (0.02)	0.34 (0.02)
Self-reported bullying victimisation Gatehouse Bullying Scale Mean (SD)	0.48 (0.6)	0.37 (1.11)	0.29 (0.96)	0.51 (0.63)	0.42 (1.13)	0.34 (1.11)
Perpetration of Aggression Edinburgh Study of Youth Transitions and Crime (ESYTC) school misbehaviour subscale Mean (SE)	NR (NR)	3.96 (0.28)	4.04 (0.21)	NR (NR)	4.24 (0.28)	4.33 (0.2)
Perpetration of Aggression Edinburgh Study of Youth Transitions and Crime (ESYTC) school misbehaviour subscale Mean (SD)	2.72 (4.77)	3.96 (15.58)	4.04 (11.68)	2.92 (4.84)	4.24 (15.83)	4.33 (11.3)

Self-reported bullying victimisation - Polarity - Lower values are better

Perpetration of Aggression - Polarity - Lower values are better

Note: Paper reports Mean/SE for 24 and 36 month follow ups; supplementary material provides Mean/SD for baseline. SDs have been manually calculated for 24 and 36 month follow ups.

Emotional distress

Outcome	Learning Together (INCLUSIVE), Baseline, N = 3320	Learning Together (INCLUSIVE), 24 month, N = 3095	Learning Together (INCLUSIVE), 36 month, N = 2281	Control, Baseline, N = 3347	Control, 24 month, N = 3195	Control, 36 month, N = 3087
Emotional Well-being Short Warwick-Edinburgh Mental Well-Being Scale Mean (SE)	NR (NR)	23.79 (0.21)	23.32 (0.19)	NR (NR)	23.54 (0.2)	22.88 (0.19)
Emotional Well-being Short Warwick-Edinburgh Mental Well-Being Scale Mean (SD)	24.33 (5.91)	23.79 (11.68)	23.32 (9.07)	24.11 (5.91)	23.54 (11.3)	22.88 (10.56)
Psychological Problems Strengths and Difficulties Questionnaire Mean (SE)	NR (NR)	11.23 (0.17)	11.51 (0.19)	NR (NR)	11.83 (0.16)	12.2 (0.18)
Psychological Problems Strengths and	10.7 (5.76)	11.23 (9.46)	11.51 (9.07)	11 (5.99)	11.83 (9.04)	12.2 (10)

Outcome	Learning Together (INCLUSIVE), Baseline, N = 3320	Learning Together (INCLUSIVE), 24 month, N = 3095	Learning Together (INCLUSIVE), 36 month, N = 2281	Control, Baseline, N = 3347	Control, 24 month, N = 3195	Control, 36 month, N = 3087
Difficulties Questionnaire						
Mean (SD)						

Emotional Well-being - Polarity - Higher values are better

Psychological Problems - Polarity - Lower values are better

Note: Paper reports Mean/SE for 24 and 36 month follow ups; supplementary material provides Mean/SD for baseline. SDs have been manually calculated for 24 and 36 month follow ups.

Quality of life

Outcome	Learning Together (INCLUSIVE), Baseline, N = 3320	Learning Together (INCLUSIVE), 24 month, N = 3095	Learning Together (INCLUSIVE), 36 month, N = 2281	Control, Baseline, N = 3347	Control, 24 month, N = 3195	Control, 36 month, N = 3087
QoL Paediatric Quality of Life Inventory	NR (NR)	80.97 (0.51)	80.65 (0.55)	NR (NR)	79.75 (0.5)	78.82 (0.54)
Mean (SE)						
QoL Paediatric Quality of Life Inventory	80.98 (14.08)	80.97 (28.37)	80.65 (26.27)	80.39 (14.31)	79.75 (28.26)	78.82 (30)
Mean (SD)						

QoL - Polarity - Higher values are better

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Behavioural outcomes: Self-reported bullying victimisation 24 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Behavioural outcomes: Self-reported bullying victimisation 36 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Behavioural outcomes: Self-reported bullying victimisation Mean SD 24 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Behavioural outcomes: Self-reported bullying victimisation-Mean SD 36 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Behavioural outcomes: Perpetration of Aggression 24 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Behavioural outcomes: Perpetration of Aggression 36 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Behavioural outcomes: Perpetration of Aggression-MeanSD 24 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Behavioural outcomes: Perpetration of Aggression-MeanSD 36 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Emotional distress: Emotional Well-being-24 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Emotional distress: Emotional Well-being 36 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Emotional distress: Emotional Well-being-Mean SD 24 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Emotional distress Emotional Well-being Mean SD 36 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Emotional distress: Psychological Problems 24 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Emotional distress: Psychological Problems 36 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Emotional distress: Psychological Problems-Mean SD 24 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Emotional distress: Psychological Problems-Mean SD- 36 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Quality of life-QoL 24 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Quality of life: QoL 36 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Quality of life: QoL-MeanSD- 24 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Quality of life: QoL-MeanSD 36 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Study arms

Intervention (N = 3320)

Brief name	The Learning Together intervention (p. 1)
Rationale/theory/Goal	<p>Learning Together is a school-based intervention that aims to support students to choose healthier behaviours by promoting their autonomy, motivation and reasoning ability. This was done by facilitating engagement with the school and education, improving student-teacher relationships, and re-orienting school practices to focus on student needs (p. 4). There are 3 aspects to the intervention:</p> <ol style="list-style-type: none"> 1. Whole school interventions to modify school policies and systems in order to increase student engagement 2. Restorative practice to prevent or resolve conflicts. This enables victims to communicate to perpetrators the effects of the harm, and perpetrators to acknowledge and amend their behaviours. 3. Social and emotional education to teach students the skills needed to manage their emotions and relationships. <p>(pp. 2-3)</p>
Materials used	All school staff received training in restorative practices. Schools were given a manual to guide action group meetings (where staff and students meet twice per term to revise relevant school policies and coordinate the intervention). Schools received a report of findings from the baseline survey to outline local needs to help inform decisions. Schools were also provided with lesson plans and slides to guide lessons on social and emotional skills (pp. 4-5).
Procedures used	All school staff received training on restorative practices, with additional in-depth training for selected staff. Restorative practices included primary prevention of incidents (e.g. circle time where students and teachers discuss feelings, identify

	<p>problems and work to build and maintain relationships) and secondary prevention to resolve incidents (e.g. conferencing, bringing together parties to a conflict, engaging professionals to support with more serious incidents) (pp. 4-5).</p> <p>Action group meetings were established and held twice per term to coordinate intervention delivery and review rules and policies regarding discipline and behaviour management. They reviewed findings of the baseline survey to inform decisions and were focused on implementing actions (Supplementary material, p. 1).</p> <p>Teachers delivered lessons on social and emotional skills for students in years 8-10 (age 12-15 years) (p. 5).</p>
Provider	Teachers were trained in restorative practice by trainers accredited by the UK's Restorative Justice Council. Action group meetings were attended by an external facilitator who were freelance consultants with experience of school leadership or change. Action groups comprised at least 6 school staff (including one member of the school's SLT and one member of the school's teaching, student support and administrative staff) and at least 6 school students. Lessons were delivered by school teachers using guides and lesson plans provided (Supplementary material p. 2).
Method of delivery	Face to face (Supplementary material p. 2).
Setting/location of intervention	Mainstream secondary schools (p. 3)
Intensity/duration of the intervention	<p>The intervention was delivered over 3 years (p. 1).</p> <p>Restorative practice training comprised a half-day for all staff plus in-depth three-day training for five to ten staff at each school. Restorative practices were delivered as frequently as required. Action groups met six times per year (twice per term) in each intervention year. Students received 5-10 hours teaching per year (Supplementary material p. 2).</p>
Tailoring/adaptation	Planned adaptations: Action groups ensured that implementation in their school was appropriate to local needs. This included ensuring revisions to policies and rules built on existing work and deciding which curriculum modules to deliver in each year (Supplementary material p. 2).
Unforeseen modifications	None (Supplementary material p. 2)
Planned treatment fidelity	Fidelity was assessed during the first two years using 8 implementation markers that included whether at least five staff attended in-depth training; six action-group meetings occurred per year; policies and rules were reviewed; and schools delivered at least 5h or two modules each year. Schools were scored out of 8. In the third year, only 4 of these implementation markers were used to assess for fidelity because research teams had less access to schools (p. 5).

Actual treatment fidelity	Mean fidelity scores were 6 out of 8 for years 1 and 2, and 1 out of 4 for year 3 (Supplementary material p. 24).
Other details	This study is the follow up cRCT of the pilot reported in Bonell (2015). In the pilot the intervention was referred to as the INCLUSIVE intervention but in this trial they mainly refer to it as the Learning Together intervention.

Cluster N = 20

Control (N = 3349)

Brief name	Standard practice (control) (p. 1)
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	Control schools continued with their normal practices and received no additional input (p. 5)
Provider	Not reported
Method of delivery	Not reported
Setting/location of intervention	Mainstream secondary schools (p. 3)
Intensity/duration of the intervention	3 years (p. 1)
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Cluster N = 20

D.1.4 Bonell, 2015

Bibliographic Reference Bonell, C; Fletcher, A; Fitzgerald-Yau, N; Hale, D; Allen, E; Elbourne, D; Jones, R; Bond, L; Wiggins, M; Miners, A; et, al.; Initiating change locally in bullying and aggression through the school environment (INCLUSIVE): a pilot randomised controlled trial; Health technology assessment (winchester, england); 2015; vol. 19 (no. 53); 1-109vii

Study details

Study design	Cluster randomised controlled trial
Trial registration number	Current Controlled Trials ISRCTN88527078
Study start date	Sep-2011
Study end date	Jul-2012
Aim	The primary aim of this pilot trial was to examine the feasibility and acceptability of the INCLUSIVE intervention, but a secondary aim was to explore its' impact on aggressive behaviours.
Country/geographical location	London and southeast England
Setting	Mainstream secondary schools
Inclusion criteria	Schools eligible to participate were mixed-sex, state secondary schools (including academies) in London and south-east England judged by the national schools inspectorate (Ofsted) as being 'satisfactory' or better and in which $\geq 6\%$ of students are eligible for FSM.
Exclusion criteria	Schools rated by Ofsted as 'unsatisfactory' or schools in which $< 6\%$ of students were eligible for FSM.
Method of randomisation	Randomisation occurred after baseline surveys had been completed. It was undertaken remotely in the offices of the Clinical Trials Unit at the LSHTM. Within each matched pair, schools were randomly allocated using simple random number tables (intervention if $n > 0.5$; control arm if $n \leq 0.5$) with no restriction.

Method of allocation concealment	Not reported
Unit of allocation	School
Unit of analysis	Individuals
Statistical method(s) used to analyse the data	All quantitative data were analysed in Stata 12 and adjusted for clustering by school and, when possible, appropriate confounders including sex, ethnicity and housing tenure at baseline. Adjustment for baseline differences in school practices was not possible as these were not measured.
Attrition	No schools dropped out of the study and student survey responses rates were 91–94% at follow-up in the intervention schools and 87–96% in comparison schools.
Study limitations (author)	<ul style="list-style-type: none"> • As this was a pilot study, it was not powered to detect significant differences so all estimates have very wide confidence intervals and the point estimates are not meaningful. • There were very marked differences at baseline between the study arms in terms of students' deprivation, family structure and behaviour problems: the intervention schools were consistently more disadvantaged. Adjustment for confounding was necessarily conservative given the small sample size. • The short intervention period (1 year) may have been insufficient to detect effects.
Study limitations (reviewer)	Study was a pilot study only and not design to detect effectiveness. AAYP and ESYTC scores increased between baseline and follow-up in both trial arms, as is expected normatively in year 8 students
Source of funding	The National Institute for Health Research Health Technology Assessment programme (research), the Paul Hamlyn Foundation, the Big Lottery Fund and the Coutts Charitable Trust (intervention).

Study arms

INCLUSIVE (N = 583)

Cluster N =2

Control (N = 561)

Cluster N=2

Characteristics

Arm-level characteristics

Characteristic	INCLUSIVE (N = 583)	Control (N = 561)
Age	12.12 (0.44)	12.11 (0.32)
Mean (SD)		
Male	n = 309 ; % = 54.2	n = 299 ; % = 54.3
No of events		
Female	n = 261 ; % = 45.8	n = 252 ; % = 45.7
No of events		
White British	n = 282 ; % = 49.5	n = 216 ; % = 39.1
No of events		
Asian / Asian British	n = 87 ; % = 15.3	n = 81 ; % = 14.6
No of events		
Black / Black British	n = 103 ; % = 18.1	n = 104 ; % = 18.8
No of events		
Chinese / Chinese British	n = 4 ; % = 0.7	n = 5 ; % = 0.9

Characteristic	INCLUSIVE (N = 583)	Control (N = 561)
No of events		
Mixed ethnicity	n = 46 ; % = 8.1	n = 55 ; % = 9.9
No of events		
Other	n = 48 ; % = 8.4	n = 92 ; % = 16.6
No of events		
Socioeconomic status Family affluence scale (FAS)	5.47 (1.83)	5.83 (1.85)
Mean (SD)		

Outcomes

Study timepoints

- Baseline
- 9 month (9 months from baseline; immediately post-intervention)

Social and emotional skills

Outcome	INCLUSIVE, Baseline, N =	INCLUSIVE, 9 month, N =	Control, Baseline, N =	Control, 9 month, N =
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Not reported

Behavioural outcomes

Outcome	INCLUSIVE, Baseline, N = 583	INCLUSIVE, 9 month, N = 508	Control, Baseline, N = 561	Control, 9 month, N = 509
Bullying victimisation Gatehouse Bullying Scale (GBS) Mean (SD)	1.04 (1.05)	1.02 (0.96)	0.91 (0.96)	0.89 (0.94)
Violence Perpetration AAYP Violence Scale Mean (SD)	0.92 (1.61)	1.09 (1.72)	0.7 (1.34)	0.88 (1.62)
Aggression Perpetration ESYTC School Misbehaviour Subscale Mean (SD)	2.94 (4.47)	4.32 (5.65)	2.72 (4.26)	3.52 (5.27)

Bullying victimisation - Polarity - Lower values are better

Violence Perpetration - Polarity - Lower values are better

Aggression Perpetration - Polarity - Lower values are better

Emotional distress

Outcome	INCLUSIVE, Baseline, N = 583	INCLUSIVE, 9 month, N = 508	Control, Baseline, N = 561	Control, 9 month, N = 509
Emotional Well-being Short Warwick-Edinburgh Mental Well-Being Scale Mean (SD)	23.01 (5.83)	24.13 (5.01)	24.35 (5.43)	24.21 (5.18)

Outcome	INCLUSIVE, Baseline, N = 583	INCLUSIVE, 9 month, N = 508	Control, Baseline, N = 561	Control, 9 month, N = 509
Psychological Problems Strengths and Difficulties Questionnaire (SDQ)	11.17 (5.25)	10.68 (5.68)	10.04 (5.62)	9.47 (5.42)
Mean (SD)				

Emotional Well-being - Polarity - Higher values are better

Psychological Problems - Polarity - Lower values are better

Quality of life

Outcome	INCLUSIVE, Baseline, N = 583	INCLUSIVE, 9 month, N = 508	Control, Baseline, N = 561	Control, 9 month, N = 509
QoL Paediatric Quality of Life Scale (PedsQL)	82.04 (12.46)	82.53 (12.81)	84.08 (12.72)	84.71 (12.45)
Mean (SD)				

QoL - Polarity - Higher values are better

School environment outcomes

Outcome	INCLUSIVE, Baseline, N = 583	INCLUSIVE, 9 month, N = 508	Control, Baseline, N = 561	Control, 9 month, N = 509
School Climate Beyond Blue School Climate Questionnaire (BBSCQ)	1.9 (0.39)	2.11 (0.42)	1.79 (0.4)	1.96 (0.42)

Outcome	INCLUSIVE, Baseline, N = 583	INCLUSIVE, 9 month, N = 508	Control, Baseline, N = 561	Control, 9 month, N = 509
Mean (SD)				

School Climate - Polarity - Higher values are better

School attendance outcomes

Outcome	INCLUSIVE, Baseline, N = 583	INCLUSIVE, 9 month, N = 508	Control, Baseline, N = 561	Control, 9 month, N = 509
Truancy Self-reported truancy assessed with a single 'yes/no' item. Percentage reported represents number of students responding 'YES' to truancy item No of events	n = 31 ; % = 5.6	n = 53 ; % = 11.1	n = 34 ; % = 6.5	n = 48 ; % = 10.2
Exclusion Self-reported exclusion (temporary or permanent) assessed with single 'yes/no' item. Percentage reported represents number of students responding 'YES' to exclusion item No of events	n = 21 ; % = 3.8	n = 32 ; % = 6.7	n = 22 ; % = 4.2	n = 33 ; % = 7.1

Truancy - Polarity - Lower values are better

Exclusion - Polarity - Lower values are better

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Behavioural outcomes: Bullying victimisation 9 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Behavioural outcomes: Violence Perpetration 9 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Behavioural outcomes: Aggression Perpetration 9 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Emotional distress: Emotional Well-being 9 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Emotional distress: Psychological Problems 9 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

School environment outcomes: School Climate 9 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

School attendance outcomes: Truancy 9 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

School attendance outcomes: Exclusion 9 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Low

Study arms

Intervention (N = 583)

Brief name	The INCLUSIVE intervention (p. xxiii).
Rationale/theory/Goal	The INCLUSIVE (initiating change locally in bullying and aggression through the school environment) intervention is a whole-school restorative approach to behaviour change informed by theories of human functioning and school organisation. It aims to reduce bullying and aggression, and promote mental and emotional well-being, by combining changes to the school environment with the promotion of social and emotional skills and restorative practices (p. xxiii). The intervention provides a systematic and scalable process in which schools are supported to deliver a health promotion curriculum and restorative practice activities alongside modifying how they manage their 'core business' of teaching, pastoral care and discipline in order to encourage a more health-promoting school environment (p. 4).
Materials used	Teaching and learning materials were provided to support delivery of the curriculum (p. 7).
Procedures used	<p>As part of the baseline assessment, student views on the school environment and their experience of aggression and bullying were obtained; these were used to produce a needs assessment report that was tailored to each intervention school. School action groups then used this report to determine local priorities and inform decision-making about how to improve their school environment. These locally adaptable actions occurred within a standardised overall process with 3 core intervention elements:</p> <ol style="list-style-type: none"> 1) whole-school staff training in restorative practices, including <i>circle time</i> where staff and students sit in a circle and share ideas, thoughts and feelings relating to social, emotional or curricular activities. All participants and their unique contributions are treated as equally valuable. For serious incidents of bullying or violence, school-based <i>restorative conferencing</i> is used to provide a safe, inclusive environment in which all individuals involved in the incident feel able to fully and constructively participate in the process of resolution to repair harm. Appropriate forms of punishment are also identified. 2) formation of a school action group who reviewed and revised school policies relating to discipline, behaviour management, staff–student communication and school rules. The group consisted of a minimum of 6 students and 6 staff, including at least one member of the school senior management team, and one member of teaching, pastoral and support staff. It was also desirable but not essential for specialist health staff such as school nurse or CAMHS staff to attend.

	<p>3) a new social and emotional skills curriculum for year 8 students (12-13 year olds) which included teaching on restorative practices, relationships, and social and emotional skills. Modules included establishing respectful relationships in the classroom and the wider school; managing emotions; understanding and building trusting relationships; exploring others' needs and avoiding conflict; and maintaining and repairing relationships. Schools were able to tailor the curriculum to their needs, as informed by the needs assessment data, and delivered modules either as 'stand-alone' lessons or integrated into various subject lessons (e.g. English).</p> <p>External facilitators worked with schools to co-ordinate the intervention and support school action groups. They also organised and conducted staff training, assisted schools with their policies and practices, worked with schools to adapt their curriculum, and provided ongoing support and feedback throughout intervention implementation.</p> <p>(pp. 6-7)</p>
Provider	<p>Schools were supported by an expert facilitator (a freelance education consultant with previous secondary school leadership experience) (p. 7).</p> <p>Training in restorative practices was conducted by a specialist training provider who also facilitated restorative conferences (p. 7).</p>
Method of delivery	Not reported but assumed face to face.
Setting/location of intervention	Secondary schools (p. xxiii)
Intensity/duration of the intervention	<p>The intervention was delivered over one academic year (p. 6)</p> <p>The action group met at least 6 times over the school year (approximately once every half-term) (p. 6).</p> <p>Students received 5-10 hours teaching on restorative practices, relationships, and social and emotional skills (p. 7).</p> <p>All school staff received 30-60 minutes training on restorative approaches followed by a further half day training. An enhanced 3-day training course was provided to 5-10 staff at each school (p. 7)</p>
Tailoring/adaptation	The intervention was designed to allow local tailoring informed by the baseline needs assessment (p. 6).

Unforeseen modifications	None reported
Planned treatment fidelity	To examine the fidelity of action group implementation, evidence from facilitators' checklists, action group meeting minutes and school policies was collected alongside data from interviews with action group members at each school. Training providers' checklists, observations of staff training sessions and focus groups with school staff provided evidence for fidelity with respect to staff training and uptake of restorative practices. To examine the delivery of the student curriculum, documentary evidence from facilitators' checklists and focus groups with school staff and students was used (p. 14).
Actual treatment fidelity	Between 91 and 97% of students completed the needs assessment survey at all intervention schools. At least six action group meetings were held in each intervention school. More than 20 staff completed restorative practices training at each school and the number of teachers attending the enhanced 3-day restorative practices training ranged from 8 to 12 for each school. Assessments showed all schools implemented restorative practices such as circle time but only 3 of the 4 intervention schools used restorative conferencing. All schools delivered a tailored curriculum and provided between 7 and 12 hours of lessons (pp. 31-34).
Other details	This was a pilot study and the primary focus was on feasibility and acceptability of the intervention; it did not aim to study intervention effects and was not powered to do so (p. xxiv). It was a 1-year pilot and precedes Bonell (2018) which was a 3-year cRCT.

Cluster N = 4

Control (N = 561)

Brief name	Comparison arm (p. 11)
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	Continuation of normal practice (p. xxiv)
Provider	Not reported
Method of delivery	Not reported

Setting/location of intervention	Secondary schools (p. xxiv)
Intensity/duration of the intervention	One academic year (p. 6)
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Cluster N = 4

D.1.5 Brown, 2011

Bibliographic Reference Brown, Eric C.; Low, Sabina; Smith, Brian H.; Haggerty, Kevin P.; Outcomes from a School-Randomized Controlled Trial of Steps to Respect: A Bullying Prevention Program; *School Psychology Review*; 2011; vol. 40 (no. 3); 423-433

Secondary publication(s) Low, Sabina and Van Ryzin, Mark (2014) The Moderating Effects of School Climate on Bullying Prevention Efforts. *School Psychology Quarterly* 29(3): 306-319

Study details

Study design	Cluster randomised controlled trial
Trial registration number	Not reported
Study start date	Nov-2008

Study end date	May-2009
Aim	To examine the efficacy of the Steps to Respect (STR) program on reducing school bullying victimisation and perpetration. It also aimed to assess whether the program can influence proximal and distal bullying-related risk factors, anti-bullying attitudes, social skills, bystander behaviour, school climate and school connectedness.
Country/geographical location	California, US
Setting	Elementary schools (3rd, 4th and 5th Grade)
Inclusion criteria	School inclusion criteria: <ul style="list-style-type: none"> • Broad socioeconomic and racial/ethnic diversity • Had an established liason with the Committee for Children • Expressed a strong need or desire for school bullying prevention • Were not currently using a school bullying prevention program
Exclusion criteria	Day schools, alternative schools and private or parochial schools were excluded from the eligible pool of schools.
Method of randomisation	Schools were matched into pairs using National Center for Education Statistics data on characteristics of the school environment (e.g. total student enrollment, number of teachers) and characteristics of the student population (e.g. ethnic/racial percentages, percentage eligible for free school lunches). Schools within each matched pair were randomly assigned to intervention or waitlist control condition using a random number table.
Method of allocation concealment	Not reported
Unit of allocation	School
Unit of analysis	Individual and school
Statistical method(s) used to analyse the data	Analyses consisted of mixed-model analysis of covariance, implemented as a hierarchical linear model for continuous outcomes or as a hierarchical generalized linear model for binary, count, and ordered categorical outcomes. The models controlled for baseline characteristics (age, gender, ethnicity, grade, and the pretest measure of the outcome).
Attrition	Not reported

Study limitations (author)	<p>The study did not use observational measures of playground behaviours and relied on students' self-report bullying and bullying related behaviours.</p> <p>The study was of relatively short duration - the STR program is designed to be implemented across three consecutive grades but this study only examined its impact across one grade and had a relatively short follow up that did not permit assessment of program sustainability.</p> <p>The assessment of program fidelity relied on teacher self reports rather than by trained independent observers.</p>
Study limitations (reviewer)	As above.
Source of funding	This research was supported by a grant from the Raynier Foundation.

Study arms

Intervention (N = 17)

17 clusters, n not reported (total sample 2940)

Waitlist control (N = 16)

16 clusters, n not reported (total sample 2940)

Characteristics

Arm-level characteristics

Characteristic	Intervention (N = 17)	Waitlist control (N = 16)
Male	n = NR ; % = 49	n = NR ; % = 52
No of events		
Female	n = NR ; % = 51	n = NR ; % = 48
No of events		
White	n = NR ; % = 52	n = NR ; % = 53
No of events		
African American	n = NR ; % = 7	n = NR ; % = 6
No of events		
Asian American	n = NR ; % = 6	n = NR ; % = 6
No of events		
Other or mixed race	n = NR ; % = 35	n = NR ; % = 35
No of events		
Age	8.9 (0.84)	8.9 (0.81)
Mean (SD)		

Outcomes

Study timepoints

- Baseline
- 18 month (Post-intervention. Intervention was implemented from December 2008-May 2009)

Behavioural outcomes

Outcome	Intervention, Baseline, N = 17	Intervention, 18 month, N = 17	Waitlist control, Baseline, N = 16	Waitlist control, 18 month, N = 16
Bullying victimisation revised version of the Colorado Trust's Bullying Prevention Initiative Student Survey	2.14 (1.04)	2.11 (1.03)	2.1 (1.04)	2.18 (1.06)
Mean (SD)				

Bullying victimisation - Polarity - Lower values are better

Social and emotional skills and attitudes

Outcome	Intervention, Baseline, N = 17	Intervention, 18 month, N = 17	Waitlist control, Baseline, N = 16	Waitlist control, 18 month, N = 16
Student Attitudes Against Bullying revised version of the Colorado Trust's Bullying Prevention Initiative Student Survey	6.18 (1.68)	5.64 (2.13)	6.19 (1.73)	5.55 (2.23)
Mean (SD)				

Student Attitudes Against Bullying - Polarity - Higher values are better

School environment outcomes

Outcome	Intervention, Baseline, N = 17	Intervention, 18 month, N = 17	Waitlist control, Baseline, N = 16	Waitlist control, 18 month, N = 16
Student climate revised version of the Colorado Trust's Bullying Prevention Initiative Student Survey Mean (SD)	2.57 (0.59)	2.6 (0.52)	2.57 (0.58)	2.51 (0.55)
School connectedness revised version of the Colorado Trust's Bullying Prevention Initiative Student Survey Mean (SD)	2.99 (0.65)	2.89 (0.67)	3.02 (0.6)	2.86 (0.68)

Student climate - Polarity - Higher values are better

School connectedness - Polarity - Higher values are better

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Behavioural outcomes: Bullying victimisation 18 months

Section	Question	Answer
Overall bias	Risk of bias judgement	High

Social and emotional skills and attitudes: Student Attitudes Against Bullying 18 months

Section	Question	Answer
Overall bias	Risk of bias judgement	High

School environment outcomes: Student climate- 18 months

Section	Question	Answer
Overall bias	Risk of bias judgement	High

School environment outcomes: School connectedness 18 months

Section	Question	Answer
Overall bias	Risk of bias judgement	High

Study arms

Intervention (N = 17)

Brief name	Steps to Respect (STR) (p. 425)
Rationale/theory/Goal	STR is a school-based bullying prevention program based on a social-ecological model of bullying that recognises that youth behaviour is shaped by multiple factors within nested contextual systems and that bullying is a social process strongly influenced by the behaviours and reactions of peers. The underlying theory is that peer attitudes, norms and behaviours are important in determining and maintaining rates of bullying.

	<p>The program seeks to change attitudes about the acceptability of bullying by clearly labelling bullying behaviour as wrong, increasing empathy for students who are bullied, and educating students about their responsibility as bystanders to bullying.</p> <p>STR targets multiple areas of the school environment through intervention components directed at the school, peer and individual levels. School-wide components foster a positive school climate and positive norms. Classroom curricula are intended to promote socially responsible norms and increase social-emotional skills. Goals include building friendship skills, increasing empathy, improving assertiveness and communication skills, and teaching appropriate bystander responses.</p> <p>(p. 425)</p>
Materials used	<p>Steps to Respect is a fully manualised program that includes classroom lessons, staff training and support materials (http://www.cfchildren.org)</p> <p>Classroom curriculum comprises 11 semi-scripted skills lessons focusing on social-emotional skills for positive peer relations (p. 433)</p>
Procedures used	<p>Prior to intervention delivery, all participating school staff received 1-day training which consisted of a 3-hour overview of program goals and key features of program content, 1.5-hour training in how to coach students involved in bullying, and 2-hour overview of classroom materials and lesson specific instructional strategies.</p> <p>During program implementation, teachers delivered weekly 1 hour lessons on topics including joining groups and being a responsible bystander. Sessions included direct instruction, games, skills practice, and small- and large-group discussion.</p> <p>Parents were engaged in the program through letters outlining key concepts and skills, and describing activities for home use. Parents were informed about the school's anti-bullying policy and procedures. (p. 433)</p>
Provider	<p>Research staff from Committee for Children delivered the training to schools then school staff, primarily teachers, delivered the STR program to students (p. 433)</p>
Method of delivery	<p>Face to face lessons (p. 433)</p>
Setting/location of intervention	<p>School setting (p. 433)</p>

Intensity/duration of the intervention	11 weekly lessons, totally about 1 hour, taught over 2-3 days each week (p. 433)
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Teachers completed a weekly Program Implementation Log online. They also provided self-reported ratings of school-wide implementation using a 4-point scale (1 = poor, 4 = excellent), and self-reported rating of program engagement with weekly lessons using a 4 point scale (1 = not at all, 4 = a lot).
Actual treatment fidelity	<ul style="list-style-type: none"> • 92% of teachers reported completing all objectives. • 83% of teachers reported teaching at least 80% of the lessons and 91% reported teaching at least 60% of the lessons. • 75% of students were exposed to at least 95% of all lessons. • At the end of the intervention year, school-wide implementation of the program was rated highly ($M = 3.25$; $SD = 0.44$) and students were rated as engaged with the lessons ($M = 3.67$; $SD = 0.54$). <p>(p. 433-434)</p>

Cluster N = 17

Waitlist control (N = 16)

Brief name	Waitlist control (p. 427)
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	Schools randomly assigned to the Waitlist control condition were instructed to wait 1 year before implementing the program (p. 427)
Provider	Not reported
Method of delivery	Not reported

Setting/location of intervention	Not reported
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Cluster N = 16

D.1.6 Cross, 2016

Bibliographic Reference Cross, D; Shaw, T; Hadwen, K; Cardoso, P; Slee, P; Roberts, C; Thomas, L; Barnes, A; Longitudinal impact of the Cyber Friendly Schools program on adolescents' cyberbullying behavior; *Aggressive behavior*; 2016; vol. 42 (no. 2); 166-180

Secondary publication(s) Cross, Donna and Barnes, Amy (2018) If it's about me, why do it without me? Genuine student engagement in school cyberbullying education. Special Issue: 10th anniversary edition of the *International Journal of Emotional Education*. 10(2): 139-145

Study details

Study design	Cluster randomised controlled trial
Trial registration number	Not reported

Aim	To measure the longitudinal impact of a whole-school online cyberbullying prevention and intervention program
Country/geographical location	Australia
Setting	Metropolitan non-Government secondary schools
Inclusion criteria	Schools had at least 90 Grade 8 students
Exclusion criteria	None
Method of randomisation	<ul style="list-style-type: none"> • Schools were stratified by school type (co-educational or single-gender), socioeconomic status and number of grade 8 students • Schools were randomly assigned in their strata (not further described)
Method of allocation concealment	Not reported
Unit of allocation	School
Unit of analysis	Individual
Statistical method(s) used to analyse the data	<ul style="list-style-type: none"> • Descriptive statistics - although noted that the data was skewed due to most of the data distribution was at the minimum end of the scale • Two-part growth models were used • Accounted for school-level clustering • ICC not reported
Attrition	<ul style="list-style-type: none"> • Intervention: 1582/1878 (84.2%) completed follow-up assessment • Control: 1292/1504 (85.9%) completed follow-up assessment
Study limitations (author)	<ul style="list-style-type: none"> • The prevalence of cyberbullying was assessed using student self-report measures which are prone to social desirability and other biases affecting accuracy. • Only non-government metropolitan schools were included in this study, and as such the generalizability of the findings beyond this sample is unknown

Study limitations (reviewer)	None to add
Source of funding	Grant from the Western Australian Health Promotion Foundation

Study arms

Cyber Friendly Schools (N = 1878)

19 schools

Control (N = 1504)

16 schools

Outcomes

Study timepoints

- Baseline
- 2 year (From baseline)

Behavioural outcomes

Outcome	Cyber Friendly Schools, Baseline, N = 1878	Cyber Friendly Schools, 2 year, N = 1582	Control, Baseline, N = 1504	Control, 2 year, N = 1292
Cyberbullying Victimization 11-item scale, based on that of Smith, Mahdavi, Carvalho, and Tippett (2006)	n = 1854 ; % = NR	n = 1563 ; % = NR	n = 1467 ; % = NR	n = 1276 ; % = NR
Sample size				
Cyberbullying Victimization 11-item scale, based on that of Smith, Mahdavi, Carvalho, and Tippett (2006)	0.1 (0.26)	0.1 (0.33)	0.08 (0.25)	0.13 (0.46)
Mean (SD)				
Cyberbullying Perpetration 11-item scales, based on that of Smith, Mahdavi, Carvalho, and Tippett (2006)	n = 1840 ; % = NR	n = 1538 ; % = NR	n = 1456 ; % = NR	n = 1246 ; % = NR
Sample size				
Cyberbullying Perpetration 11-item scales, based on that of Smith, Mahdavi, Carvalho, and Tippett (2006)	0.03 (0.17)	0.03 (0.22)	0.02 (0.12)	0.03 (0.25)
Mean (SD)				

Cyberbullying Victimization - Polarity - Lower values are better

Cyberbullying Perpetration - Polarity - Lower values are better

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Behavioural outcomes: Cyberbullying Victimization

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Cyberbullying Perpetration

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Study arms

CFS (N = NA)

Brief name	p168 The Cyber Friendly Schools Project (CFSP)
Rationale/theory/Goal	p168 Aims to enhance the capacity of school staff, students, and families to respond effectively to reduce cyberbullying behaviour.
Materials used	p170 <ul style="list-style-type: none"> It provided whole-school and student level resources and training targeting the student cohort, Grade 10 student cyber leaders, pastoral care staff, classroom teachers, and parents/carers.

	<p>The teaching and learning resources were largely provided online through the CFS website and were designed to encourage teachers to facilitate and support student self-directed learning.</p> <p>The nine online modules included multi-media and information links to draw student interest and enhance the relevancy of the content. Interactive activities such as problem solving, quizzes, and case studies were also provided to consolidate student learning in each module.</p>
Procedures used	<p>p170</p> <ul style="list-style-type: none">• Grades 8 and 9 intervention teachers were trained to support students' largely self-directed learning.• Intervention school pastoral care teams were also trained to implement whole-school policy and practices to discourage cyberbullying. <p>Whole-school level program</p> <ul style="list-style-type: none">• The intervention targeted the online contexts in which 13–14 year-old students interact and the actions they take and responses they receive in each context• The program focused on assisting staff to implement strategies related to their school's approach to cyberbullying with strategies to develop:<ul style="list-style-type: none">• students' social relationships and peer support; policy and its implementation involving the school community;• school ethos;• student social and emotional development;• positive behavior management with fewer punitive solutions;• school–home–community links.

	<ul style="list-style-type: none"> • The four to six cyber leaders in each intervention school were trained for 10 hr in each of the first 2 years of the study to lead at least three major whole-school activities to encourage students’ positive use of technology. • The pastoral care team received 6 hr of training in each of the first 2 years of the study to use a specially designed school policy and practice audit tool, to assess the strengths and weaknesses in their current whole-school efforts to reduce cyber and other forms of bullying • Schools used these assessments and resources to determine gaps and opportunities and to plan and implement whole-school actions to enhance their current policies and practices • Online resources were disseminated by the school to increase parents’ awareness of technologies used by their children, and the benefits and harms associated with these. <p>Student cohort program</p> <p>The CFSP teaching and learning program, led by classroom teachers, aimed to reduce student harm via “5Cs:”</p> <ul style="list-style-type: none"> • the online contexts where students spent time; • the online contacts they made • how they managed their confidentiality (privacy); • their conduct and online skills; • the content they accessed.
Provider	<p>p170</p> <p>School project coordinator, pastoral care staff and Grade 10 student cyber leaders</p>
Method of delivery	<p>Not reported</p>

Setting/location of intervention	p170-1 School/classroom
Intensity/duration of the intervention	P171 <ul style="list-style-type: none"> • 2 years
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	None reported
Actual treatment fidelity	None reported
Other details	None

Control (N = NA)

Brief name	page 169 usual bullying prevention programs
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	p170

	School staff in the control schools implemented their regular classroom and whole-school responses to online and offline student bullying.
Provider	Not reported
Method of delivery	Not reported
Setting/location of intervention	Not reported
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	Not reported

D.1.7 Del Rey, 2016

Bibliographic Reference

Del Rey, Rosario; Casas, Jose A; Ortega, Rosario; Impact of the ConRed program on different cyberbullying roles.; Aggressive behavior; 2016; vol. 42 (no. 2); 123-35

Study details

Study design	Non-randomised controlled trial (NRCT)
Trial registration number	Not reported
Aim	To examine bullying role-specific impacts of the ConRed Program
Country/geographical location	Cordoba, Spain
Setting	3 secondary schools (2 of which were public schools)
Inclusion criteria	<ul style="list-style-type: none"> • The scores from the cyberbullying scale (ECIPQ) were used to assign each participant to the different roles • Bystanders: scored ≤ 1 on items corresponding to victimisation and aggression and witnessed some form of cyberbullying in the last 2 months • Victims: scored ≥ 2 in items corresponding to victimisation ≤ 1 on items corresponding to aggression • Aggressors: scored ≥ 2 in items corresponding to aggressions but ≤ 1 on items corresponding to victimisation • Bully/victms: scores ≥ 2 in items corresponding to both victimisation and aggression
Exclusion criteria	None reported
Method of randomisation	Not applicable
Method of allocation concealment	None reported
Unit of allocation	Classes
Unit of analysis	Individual
Statistical method(s) used to analyse the data	<ul style="list-style-type: none"> • A mixed repeated-measures multivariate analysis of variance, or repeated-measures MANOVA, was conducted for each of the four roles comparing the variables between control and experimental groups, both pre- and post-test. • The variable gender was also tested this way within each role. Cohen's d was computed to assess effect size.

Attrition	Not reported
Study limitations (author)	<ul style="list-style-type: none"> • Number of participants were lower in the control group than in the experimental group as the schools had requested this • Assignment was non-random • Both groups came from the same schools • Post-intervention evaluation only
Study limitations (reviewer)	<ul style="list-style-type: none"> • Reported significant findings only
Source of funding	Not reported

Study arms

ConRed (N = 586)

Control (N = 289)

Characteristics

Study-level characteristics

Characteristic	Study (N = 1164)
Age	11 to 19
Range	

Arm-level characteristics

Characteristic	ConRed (N = 586)	Control (N = 289)
Male	n = 333 ; % = 56.83	n = 123 ; % = 42.8
No of events		
Female	n = 253 ; % = 43.17	n = 166 ; % = 57.2
No of events		

Outcomes

Study timepoints

- Baseline
- 3 month (From baseline. Post-intervention)

Behavioural outcomes

Outcome	ConRed, Baseline, N = NA	ConRed, 3 month, N = NA	Control, Baseline, N = NA	Control, 3 month, N = NA
Cybervictim subgroup Reported as significant	n = 103 ; % = NA	n = 103 ; % = NA	n = 85 ; % = NA	n = 85 ; % = NA
Sample size				
Cybervictim subgroup Reported as significant	0.26 (NR)	0.12 (NR)	0.26 (NR)	0.27 (NR)
Mean (SD)				

Outcome	ConRed, Baseline, N = NA	ConRed, 3 month, N = NA	Control, Baseline, N = NA	Control, 3 month, N = NA
Cyberbully/victims subgroup Reported as significant	n = 104 ; % = NA	n = 104 ; % = NA	n = 55 ; % = NA	n = 55 ; % = NA
Sample size				
Cyberbully/victims subgroup Reported as significant	0.34 (NR)	0.18 (NR)	0.39 (NR)	0.25 (NR)
Mean (SD)				
Cyberbully subgroup Reported as non-significant	n = 36 ; % = NA	n = 36 ; % = NA	n = 26 ; % = NA	n = 26 ; % = NA
Sample size				
Cyberbully subgroup Reported as non-significant	0.19 (NR)	0.16 (NR)	0.18 (NR)	0.17 (NR)
Mean (SD)				
Cyberbully/victims subgroup Reported as significant	n = 104 ; % = NA	n = 104 ; % = NA	n = 55 ; % = NA	n = 55 ; % = NA
Sample size				
Cyberbully/victims subgroup Reported as significant	0.43 (NR)	0.16 (NR)	0.46 (NR)	0.39 (NR)
Mean (SD)				

Cyberbullying Victimization - Polarity - Lower values are better

Cyber bullying aggression - Polarity - Lower values are better

Critical appraisal - ROBINS-I: a tool for assessing risk of bias in non-randomised studies of interventions

Behavioural outcomes: Cyberbullying Victimisation-Cybervictim subgroup

Section	Question	Answer
Overall bias	Risk of bias judgement	Serious

Behavioural outcomes: Cyberbullying Victimisation-Cyberbully/victims subgroup

Section	Question	Answer
Overall bias	Risk of bias judgement	Serious

Behavioural outcomes: Cyberbullying aggression-Cyberbully subgroup

Section	Question	Answer
Overall bias	Risk of bias judgement	Serious

Behavioural outcomes: Cyberbullying aggression-Cyberbully/victims subgroup

Section	Question	Answer
Overall bias	Risk of bias judgement	Serious

Study arms

ConRed (N = NA)

Brief name	p125 The ConRed Program (The Knowing, Building, and Living Together on the Internet Program [Conocer, Construir y Convivir en la Red, ConRed])
Rationale/theory/Goal	p125 Designed to cope with cyberbullying by focuseing on three areas: <ul style="list-style-type: none">• Internet dependence• traditional bullying• Empathy Its design was based on psycho-educational research into key intervention strategies for dealing with traditional bullying
Materials used	p126 The ConRed Program implemented an awareness-raising campaign aimed at the whole school community, using posters, leaflets, bookmarks, stickers for notebooks and tables, and other materials.
Procedures used	p126 The program has 3 elements: <ol style="list-style-type: none">1. curriculum-based work aimed at developing social competencies2. sessions on information gathering and the safe and cautious use of the Internet3. Working sessions with teaching teams that are experienced in bullying prevention.

	<p>4. ConRed belongs to the class of anti-bullying programs that stresses the importance of cooperation between teachers, students, and parents</p> <ul style="list-style-type: none"> • Over a 3-month period, eight training sessions were conducted with the students. • Two sessions were held with teaching staff and one with families, in which the student topics were summarized and adapted to the needs of the adults. • The work was carried out in close collaboration with the schools' counselling teams and was made to fit their existing educational projects to improve the social climate and Convivencia • The student, staff, and family sessions covered the following topics: (i) the Internet and social networks; (ii) the advantages of social networks and their correct use; and (iii) risks attached to the irresponsible use of the Internet and social networks, and related advice and coping strategies
Provider	<p>p126</p> <p>Teachers</p>
Method of delivery	<p>p126</p> <p>Group</p>
Setting/location of intervention	<p>Not reported</p>
Intensity/duration of the intervention	<p>p126</p> <ul style="list-style-type: none"> • 3 months • 8 training sessions with students • 2 sessions with teaching staff
Tailoring/adaptation	<p>None reported</p>
Unforeseen modifications	<p>None reported</p>

Planned treatment fidelity	None reported
Actual treatment fidelity	None reported
Other details	None reported

Control (N = NA)

Brief name	p126 Usual lessons (convivencia)
Rationale/theory/Goal	None reported
Materials used	None reported
Procedures used	None reported
Provider	None reported
Method of delivery	None reported
Setting/location of intervention	None reported
Intensity/duration of the intervention	None reported
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	None reported
Actual treatment fidelity	None reported
Other details	None reported

D.1.8 Ferrer-Cascales, 2019

Bibliographic Reference Ferrer-Cascales, Rosario; Albaladejo-Blazquez, Natalia; Sanchez-SanSegundo, Miriam; Portilla-Tamarit, Irene; Lordan, Oriol; Ruiz-Robledillo, Nicolas; Effectiveness of the TEI Program for Bullying and Cyberbullying Reduction and School Climate Improvement.; International journal of environmental research and public health; 2019; vol. 16 (no. 4)

Study details

Trial registration number	Not reported
Study start date	Sep-2015
Study end date	Jun-2016
Aim	To examine the effectiveness of the TEI program, a peer tutoring based intervention, in reducing bullying and improving school climate.
Country/geographical location	Spain
Setting	Public secondary schools
Inclusion criteria	(1) Present in the classroom on the day of the survey; (2) able to read and complete the questionnaires; (3) informed consent of parents and adolescents over 12 years of age before data collection.
Exclusion criteria	Not reported
Method of randomisation	Not reported
Method of allocation concealment	Not reported

Unit of allocation	School
Unit of analysis	Individuals
Statistical method(s) used to analyse the data	ANCOVA of repeated measures of 'moment' (T1 pre-intervention vs. T2 post-intervention) with 'group' (intervention vs. control) as the between-subject factor was performed to analyze the effectiveness of the intervention in reducing bullying and improving school climate.
Attrition	86.1% of the initial sample completed T1 and T2 phases and their questionnaires could be correctly matched. The loss of 332 students was largely due to errors when completing their identification code to allow T1 and T2 responses to be matched, or absence on the day of data collection.
Study limitations (author)	<ul style="list-style-type: none"> • The use of self-report measures to assess bullying and cyberbullying, which have a risk of bias through social desirability. • The short follow-up period; longitudinal follow up after the end of program implementation is more desirable. • Participants were students from a specific location in Spain, which may limit the generalisability of findings.
Source of funding	The Office of the Vice President of Research and Knowledge Transfer of the University of Alicante (GRE-16-32).

Study arms

TEI Peer Tutoring Program (N = 987)

10 schools

Control (N = 1070)

12 schools

Characteristics

Study-level characteristics

Characteristic	Study (N = 2057)
Age	11 to 16
Range	
Age	13.08 (1.18)
Mean (SD)	
Male	n = 1036 ; % = 50.4
No of events	
Female	n = 1021 ; % = 49.6
No of events	

Outcomes

Study timepoints

- Baseline
- 7 month (7 months from baseline; immediately post-intervention)

Behavioural outcomes

Outcome	TEI Peer Tutoring Program, Baseline, N = 987	TEI Peer Tutoring Program, 7 month, N = 987	Control, Baseline, N = 1070	Control, 7 month, N = 1070
Bullying Behaviour Illinois Bully Scale - Bully Behaviour Subscale Mean (SD)	3.8 (5.76)	3.37 (4.68)	3.44 (4.51)	4.8 (5.92)
Bullying victimisation Illinois Bully Scale - Peer Victimization Subscale Mean (SD)	2.05 (2.93)	1.93 (2.84)	1.97 (2.94)	2.64 (3.5)
Frequency of Fighting Illinois Bully Scale - Frequency of Fighting Subscale Mean (SD)	1.83 (2.89)	1.76 (2.84)	1.74 (2.81)	2.52 (3.62)
Cyberbullying Perpetration E-bullying scale Mean (SD)	2.27 (3.1)	1.59 (3.8)	2.08 (3.13)	2.21 (4.48)
Cyberbullying Victimization E-victimisation scale Mean (SD)	3.19 (4.82)	1.94 (4.51)	2.95 (5.1)	2.7 (5.3)

Bullying Behaviour - Polarity - Lower values are better

Bullying victimisation - Polarity - Lower values are better

Frequency of Fighting - Polarity - Lower values are better

Cyberbullying Perpetration - Polarity - Lower values are better

Cyberbullying Victimization - Polarity - Lower values are better

School environment outcomes

Outcome	TEI Peer Tutoring Program, Baseline, N = 987	TEI Peer Tutoring Program, 7 month, N = 987	Control, Baseline, N = 1070	Control, 7 month, N = 1070
School Climate - Satisfaction Spanish Version of the School Climate Questionnaire - Satisfaction with School Subscale Mean (SD)	17.2 (4.65)	18.08 (4.78)	17.46 (4.98)	17.17 (4.68)
School Climate - Sense of Belonging Spanish Version of the School Climate Questionnaire - Sense of Belonging Subscale Mean (SD)	6.92 (2.5)	11 (2.82)	6.76 (2.6)	8.94 (2.98)
School Climate - Cooperation Spanish Version of the School Climate Questionnaire - Cooperation Subscale Mean (SD)	5.86 (2)	7.51 (1.61)	5.98 (1.99)	5.91 (2.06)
School Climate - Communication Spanish Version of the School Climate Questionnaire - Cooperation Between Family and School Subscale Mean (SD)	13.65 (3.47)	15.98 (2.45)	13.82 (3.62)	13.12 (3.29)

School Climate - Satisfaction - Polarity - Higher values are better

School Climate - Sense of Belonging - Polarity - Higher values are better

School Climate - Cooperation - Polarity - Higher values are better

School Climate - Communication - Polarity - Higher values are better

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Behavioural outcomes: Bullying Behaviour 7 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Bullying victimisation 7 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Frequency of Fighting 7 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Cyberbullying Perpetration 7 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Cyberbullying Victimization 7 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

School environment outcomes: School Climate 7 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

School environment outcomes: School Climate - Sense of Belonging 7 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

School environment outcomes: School Climate-Cooperation 7 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

School environment outcomes: School Climate-Communication-7 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Study arms

Intervention (N = 987)

Brief name	TEI Program "Peer Tutoring" (p. 2) (Acronym refers to the Spanish term "Tutoria Entre Iguales")
Rationale/theory/Goal	TEI is a school-based peer-tutoring intervention designed to prevent school violence and cyber bullying by improving the school climate and promoting positive coexistence. The intervention develops problem-solving strategies and integrates a culture of zero tolerance for violence, requiring the collaboration and commitment of the whole school community. p. 2 Aspects of the Whole School Approach covered: Curriculum: Students undertook specific training activities in tutor-tutee pairings across the school year on specific skills e.g. emotional self-knowledge, emotional regulation, social competency.

	<p>Ethos and Environment: The intervention aims to promote a positive school climate and uses a peer-tutoring approach.</p> <p>Working with Parents: Families receive information regarding the TEI program and are encouraged to be actively involved with program implementation. Volunteer parents receive training on detection and action against victimisation.</p> <p>Staff Development: Intensive training for teachers including creation of a group responsible for coordinating the implementation of the intervention in the school.</p> <p>Student Voice: Student tutors receive training on tutor functions, social abilities, prosocial behaviour, empathy and problem-solving. Intervention aims to involve all students in the program in some way.</p> <p>pp. 2-3</p>
Materials used	Not reported
Procedures used	<p>Stage 1. Information about the program and its objectives is disseminated between all members of the school community (teachers, families, students, school management team).</p> <p>Stage 2. Initial intensive educational training for teachers and a coordinating group of teachers responsible for program implementation is established.</p> <p>Stage 3. Student tutors are trained on the socioaffective method of the intervention.</p> <p>Stage 4. Coordinating teachers create tutor-tutee pairings, taking into account students' age (no more than 2 years age difference) and interpersonal skills (based on rating of vulnerability or risk of harassment). Students with high interpersonal skills were assigned as tutors of vulnerable younger students.</p> <p>Stage 5. Pairs were trained on 3 specific activities: 1) cohesion activities to facilitate the tutor-tutee relationship; 2) tutorial activities, both formal (monthly) and informal (during recess, in corridors etc); and 3) specific training activities aimed at the development of a specific skills such as emotional regulation and social competencies.</p> <p>Stage 6. Intervention closure performed at the end of the academic year.</p> <p>pp. 2-3</p>

Provider	Initial intervention implementation by TEI staff, a group of specialised education professionals (p. 2)
Method of delivery	Families receive program information from TEI staff (but no information provided on method of delivery) Teachers receive face to face and virtual training Students receive face to face training from TEI staff Students in tutor-tutee pairings interact face to face pp. 2-3
Setting/location of intervention	Secondary schools p. 2
Intensity/duration of the intervention	The intervention was delivered across an academic year (Sept/Oct 2015 to May/June 2016) (p. 4) Teacher training: 30 hours (10 hours face to face and 20 hours virtual) Student tutors: 3 initial training sessions lasting 1 hour plus 4 1 hour sessions quarterly throughout the academic year Student tutor-tutee pairings: 2 cohesion activity sessions per quarter; formal tutoring each month; 9 1 hour skills training sessions across the academic year pp. 2-3
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Cluster N = 10

Control (N = 1070)

Brief name	Referred to as 'Control Group' throughout, except for one instance where it is described as 'wait-list control' (p. 4), however no further information is provided to clarify.
Rationale/theory/Goal	Not provided
Materials used	Not reported
Procedures used	Not reported
Provider	Not reported
Method of delivery	Not reported
Setting/location of intervention	Not reported
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	Very limited information. Not clear whether control or wait list control.

Cluster N = 12

D.1.9 Gradinger, 2015

Bibliographic Reference

Gradinger, Petra; Yanagida, Takuya; Strohmeier, Dagmar; Spiel, Christiane; Prevention of cyberbullying and cyber victimization: Evaluation of the ViSC Social Competence Program.; Journal of School Violence; 2015; vol. 14 (no. 1); 87-110

Study details

Study design	Cluster randomised controlled trial
Trial registration number	Not reported
Study start date	Jun-2009
Study end date	Jun-2010
Aim	To examine whether a general anti-bullying program, the ViSC Social Competence program, can change cyberbullying and cybervictimisation.
Country/geographical location	Austria
Setting	Secondary schools
Inclusion criteria	Pupils in Grades 5 to 7
Exclusion criteria	None reported
Method of randomisation	Not reported
Method of allocation concealment	Not reported
Unit of allocation	Schools
Unit of analysis	Individuals (but analyses did not appear to adjust for clusters)

Statistical method(s) used to analyse the data	A structural equation modeling (SEM) approach was used to test the main hypotheses of the study. A bivariate multiple group latent change score (LCS) model comparing intervention and control group was applied and statistically controlled for pretest scores and additional covariates. In order to study intervention effects, multiple group SEM was applied, where data were split according to the group variable so that the expected mean change was calculated for the control and intervention group separately. The difference between this mean change between control and intervention group represents the intervention effect. This difference was tested for statistical significance using a Wald parameter test.
Attrition	Not reported in detail but study notes that 974 records (47.7%) were incomplete resulting from two main missing data patterns: students who participated at pretest only (n = 515) and students who participated at posttest only (n = 403).
Study limitations (author)	<ul style="list-style-type: none">• Due to the complex model it was not possible to test for gender moderation of program effects
Study limitations (reviewer)	The percentage of missing values across the 78 variables ranged between 16.1% and 19.7% and there is insufficient attention to the factors that may have contributed to this relatively high level of missing data.
Source of funding	The Austrian Federal Ministry for Education, Arts and Cultural Affairs supported data collection. The Platform for Intercultural Competences, University of Applied Sciences Upper Austria supported the writing of this article.

Study arms

ViSC (N = 1377)

13 schools

Control (N = 665)

5

Characteristics

Arm-level characteristics

Characteristic	ViSC (N = 1377)	Control (N = 665)
Age	11.7 (0.9)	11.6 (0.8)
Mean (SD)		
Female	n = 578 ; % = 48.5	n = 202 ; % = 45.2
No of events		
Male	n = 614 ; % = 51.5	n = 245 ; % = 54.8
No of events		
Austrian	n = 550 ; % = 46.1	n = 211 ; % = 47.2
No of events		
Yugoslav	n = 248 ; % = 20.8	n = 83 ; % = 18.6
No of events		
Turkish	n = 163 ; % = 13.7	n = 71 ; % = 15.9
No of events		
Other	n = 231 ; % = 19.4	n = 82 ; % = 18.3
No of events		

Outcomes

Study timepoints

- Baseline
- 1 year (Post-intervention)

Behavioural Outcomes

Outcome	ViSC, Baseline, N = 1192	ViSC, 1 year, N = 1377	Control, Baseline, N = 447	Control, 1 year, N = 665
Cyberbullying Perpetration Self-reported perpetration of cyberbullying using 7 items Mean (SD)	0.2 (0.71)	0.33 (0.82)	0.13 (0.4)	0.39 (0.93)
Cyberbullying Victimization Self-reported cybervictimisation using 7 items Mean (SD)	0.21 (0.66)	0.27 (0.69)	0.15 (0.4)	0.31 (0.79)

Cyberbullying Perpetration - Polarity - Lower values are better

Cyberbullying Victimization - Polarity - Lower values are better

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Behavioural Outcomes: Cyberbullying Perpetration 1 year

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural Outcomes: Cyberbullying Victimization 1 year

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Study arms

Intervention (N = 1192)

Brief name	ViSC Social Competence Program (p. 90)
Rationale/theory/Goal	<p>The ViSC program is a component of the Austrian national strategy plan to prevent violence in schools. It adopts a systemic perspective and aims to both reduce aggressive behaviour and to foster social and intercultural competencies in schools. It is primarily preventive and aims to empower students to take responsibility for what happens in their class. Intervention activities are designed to create a friendly, encouraging school environment where bullying behaviours are less likely, rather than aiming to directly change the behaviour of a bullying student (pp. 90-91).</p> <p>Aspects of the Whole School Approach Ethos and Environment</p>
Materials used	None reported
Procedures used	The intervention follows a cascaded train-the-trainer model where scientists train multipliers, multipliers train teachers, and teachers train their students. During the first semester of the intervention year teachers are the primary target group

	and the program covers interventions and preventive measures at the school level. In the second semester, teachers and students are the target group and teachers are trained to recognise bullying, tackle acute bullying cases, and implement preventive measures. There is also a class project which comprises 8 lessons where students actively work together to find ways to prevent aggressive behaviour in their class, followed by 5 lessons where students complete a project that requires working together to achieve a common goal (p. 90).
Provider	Not reported but ViSC follows a cascaded train-the-trainer model whereby scientists train multipliers, multipliers train teachers and teachers train students, so it is assumed that members of the research team train the multipliers (p. 90)
Method of delivery	Not reported but assumed face to face
Setting/location of intervention	Secondary schools (p. 91)
Intensity/duration of the intervention	The program was implemented across one academic year (p. 92).
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Cluster N = 13

Control (N = 447)

Brief name	Control group
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	Not reported

Provider	Not reported
Method of delivery	Not reported
Setting/location of intervention	Secondary schools (p. 91)
Intensity/duration of the intervention	One academic year (p. 92)
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Cluster N = 5

D.1.10 Karna, 2011

Bibliographic Reference Karna, A; Voeten, M; Little, TD; Poskiparta, E; Kaljonen, A; Salmivalli, C; A large-scale evaluation of the KiVa antibullying program: grades 4-6; *Child development*; 2011; vol. 82 (no. 1); 311-330

Secondary publication(s) Ahtola, Annarilla, Haataja, Anne, Karna, Antti et al. (2012) For children only? Effects of the KiVa antibullying program on teachers. *Teaching and Teacher Education* 28(6): 851-859

Juvonen, Jaana, Schacter, Hannah L, Sainio, Miia et al. (2016) Can a school-wide bullying prevention program improve the plight of victims? Evidence for risk x intervention effects. *Journal of Consulting and Clinical Psychology* 84(4): 334-344

Kaufman, Tessa M L, Kretschmer, Tina, Huitsing, Gijs et al. (2018) Why Does a Universal Anti-Bullying Program Not Help All Children? Explaining Persistent Victimization During an Intervention. *Prevention science : the official journal of the Society for Prevention Research* 19(6): 822-832

Salmivalli, C.; Karna, A.; Poskiparta, E. (2011) Counteracting bullying in Finland: The KiVa program and its effects on different forms of being bullied. *International Journal of Behavioral Development* 35(5): 405-411

Williford, A, Elledge, LC, Boulton, AJ et al. (2013) Effects of the KiVa antibullying program on cyberbullying and cybervictimization frequency among Finnish youth. *Journal of clinical child and adolescent psychology* 42(6): 820-833

Williford, Anne, Boulton, Aaron, Noland, Brian et al. (2012) Effects of the KiVa anti-bullying program on adolescents' depression, anxiety, and perception of peers. *Journal of abnormal child psychology* 40(2): 289-300

Study details

Study design	Cluster randomised controlled trial
Trial registration number	Not reported
Study start date	May-2007
Study end date	May-2008
Aim	To assess the effectiveness of the KiVa antibullying program on bullying, victimisation and student well-being at school.
Country/geographical location	Finland
Setting	Grades 4-6
Inclusion criteria	Not reported
Exclusion criteria	Special-education-only schools were excluded. Students were excluded from the analyses if: (a) they were denied permission to participate in the study but had somehow answered the questionnaire and (b) they left school after Wave 1 of data collection.

Method of randomisation	Schools were stratified by province and language (Finnish or Swedish). Method of randomisation not reported
Method of allocation concealment	Not reported
Unit of allocation	School
Unit of analysis	Individuals
Statistical method(s) used to analyse the data	Multilevel modeling with MLwiN 2.11 was used to estimate the intervention effects in the presence of the nested data structures. Four-level models were fitted, with the first level representing change over time, the second level representing individual student differences, the third level representing differences between classrooms, and the fourth level representing between-school differences. The differences between KiVa schools and control schools were examined after controlling for baseline levels of the variable of interest, gender, age, and language of instruction at school (Finnish or Swedish).
Attrition	After recruitment, one whole school dropped out before data collection because of problems related to their school facilities. Two control schools dropped out between Waves 1 and 2 ($n = 51$); and five more between Waves 2 and 3 ($n = 640$).
Study limitations (author)	None reported
Source of funding	The KiVa project is financed by the Finnish Ministry of Education and Culture. In addition, the present study was supported by the Academy of Finland Grants 134843 and 135577.

Study arms

KiVa Anti-Bullying Program (N = 4207)

Cluster N=39

Control (N = 4030)

Cluster N=39

Characteristics

Study-level characteristics

Characteristic	Study (N = 8237)
Age	9 to 11
Range	
Male	% = 49.9
No of events	
Female	% = 51.1
No of events	
Native Finns	% = 97.6
No of events	
Immigrants	% = 2.4
No of events	

Outcomes

Study timepoints

- Baseline
- 4 month (Paper notes that follow-up data collection was at 4 and 9 months after beginning the program implementation, which is equivalent to 7 and 12 months after pre-test measures.)
- 9 month (Paper notes that follow-up data collection was at 4 and 9 months after beginning the program implementation, which is equivalent to 7 and 12 months after pre-test measures.)

Behavioural Outcomes

Outcome	KiVa Anti-Bullying Program, Baseline, N = 4201	KiVa Anti-Bullying Program, 4 month, N = 4201	KiVa Anti-Bullying Program, 9 month, N = 4201	Control, Baseline, N = 3965	Control, 4 month, N = 3965	Control, 9 month, N = 3965
Bullying Victimization (Self-reported) Global item from revised Olweus Bully/Victim Questionnaire ("How often have you been bullied at school in the last couple of months?") Mean (SD)	0.74 (1.07)	0.74 (1.07)	0.49 (0.84)	0.78 (1.06)	0.83 (1.1)	0.66 (0.91)
Bullying Perpetration (Self-reported) Global item from revised Olweus Bully/Victim Questionnaire ("How often have you bullied others at school in the last couple of months?") Mean (SD)	0.48 (0.75)	0.36 (0.65)	0.27 (0.57)	0.51 (0.73)	0.43 (0.71)	0.35 (0.6)
Bullying Victimization (Peer-reported) Using the Participant Role Questionnaire, students nominated classmates that had experienced certain	0.063 (0.091)	0.059 (0.081)	0.049 (0.075)	0.065 (0.096)	0.07 (0.091)	0.065 (0.081)

Outcome	KiVa Anti-Bullying Program, Baseline, N = 4201	KiVa Anti-Bullying Program, 4 month, N = 4201	KiVa Anti-Bullying Program, 9 month, N = 4201	Control, Baseline, N = 3965	Control, 4 month, N = 3965	Control, 9 month, N = 3965
bullying behaviours (e.g. being pushed, called names, mocked etc). Peer nominations received were totaled and divided by the number of classmates responding.						
Mean (SD)						
Bullying Perpetration (Peer-reported) Using the Participant Role Questionnaire, students nominated classmates that engage in bullying behaviours. Peer nominations received were totaled and divided by the number of classmates responding.	0.069 (0.12)	0.06 (0.11)	0.054 (0.097)	0.071 (0.12)	0.07 (0.12)	0.07 (0.11)
Mean (SD)						

Bullying Victimization (Self-reported) - Polarity - Lower values are better

Bullying Perpetration (Self-reported) - Polarity - Lower values are better

Bullying Victimization (Peer-reported) - Polarity - Lower values are better

Bullying Perpetration (Peer-reported) - Polarity - Lower values are better

School environment outcomes

Outcome	KiVa Anti-Bullying Program, Baseline, N = 4201	KiVa Anti-Bullying Program, 4 month, N = 4201	KiVa Anti-Bullying Program, 9 month, N = 4201	Control, Baseline, N = 3965	Control, 4 month, N = 3965	Control, 9 month, N = 3965
Well-Being at School Measured using items that were initially developed by the Finnish National Board of Education. Includes items on general school liking, academic self-concept, classroom climate and school climate. Mean (SD)	3.03 (0.72)	3 (0.66)	2.87 (0.83)	2.98 (0.71)	2.9 (0.71)	2.75 (0.79)

Well-Being at School - Polarity - Higher values are better

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Behavioural Outcomes: Bullying Victimization(Self-reported) 4 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural Outcomes: Bullying Victimization (Self-reported) 9 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural Outcomes: Bullying Perpetration (Self-reported) 4 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural Outcomes: Bullying Perpetration (Self-reported) 9 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural Outcomes: Bullying Victimization (Peer-reported) 4 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural Outcomes: Bullying Victimization (Peer-reported) 9 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural Outcomes: Bullying Perpetration (Peer-reported) 4 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural Outcomes: Bullying Perpetration (Peer-reported) 9 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

School environment outcomes: Well-Being at School 4 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

School environment outcomes: Well-Being at School 9 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Study arms

Intervention (N = 4207)

Brief name	KiVa Antibullying Program (an acronym for Kiusaamista Vastaan, meaning 'against bullying' in Finnish) (p. 312)
Rationale/theory/Goal	Social cognitive theory is used as a framework for the intervention. Bullying is seen as behaviour motivated by the pursuit of a position of power and high status in the peer group. Bystanders are seen to maintain bullying so KiVa emphasises the need to enhance the empathy, self-efficacy and anti-bullying attitudes of bystanders (neither bullies nor victims). This positive change in the behaviours of classmates is believed to reduce the rewards gained by bullies and therefore their motivation to bully (p. 313).
Materials used	Students play an anti-bullying computer game during and between KiVa lessons. This multi-component game helps students acquire new information and test their knowledge about bullying, learn new skills on how to act in bullying situations, and make use of this in real life situations. KiVa also provides bright vests for recess supervisors to enhance their visibility, and posters to use throughout the school. Schools are given presentation graphics for use with school personnel and parents. Parents also receive a guide about bullying and how to prevent it (p. 313). Schools are also provided with professional prepared materials and activity packs to be carried out with students (p. 314).
Procedures used	<p>Students receive 10 lessons, delivered by their teachers, during a school year. Lessons include discussion, group work, role play and short films. The lessons aim to raise awareness of the role of the group in maintaining bullying; increase empathy toward victims; and promote strategies to support victims. Class rules based on lesson themes are adopted as lessons proceed (p. 313).</p> <p>Students play an anti-bullying computer game throughout the intervention period (p. 313).</p>

	Indicated actions: Occurrences of bullying are addressed by teams of four school personnel through individual and small-group discussions with victims and bullies, and there are systematic follow up meetings. Classroom teachers also meet with two to four prosocial high-status classmates and encourage them to support the victim (p. 313).
Provider	Classroom teachers (p. 313)
Method of delivery	KiVa lessons are delivered face-to-face in group (classroom) settings (p. 313) The KiVa antibullying game is delivered on school computers (p. 313)
Setting/location of intervention	School Grades 4-6 (p. 313)
Intensity/duration of the intervention	Students received 20 hours of KiVa lessons over one academic year (p. 313) Teachers received 2 full days of face to face training (p. 313). Each case of bullying throughout the intervention period is addressed by a team of 4 school personnel and the bully and victim (p. 313). School networks of teachers from 3 participating schools were created; these networks met 3 times across the school year with one person from KiVa present to provide guidance (p. 313).
Tailoring/adaptation	Not reported
Unforeseen modifications	None reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Cluster N = 39

Control (N = 4030)

Brief name	Control (p. 314)
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	Not reported
Provider	Not reported
Method of delivery	Not reported
Setting/location of intervention	School Grades 4-6 (p. 314)
Intensity/duration of the intervention	One academic year (p. 315)
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Cluster N = 39

D.1.11 Karna, 2013

Bibliographic Reference Karna, Antti; Voeten, Marinus; Little, Todd D; Alanen, Erkki; Poskiparta, Elisa; Salmivalli, Christina; Effectiveness of the KiVa Antibullying Program: Grades 1-3 and 7-9.; Journal of Educational Psychology; 2013; vol. 105 (no. 2); 535-551

Study details

Study design	Cluster randomised controlled trial
Trial registration number	Not reported
Study start date	2008
Study end date	2009
Aim	To investigate the effectiveness of the KiVa antibullying program in two samples of students, one from Grades 1–3 (7–9 years old, and the other from Grades 7–9 (13-15 years old)
Country/geographical location	Finland
Setting	125 Finnish elementary and lower secondary schools
Inclusion criteria	Not reported
Exclusion criteria	Not reported
Method of randomisation	Not reported
Method of allocation concealment	Not reported
Unit of allocation	Schools
Unit of analysis	Individual
Statistical method(s) used to analyse the data	<ul style="list-style-type: none"> • Adjusted for clusterings • ICCs reported for each outcome at classroom and school level • Multi-level modeling

Attrition	<p>Pre-test data was not collected for the youngest year groups (Grades 1 and 7) because they would not have been at the the school at that point</p> <p>For Grades 1-3:</p> <ul style="list-style-type: none"> • two intervention and three control schools dropped out without providing any data. • 304/7231 dropped out because they were not in schools at the time of the intervention <p>For Grades 7-9:</p> <ul style="list-style-type: none"> • Four control schools dropped out without providing any data • One intervention school dropped out after providing data at the first wave. • 261/16764 students left the sample after wave 1. <p>All students who dropped out were excluded from the analysis</p>
Study limitations (author)	<ul style="list-style-type: none"> • Only post-test data for Grades 1 and 7 • Only reported self-reported bullying and victimisation outcomes for Grades 1-3 • Did not investigate the effectiveness of KiVa on different forms of victimization and bullying. • Results were solely assessed on questionnaire data • Questionnaires were administered by teachers which may have influenced how the student answered
Study limitations (reviewer)	<ul style="list-style-type: none"> • 31 controls schools from the Grades 4-6 study were included as intervention schools in this study so were not part of the randomisation. Results were not disaggregated
Source of funding	The Finnish Ministry of Education and Culture

Study arms

KiVa (N = NR)

38 Grade 1-3 schools 38 Grade 7-9 schools

Control (N = NR)

36 Grade 1-3 schools 35 Grade 7-9 schools

Outcomes

Study timepoints

- Baseline
- 1 year (From baseline)

Behavioural outcomes

Outcome	KiVa, Baseline, N = NA	KiVa, 1 year, N = NA	Control, Baseline, N = NA	Control, 1 year, N = NA
Grades 2-3	n = 2030 ; % = NR	n = 2020 ; % = NR	n = 1987 ; % = NR	n = 2018 ; % = NR
Sample size				
Grades 2-3	0.13 (0.34)	0.13 (0.33)	0.23 (0.42)	0.17 (0.38)
Mean (SD)				
Grades 8-9	n = 5694 ; % = NR	n = 5252 ; % = NR	n = 4333 ; % = NR	n = 3847 ; % = NR
Sample size				
Grades 8-9	0.09 (0.29)	0.07 (0.25)	0.1 (0.3)	0.07 (0.26)
Mean (SD)				

Outcome	KiVa, Baseline, N = NA	KiVa, 1 year, N = NA	Control, Baseline, N = NA	Control, 1 year, N = NA
Grades 2-3	n = 2027 ; % = NR	n = 2019 ; % = NR	n = 1966 ; % = NR	n = 2018 ; % = NR
No of events				
Grades 2-3	0.07 (0.26)	0.04 (0.2)	0.07 (0.25)	0.06 (0.23)
Mean (SD)				
Grades 8-9	n = 5690 ; % = NR	n = 5216 ; % = NR	n = 4327 ; % = NR	n = 3816 ; % = NR
No of events				
Grades 8-9	0.07 (0.25)	0.05 (0.23)	0.08 (0.26)	0.07 (0.25)
Mean (SD)				

Self-reported victimisation - Polarity - Lower values are better

Self-reported bullying - Polarity - Lower values are better

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Behavioural outcomes: Self-reported victimisation Grades 2-3

Section	Question	Answer
Overall bias	Risk of bias judgement	High

Behavioural outcomes: Self-reported victimisation Grades 8-9

Section	Question	Answer
Overall bias	Risk of bias judgement	High

Behavioural outcomes: Self-reported bullying Grades 2-3

Section	Question	Answer
Overall bias	Risk of bias judgement	High

Behavioural outcomes: Self-reported bullying Grades 8-9

Section	Question	Answer
Overall bias	Risk of bias judgement	High

Study arms

KiVa (N = NA)

Brief name	Page 536 The KiVa Antibullying Program
Rationale/theory/Goal	P536 The program is based on <ul style="list-style-type: none"> studies on the social standing of aggressive children in general and bullies in particular

	<ul style="list-style-type: none"> • research on participant roles in bullying • social-cognitive theory is used as a framework for understanding the processes of social behaviour
Materials used	<p>P537</p> <p>Universal</p> <p>KiVa provides prominent symbols such as bright vests for the recess supervisors to enhance their visibility and signal that bullying is taken seriously in the school and posters to remind students and school personnel about the KiVa program. Schools get presentation graphics they can use to introduce the program for the whole personnel and for parents. Parents also receive a guide that includes information about bullying and advice about what parents can do to prevent and reduce the problem</p>
Procedures used	<p>P536-537</p> <p>Universal</p> <ul style="list-style-type: none"> • Lessons were given throughout the school year • The lesson goals are (a) to raise awareness of the role that the group plays in maintaining bullying, (b) to increase empathy toward victims, and (c) to promote children’s strategies of supporting the victim and thus their self-efficacy to do so. • Lesson plans involve discussion, group work, role-play exercises and short films about bullying. • For Grades 7-9 four themes are described in the teachers’ manual that can be introduced to students as series of lessons, whole theme days etc. • For primary school students there is an antibullying computer game that can be played during and between the student lessons. • The content of the game is closely linked with the corresponding lessons. • For secondary school students the virtual learning environment is called KiVa Street which is an internet forum where students have access to various resources e.g. information on bullying or short films

	<p>Indicated</p> <ul style="list-style-type: none"> • a team of three teachers or other school personnel, along with the classroom teacher, addresses each case of bullying that comes to their attention • The school team deals with bullying cases only; other conflicts are delegated to the classroom teacher. • Individual discussion are organised with the victim • The victim gets a chance to relate his or her experiences, and the school team members communicate that they are on the victim's side and intend to put an end to bullying • Each bully is taken without prior notice individually to discuss the bullying case • During the program evaluation phase, for research purposes, the school teams were randomized to implement one of two discussion methods: (a) a confronting approach, where the bullies are openly told that their behavior must stop immediately, and (b) a non-confronting Approach where the adult shares his or her concern about the victim and invites the bully to provide suggestions on what could improve the situation. • the school team meets with the bullies as a group to further confirm the agreements made individually. • there is a follow-up meeting with the victim to ascertain that bullying has stopped. • A final meeting is held with the bullies and the victims if they want to attend to make sure the bullying has stopped permanently. • In addition to the discussions with the involved students, the classroom teacher meets with between two and four prosocial and high-status classmates and encourages them to support the victimized child
Provider	<p>P537</p> <ul style="list-style-type: none"> • Classroom teachers
Method of delivery	<p>P537</p> <ul style="list-style-type: none"> • Group and individual
Setting/location of intervention	<p>P537</p> <p>School and classroom</p>

Intensity/duration of the intervention	P537 <ul style="list-style-type: none"> • 10 double lessons (2 x 45 mins) in Grades 1-3 in a school year • The recommended time to spend on the kick-off session, the four themes, and the concluding session compose 13–23 lessons altogether
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	P539 <ul style="list-style-type: none"> • For Grades 1–3, the classroom teachers were asked to fill out a questionnaire immediately after each of the 10 KiVa lessons, whereas for Grades 7–9, the schools reported via a web-based questionnaire (in May 2009) about the activities during the intervention year. In this study, the implementation fidelity was represented as school-level averages of the number of given lessons and themes.
Actual treatment fidelity	None reported
Other details	None

Control (N = NA)

Brief name	Control (not further described)
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	Not reported
Provider	Not reported
Method of delivery	Not reported

Setting/location of intervention	Not reported
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	Not reported

D.1.12 Kiviruusu, 2016

Bibliographic Reference Kiviruusu, Olli; Bjorklund, Katja; Koskinen, Hanna-Leena; Liski, Antti; Lindblom, Jallu; Kuoppamaki, Heini; Alasuvanto, Paula; Ojala, Tiina; Samposalo, Hanna; Harmes, Nina; Hemminki, Elina; Punamaki, Raija-Leena; Sund, Reijo; Santalahti, Paivi; Short-term effects of the "Together at School" intervention program on children's socio-emotional skills: a cluster randomized controlled trial.; BMC psychology; 2016; vol. 4 (no. 1); 27

Secondary publication Björklund K, Liski A, Samposalo H et al. (2014) "Together at school"--a school-based intervention program to promote socio-emotional skills and mental health in children: study protocol for a cluster randomized controlled trial. BMC public health 14: 1042

Study details

Study design	Cluster randomised controlled trial
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Trial registration number	ClinicalTrials.gov identifier: NCT02178332
Study start date	Mar-2013
Study end date	Mar-2015
Aim	To examine the short term effects of the Together at School intervention program targeted at improving primary-school children's socio-emotional skills and reducing psychological problems.
Country/geographical location	Finland
Setting	Primary schools
Inclusion criteria	Not reported
Exclusion criteria	23 schools that had agreed to participate were excluded from the study as they were considered noneligible due to the risk of contamination (schools from the town in which the intervention was developed in close cooperation with the schools) or excessive training costs (due to being very small or very remote schools).
Method of randomisation	Not reported
Method of allocation concealment	Not reported
Unit of allocation	Schools
Unit of analysis	Individuals
Statistical method(s) used to analyse the data	Due to the clustered nature of the data the analyses of change between T0 and T1 in the outcome measures (i.e. the intervention effectiveness) were conducted using multilevel modeling with MLwiN Version 2.32. In the multilevel models, variance was estimated for each dependent variable at four levels: time, children, classes and schools. Intraclass correlations were calculated as indicators of variance for children, classes and schools. Condition (intervention vs. control), time (T1 vs. T0) and grade (2nd, 3rd vs. 1st) were entered as independent variables.
Attrition	After randomisation, 7 schools (3 intervention and 4 control) dropped out for various reasons including personnel shortage and the school economic situation. No further attrition analyses are reported.
Study limitations (author)	<ul style="list-style-type: none"> The proportion of children with parental consent to participate was 82.3% and additional analyses showed that reasons for nonconsent related usually to difficulties in school/teacher-parent communication, cultural/language

	<p>challenges, or parental economic stress. This might be an indication of selective non-response, and as such might have had some influence on the results.</p> <ul style="list-style-type: none"> • The study relied on teacher ratings only. The fact that teachers both delivered the intervention and rated the children could have led to some bias. • The control group was not a “pure” no-treatment group, but was given lectures on the same themes that the intervention was targeting. In addition, the lecturers informally reported that during the lectures the control group teachers shared actively with each other their experiences of supporting children’s wellbeing and social and emotional skills, indicating that some of them already used some kind of methods comparable to the intervention. It also suggested that they were highly motivated in topics related to supporting child’s socio-emotional development. • The follow-up period was short, being in practice between 4 and 6 months. • Other factors beyond program implementation may have contributed to program effects. For example, those teachers implementing the intervention with the intended intensity might differ in other relevant aspects (e.g. motivation, personality characteristics, etc.) from their colleagues who implemented the intervention below the intended level. This induces the possibility that the effects in the outcomes are not totally related to the intervention itself, but may be a product of the interplay between intervention-related variables and teacher characteristics, as well as other non-measured factors such as children’s background characteristics.
Study limitations (reviewer)	None
Source of funding	The trial was funded by the Finnish Ministry of Education and Culture, the National Institute for Health and Welfare and the town of Ylöjärvi.

Study arms

Together at School (N = 2036)

Control (N = 1668)

Characteristics

Study-level characteristics

Characteristic	Study (N = 3704)
Age	8.1 (0.85)
Mean (SD)	

Arm-level characteristics

Characteristic	Together at School (N = 2036)	Control (N = 1668)
Male	n = 1016 ; % = 49.9	n = 784 ; % = 47
Sample size		
Female	n = 1020 ; % = 50.1	n = 884 ; % = 53
Sample size		
Socioeconomic status		
Both parents employed	n = 1070 ; % = 68.2	n = 834 ; % = 67.7
No of events		

Outcomes

Study timepoints

- Baseline
- 6 month (6 months after baseline; immediately post-intervention)

Social and emotional skills

Outcome	Together at School, Baseline, N = 1942	Together at School, 6 month, N = 1985	Control, Baseline, N = 1595	Control, 6 month, N = 1591
Cooperation Multisource Assessment of Social Competence Scale (MASCs); cooperation subscale (range 5–20)	n = NA ; % = NA	n = NA ; % = NA	n = NA ; % = NA	n = NA ; % = NA
Number in subgroup				
Cooperation Multisource Assessment of Social Competence Scale (MASCs); cooperation subscale (range 5–20)	14.79 (3.17)	15.16 (3.2)	14.9 (3.19)	15.18 (3.13)
Mean (SD)				
Male	n = 972 ; % = 50	n = 987 ; % = 49.7	n = 758 ; % = 47.5	n = 744 ; % = 46.7
Number in subgroup				
Male	14.09 (3.06)	14.35 (3.09)	14.14 (3.06)	14.45 (3.03)
Mean (SD)				
Female	n = 970 ; % = 50	n = 998 ; % = 50.3	n = 837 ; % = 52.5	n = 847 ; % = 53.3
Number in subgroup				
Female	15.49 (3.12)	15.97 (3.1)	15.6 (3.15)	15.82 (3.08)
Mean (SD)				

Outcome	Together at School, Baseline, N = 1942	Together at School, 6 month, N = 1985	Control, Baseline, N = 1595	Control, 6 month, N = 1591
Empathy Multisource Assessment of Social Competence Scale (MASCs); empathy subscale (range 3–12)	n = NR ; % = NR	n = NR ; % = NR	n = NR ; % = NR	n = NR ; % = NR
Number in subgroup				
Empathy Multisource Assessment of Social Competence Scale (MASCs); empathy subscale (range 3–12)	9.44 (1.9)	9.61 (1.9)	9.52 (1.87)	9.64 (1.8)
Mean (SD)				
Male	n = 972 ; % = 50	n = 987 ; % = 49.7	n = 758 ; % = 47.5	n = 744 ; % = 46.7
Number in subgroup				
Male	8.99 (1.92)	9.12 (1.94)	9.16 (1.86)	9.25 (1.79)
Mean (SD)				
Female	n = 970 ; % = 50	n = 998 ; % = 50.3	n = 837 ; % = 52.5	n = 847 ; % = 53.3
Number in subgroup				
Female	9.88 (1.78)	10.09 (1.79)	9.84 (1.83)	9.97 (1.74)
Mean (SD)				

Cooperation - Polarity - Higher values are better

Empathy - Polarity - Higher values are better

Behavioural outcomes

Outcome	Together at School, Baseline, N = 1942	Together at School, 6 month, N = 1985	Control, Baseline, N = 1595	Control, 6 month, N = 1591
SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) total	n = NR ; % = NR	n = NR ; % = NR	n = NR ; % = NR	n = NR ; % = NR
Number in subgroup				
SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) total	6.31 (5.94)	5.94 (5.66)	5.93 (5.52)	5.69 (5.32)
Mean (SD)				
Male	n = 972 ; % = 50	n = 987 ; % = 49.7	n = 758 ; % = 47.5	n = 744 ; % = 46.7
Number in subgroup				
Male	7.95 (6.27)	7.62 (6.07)	7.3 (5.83)	7.04 (5.72)
Mean (SD)				
Female	n = 970 ; % = 50	n = 998 ; % = 50.3	n = 837 ; % = 52.5	n = 847 ; % = 53.3
Number in subgroup				
Female	4.67 (5.08)	4.27 (4.66)	4.68 (4.91)	4.51 (4.63)
Mean (SD)				
Prosocial behaviour SDQ prosocial subscale	n = NR ; % = NR	n = NR ; % = NR	n = NR ; % = NR	n = NR ; % = NR
Number in subgroup				
Prosocial behaviour SDQ prosocial subscale	6.31 (5.94)	5.94 (5.66)	5.93 (5.52)	5.69 (5.32)

Outcome	Together at School, Baseline, N = 1942	Together at School, 6 month, N = 1985	Control, Baseline, N = 1595	Control, 6 month, N = 1591
Mean (SD)				
Male	n = 972 ; % = 50	n = 987 ; % = 49.7	n = 758 ; % = 47.5	n = 744 ; % = 46.7
Number in subgroup				
Male	5.36 (2.32)	5.51 (2.39)	5.48 (2.34)	5.59 (2.39)
Mean (SD)				
Female	n = 970 ; % = 50	n = 998 ; % = 50.3	n = 837 ; % = 52.5	n = 847 ; % = 53.3
Number in subgroup				
Female	6.89 (2.26)	7.2 (2.11)	7.11 (2.18)	7.29 (2.14)
Mean (SD)				

SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) total - Polarity - Lower values are better

Prosocial behaviour - Polarity - Higher values are better

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Social and emotional skills: Cooperation 6 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Social and emotional skills: Cooperation-Male 6 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Social and emotional skills: Cooperation-Female 6 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Social and emotional skills: Empathy 6 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Social and emotional skills: Empathy-Male 6 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Social and emotional skills: Empathy-Female 6 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: SDQ(emotional symptoms, conduct problems, hyperactivity, peer problems) total 6 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: SDQ (emotional symptoms, conduct problems, hyperactivity ,peer problems) total-Male 6 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: SDQ (emotional symptoms ,conduct problems, hyperactivity, peer problems) total-Female 6 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Prosocial behaviour 6 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Prosocial behaviour-Male 6 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Prosocial behaviour-Female 6 months

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Study arms

Intervention (N = NA)

Brief name	The Together at School intervention program (page 3)
Rationale/theory/Goal	The aim of the program is to promote children's socio-emotional skills in a whole school context. (page 2)
Materials used	<ul style="list-style-type: none"> As part of the training teachers received a 258-page Together at School manual where all the intervention methods and tools are described in detail. (page 5)

Procedures used

(pages 4-5)

- The program employed methods and tools within three areas in order to guarantee the whole school approach
- All the methods and tools are designed to be integrated into the normal school curriculum

First set of methods:

- carried out in class by the teachers, are designed for the children: Circle time, Do-It-Myself lesson, Do-It-Together lesson, and teacher-child individual discussions
- Circle time: 15 min session consisting of guided greetings (e.g. eye contact, friendly touch), children taking turns in telling others about something important to them, and playing – the aim is to practice children’s communication and emotional skills and enhance classroom climate.
- Do-it-Myself lesson: 10–40 min weekly lesson aimed at practicing children’s skills of independent work: concentrating, focusing on one’s own task and problem solving
- Do-it-together lesson: children work in small groups to practice cooperation skills.

Second set of methods:

- carried out by the principal and the staff, are designed to improve the school work environment (Planning of Collaborative Time, Staff Meeting, Service Station, and Toolkit Session).
- E.g.a Toolkit session (45 min, once or twice a year) held by a staff member offers the teaching staff a possibility to share know-how based on their own interests and expertise, aiming at enhancing occupational know-how among the teaching staff

Third set of methods:

- carried out by the teachers and aimed at improving and maintaining a good relationship between the home and school and enhance teacher-parent collaboration.
- includes materials for meeting the parents individually (allowing the parents to express their thoughts freely and give information about their child) and for organizing the Parents’ Evening (aimed to activate teacher-parent interaction and provide support to the parents and the teacher in their child rearing work)

Provider	(page 5) <ul style="list-style-type: none"> • teachers • teachers received program training before starting the implementation of the intervention. • Six instructors with a degree in pedagogics (trained teachers) were responsible for the intervention program training.
Method of delivery	(page 4) Group
Setting/location of intervention	(page 4-5) Classroom/ school
Intensity/duration of the intervention	(page 5) 10 months of teacher training covering 4 modules. Teachers used the methods at tools in the classroom after each module
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	(page 6) <ul style="list-style-type: none"> • Teachers completed detailed intervention protocols in order to keep a log of the tools and methods they had carried out in their classes • The protocols were used to monitor the implementation process and measure the implementation fidelity.
Actual treatment fidelity	Not reported
Other details	None

Control (N = NA)

Brief name	(page 5) Control group
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	(page 5) The control group teachers and headmasters received two 3-hour lessons given by the psychologists and child psychiatrists of the research group
Provider	Page 5 Psychologists and child psychiatrists
Method of delivery	(Page 5) Group (lectures)
Setting/location of intervention	(page 5) Lectures were offered in four central locations in Finland
Intensity/duration of the intervention	Page 5 2 x 3 hour lessons (for teachers)
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Other details	Page 5 The control group was not a “pure” no-treatment group, but was given lectures on the same themes that the intervention was targeting. In addition, the lecturers reported (from informal discussions with the lecturers) that during the lectures the control group teachers shared actively with each other their experiences of supporting children’s wellbeing and social and emotional skills, indicating that some of them already used some kind of methods comparable to the intervention.
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D.1.13 Larsen et al.

Bibliographic Reference	Larsen, T. B.; Urke, H.; Tobro, M.; Ardal, E.; Waldahl, R. H.; Djupedal, I.; Holsen, I.; Promoting Mental Health and Preventing Loneliness in Upper Secondary School in Norway: Effects of a Randomized Controlled Trial; Scandinavian Journal of Educational Research
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Study details

Study design	Cluster randomised controlled trial
Trial registration number	NCT03382080
Study start date	01-Feb-2016
Study end date	12-Feb-2020
Aim	To evaluate the effect of an intervention with a universal program (single-tier), and the combination of this universal program and a selected + indicated measure (multi-tier).
Country/geographical location	Norway
Setting	Secondary schools

Inclusion criteria	<ul style="list-style-type: none"> Schools were self-selected, and eligible for participation if they had not previously or currently implemented any of the interventions, or similar interventions
Exclusion criteria	None further
Method of randomisation	Computer generated randomisation stratified by county.
Method of allocation concealment	The study was non-blinded
Unit of allocation	School
Unit of analysis	Individual
Statistical method(s) used to analyse the data	<ul style="list-style-type: none"> Evaluation of effect was conducted according to the intention-to-treat principle, and adjusted for clustering Missing data were not imputed, but handled with full information maximum likelihood estimation in regression analyses. The intra class correlation coefficient (ICC) was 1%, for the school level, larger for the class level (7–9%), and largest for the individual level (64–67%).
Attrition	<p>Lost to follow-up:</p> <p>DSP: 105/1019 (10.3%)</p> <p>DSP + MHST: 133/1264 (10.5%)</p> <p>Control: 79/720 (11%)</p>
Study limitations (author)	<ul style="list-style-type: none"> Lack of statistical power due to the low number of schools participating Self-selection of schools may have influenced generalisability Attrition from baseline to follow-up could be due to more mental health problems
Study limitations (reviewer)	<ul style="list-style-type: none"> Interim results only - study not completed at time of publication
Source of funding	Ministry of Education and Integration

Study arms

DSP (N = 1019)

6 schools

DSP and MHST (N = 1264)

6 schools

Control (N = 720)

5 schools

Characteristics

Arm-level characteristics

Characteristic	DSP (N = 1019)	DSP and MHST (N = 1264)	Control (N = 720)
Male	n = 384 ; % = 49	n = 537 ; % = 57	n = 285 ; % = 53
No of events			
Male	n = 775 ; % = NA	n = 942 ; % = NA	n = 537 ; % = NA
Responders			

Characteristic	DSP (N = 1019)	DSP and MHST (N = 1264)	Control (N = 720)
Female	n = 391 ; % = 51	n = 405 ; % = 43	n = 252 ; % = 47
No of events			
Female	n = 775 ; % = NA	n = 942 ; % = NA	n = 537 ; % = NA
Responders			
Ethnic Norwegian	n = 710 ; % = 93	n = 854 ; % = 91	n = 464 ; % = 87
No of events			
Ethnic Norwegian	n = 775 ; % = NA	n = 942 ; % = NA	n = 537 ; % = NA
Responders			
Lower middle	n = 62 ; % = 8	n = 63 ; % = 7	n = 36
No of events			
Lower middle	n = 775 ; % = NA	n = 942 ; % = NA	n = 537 ; % = NA
Responders			
Middle	n = 62 ; % = 4	n = 267 ; % = 29	n = 154
No of events			
Middle	n = 775 ; % = NA	n = 942 ; % = NA	n = 537 ; % = NA
Responders			
Upper Middle	n = 524 ; % = 68	n = 593 ; % = 64	n = 330
No of events			

Characteristic	DSP (N = 1019)	DSP and MHST (N = 1264)	Control (N = 720)
Upper Middle Responders	n = 775 ; % = NA	n = 942 ; % = NA	n = 537 ; % = NA

Outcomes

Study timepoints

- Baseline
- 8 month (interim follow up)

Emotional distress

Outcome	DSP, Baseline, N = 670	DSP, 8 month, N = 670	DSP and MHST, Baseline, N = 809	DSP and MHST, 8 month, N = 809	Control, Baseline, N = 458	Control, 8 month, N = 458
Mental health Joint symptoms of anxiety and depression; Symptom Check List (SCL) Mean (SD)	1.8 (0.79)	1.91 (0.85)	1.75 (0.79)	1.81 (0.8)	1.84 (0.82)	1.92 (0.85)
Loneliness Loneliness scale Mean (SD)	2.21 (0.79)	2.3 (0.79)	2.24 (0.79)	2.25 (0.77)	2.25 (0.78)	2.33 (0.82)

Mental health - Polarity - Lower values are better

Loneliness - Polarity - Lower values are better

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Emotional distress: Mental health

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Emotional distress: Loneliness

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Study arms

DSP (N = NA)

Brief name	Page 4 The Dream School Program (DSP)
Rationale/theory/Goal	Page 4 Program is a universal and whole-school program, involving school staff and students, with the aim of creating environments where students are encouraged to participate, feel confident and experience a sense of belonging, and where mental health is promoted

Materials used	<p>Page 5</p> <ul style="list-style-type: none"> • A DSP manual for carrying out the program is provided to the responsible staff involved, in addition to training by AfC of school staff and peer mentors • The Dream Class poster should be developed during the first weeks of the first semester.
Procedures used	<p>Page 4-5</p> <ul style="list-style-type: none"> • The DSP contains specific core elements that must be conducted for it to be well implemented. • These are the Dream Class 1 and 2, and the Dream Class poster, which provides guidelines for enabling a good psychosocial class environment. • The Dream Class 1 is scheduled to the first week of school, and the Dream Class 2 is scheduled to the beginning of the second semester of the school year (January/February). • The peer mentors are to be actively involved in collaboration with class teachers in carrying out these core elements • The peer mentors welcome new students on the first day of school, convey information about class and school gatherings, and are intended to be actively involved in creating meeting points for socialization throughout the school year and should give special attention to students who seem to be left out or lonely
Provider	<p>Page 5</p> <p>School staff and peer mentors</p>
Method of delivery	<p>Page 5</p> <p>Probably group as describes classes</p>
Setting/location of intervention	<p>Page 5</p> <p>Classroom</p>

Intensity/duration of the intervention	Page 5 Duration not reported 2 classes: One delivered during the first week of school and one at the beginning of the second semester
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	None

DSP and MHST (N = NA)

Brief name	page 5 The Dream School Program (DSP) plus The Mental Health Support Team (MHST) (see DSP for details on that part of the intervention)
Rationale/theory/Goal	Page 5 <ul style="list-style-type: none"> The MHST works both indicative and selective—it targets specific students with known mental health problems or other issues who are at risk of dropping out, and identifies and follows up on students who have patterns of high absence from school.
Materials used	None reported
Procedures used	Page 5

	<ul style="list-style-type: none"> • The MHST team has its starting point in the school’s student services and thus represents a reorganizing of existing resources within the school to work more systematically with identifying and follow up of students at risk. • The NHST team systematizes and reorganizes student services through: <ul style="list-style-type: none"> • (1) services and staff working in services being situated at the same place; • (2) having “one open door” to increase the accessibility of services and staff to students and teachers; • (3) focusing on enhancing the quality of the school start to better facilitate the move from lower to upper secondary school, while also collaborating with lower secondary schools; • (4) mapping all 1st year students’ health and well-being during the autumn and follow-up talks with students with Kidscreen scores indicating that they are struggling; • (5) having close follow-up of at-risk students to ensure tailored help is available to each student; • (6) focusing on early detection of absentee as well as intervention and follow-up when the student shows signs of absenteeism
Provider	<p>Page 5</p> <ul style="list-style-type: none"> • Each team consists of counselors, school nurses and follow-up services staff.
Method of delivery	Not reported
Setting/location of intervention	Not reported
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Other details	<p>Page 5</p> <ul style="list-style-type: none"> • The teams are cross- and multidisciplinary, and facilitate collaborations within the MHST, between MHST and school leadership, and between lower and upper secondary schools. • They also support teachers and act as supervisors in their work with at-risk students
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Control (N = NA)

Brief name	<p>Page 5</p> <p>Control (not further described)</p>
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	Not reported
Provider	Not reported
Method of delivery	Not reported
Setting/location of intervention	Not reported
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Other details	Not reported
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D.1.14 Nocentini, 2016

Bibliographic Reference	Nocentini, Annalaura; Menesini, Ersilia; KiVa Anti-Bullying Program in Italy: Evidence of Effectiveness in a Randomized Control Trial.; Prevention science : the official journal of the Society for Prevention Research; 2016; vol. 17 (no. 8); 1012-1023
Secondary publication(s)	Nocentini, Annalaura; Palladino, Benedetta Emanuela; Menesini, Ersilia (2019) For Whom Is Anti-Bullying Intervention Most Effective? The Role of Temperament. International journal of environmental research and public health 16(3)

Study details

Study design	Cluster randomised controlled trial
Trial registration number	Not reported
Study start date	Sep-2013
Study end date	May-2014
Aim	To evaluate the effectiveness of the KiVa antibullying program in reducing bullying and victimisation in Italian schools.
Country/geographical location	Italy
Setting	Italian comprehensive institutes (includes elementary and middle schools).
Inclusion criteria	<ul style="list-style-type: none"> Schools are comprehensive institutes Schools are characterised by an average level of academic performance and socioeconomic background (in order to exclude very special school contexts and result in a representative sample)
Exclusion criteria	None reported

Method of randomisation	Schools were randomised by the Regional School Board of Tuscany using a toss of a coin.
Method of allocation concealment	Not reported
Unit of allocation	School
Unit of analysis	Individuals
Statistical method(s) used to analyse the data	The linear mixed-effect model (MIXED) procedure in SPSS was used with full-information maximum likelihood (ML) estimation (West 2009). MIXED procedure handles more complex situations in which experimental units are nested in a hierarchy such as schools. A three-level (measurement occasion within individual, within schools) random-intercept model was fit to account for within-subject, within-school correlations. The fixed-effect portion of the model treated outcomes as a function of time, experimental group condition (KiVa and control), and time interacting with group. The random-effect portion of the model considered the random effects of subjects and schools. In addition, bully and victim prevalence rates and odds ratios at T2 were calculated, with standard errors of odds ratios corrected for clustering at the school level.
Attrition	2042 students completed questionnaires at T1 and 1910 completed questionnaires at T2 (93.5%). Attrition analyses showed no significant differences in attrition by group assignment, gender, class level, or baseline scores on measures of bullying, victimisation, anti-bullying or pro-victim attitudes, or empathy for the victim.
Study limitations (author)	<ul style="list-style-type: none"> • All study measures were self-evaluated and can be affected by social desirability bias. Additional measures based on peer and teacher reports would be beneficial. • All schools involved in the evaluation either as intervention or control schools volunteered to do so, such that study findings may only be generalisable to Italian schools that are willing to implement an anti-bullying program. • Data on implementation fidelity was not reported. Adherence to the program may have affected the variability in outcomes by school observed in this study. • The study focused on short-term effects: future studies should evaluate whether effects are stable over a longer period.
Study limitations (reviewer)	None
Source of funding	Not reported

Study arms

KiVa Anti-bullying Program (N = 1039)

7 schools

Control (N = 1003)

6 schools

Characteristics

Study-level characteristics

Characteristic	Study (N = 2042)
Grade 4 students	8.84 (0.43)
Mean (SD)	
Grade 6 students	10.93 (0.48)
Mean (SD)	
Male	% = 49
No of events	
Female	% = 51
No of events	
Italian	% = 92

Characteristic	Study (N = 2042)
No of events	

Outcomes

Study timepoints

- Baseline
- 7 month (Post-intervention)

Behavioural outcomes

Outcome	KiVa Anti-bullying Program, Baseline, N = 1039	KiVa Anti-bullying Program, 7 month, N = 954	Control, Baseline, N = 1003	Control, 7 month, N = 956
Primary school	n = 448 ; % = NR	n = 443 ; % = NR	n = 487 ; % = NR	n = 462 ; % = NR
Sample size				
Primary school	0.13 (0.12)	0.098 (0.1)	0.14 (0.12)	0.14 (0.12)
Mean (SD)				
Middle school	n = 533 ; % = NR	n = 494 ; % = NR	n = 516 ; % = NR	n = 493 ; % = NR
Sample size				

Outcome	KiVa Anti-bullying Program, Baseline, N = 1039	KiVa Anti-bullying Program, 7 month, N = 954	Control, Baseline, N = 1003	Control, 7 month, N = 956
Middle school	0.062 (0.096)	0.057 (0.073)	0.056 (0.08)	0.075 (0.086)
Mean (SD)				
Primary school	n = 488 ; % = NR	n = 442 ; % = NR	n = 486 ; % = NR	n = 462 ; % = NR
Sample size				
Primary school	0.059 (0.086)	0.046 (0.073)	0.064 (0.09)	0.064 (0.078)
Mean (SD)				
Middle school	n = 529 ; % = NR	n = 493 ; % = NR	n = 516 ; % = NR	n = 493 ; % = NR
Sample size				
Middle school	0.032 (0.059)	0.029 (0.053)	0.03 (0.05)	0.041 (0.063)
Mean (SD)				

Victimisation - Polarity - Lower values are better

Bullying - Polarity - Lower values are better

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Behavioural outcomes: Victimisation-Primary school

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Victimisation-Middle school

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Bullying-Primary school

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Bullying-Middle school

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Study arms

Intervention (N = 1039)

Brief name	KiVa Anti-Bullying Program (p. 1013)
Rationale/theory/Goal	<p>KiVa is a comprehensive whole-school anti-bullying program that focuses on actions targeting individual students, classrooms and schools. Bullying is seen as a group process and the intervention focuses on the role of the bystander and their reaction to bullying occurrences. The intervention aims to change the attitudes and behaviours of the bystander which can inadvertently reinforce bullying behaviour. Positively changing bystander attitudes and behaviour by enhancing empathy and self-efficacy, and teaching behaviours that support the victim, can reduce the social rewards gained by bullies and reduce their motivation to bully. KiVa involves both universal actions targeted at all students, and indicated actions targeted at bullies or their victims (p. 1013).</p> <p>The general goal is to create a school where bullying is unacceptable; where victims are supported by adults and bullies are confronted for their unacceptable behaviour (p. 1014).</p>
Materials used	During student lessons, short films about bullying were used. Schools were provided with KiVa vests for recess supervisors and KiVa posters to place around the school. Parents received a guide about bullying and the KiVa program (p. 1013). Teacher manuals, badges and posters were also provided in training sessions (p. 1015).
Procedures used	<p>Shortly before starting the intervention, pre-implementation training was provided to all intervention schools. Participants included principals, teachers, school social workers and psychologists. Schools were provided with KiVa resources (manuals, badges, posters) during this training (p. 1015).</p> <p>The intervention included student lessons on raising awareness of the role of bystanders in bullying, increasing empathy for victims, and teaching strategies for supporting and defending their victimised peers. Lessons involved discussion, group work, role play exercises and short films. As lessons progressed, class rules were developed and adopted. KiVa symbols (e.g. badges, posters) were used around the school to remind staff and students about the program (p. 1013).</p> <p>A specific set of KiVa procedures were adopted when cases of acute bullying occurred. Teams of three staff members immediately held an individual meeting with the victim, then the bully, followed by a group discussion with all bullies if more than one were involved. In parallel, the classroom teacher discussed the issue with a small number of pro-social classmates (neither victims nor bullies) to enhance support for the victim. 1 to 2 week follow up meetings with victim and bully (separately) were used to monitor changes (p. 1013).</p>

Provider	KiVa training sessions were conducted by two Italian certified trainers (researcher psychologists trained by the original developer group in Finland) (p. 1015).
	The University team provided meetings during the school year to prepare lessons and monitor implementation (p. 1016).
Method of delivery	Face to face (p. 1013)
Setting/location of intervention	Italian comprehensive institutes (combined elementary and middle schools) (p. 1014).
Intensity/duration of the intervention	One school year (p. 1015)
Tailoring/adaptation	The KiVa antibullying program was adapted for the Italian context. The structure of the intervention remained the same but modifications involved changing the language of intervention materials and activities from Finnish to Italian. Recess supervisors vests were substituted for badges. All online components of the program, including a virtual game designed to reinforce knowledge acquired during lessons, were excluded because the availability of computers in Italian schools is low. The schedule of training and implementation was modified due to different timings of the school year between Finnish and Italian schools. Italian teachers were provided with extra training, support and monitoring across the school year. In two schools, teachers were encouraged with economic support (between 250 and 400 Euros) from their headteachers to compensate for the additional time spent on the program (p. 1016).
Unforeseen modifications	None reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Cluster N = 7

Control (N = 1003)

Brief name	Usual school provision (page 1012)
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Rationale/theory/Goal	Not reported
Materials used	None reported
Procedures used	Usual school provision (p. 1012).
Provider	Not reported
Method of delivery	Not reported
Setting/location of intervention	Italian comprehensive institutes (combined elementary and middle schools) (p. 1014).
Intensity/duration of the intervention	One school year (p. 1015)
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Cluster N = 6

D.1.15 Palladino, 2016a

Bibliographic Reference Palladino BE; Nocentini A; Menesini E; Evidence-based intervention against bullying and cyberbullying: Evaluation of the NoTrap! program in two independent trials. ****TRIAL 2****; Aggressive behavior; 2016; vol. 42 (no. 2)

Study details

Study design	Non-randomised controlled trial (NRCT)
Trial registration number	None reported
Study start date	2012
Aim	To evaluate the efficacy of the third Edition of the No Trap! program in accordance with the recent criteria for evidence-based interventions
Country/geographical location	Italy
Setting	7 high schools in the province of Lucca
Inclusion criteria	None reported
Exclusion criteria	None reported
Method of randomisation	Not applicable
Method of allocation concealment	None reported
Unit of allocation	Schools
Unit of analysis	Individual
Statistical method(s) used to analyse the data	<ul style="list-style-type: none"> • Missing data handled with a maximum likelihood estimation models • Adjusted for clustering • ANCOVAS used to test the differences between the control and experimental groups
Attrition	Not reported
Study limitations (author)	<ul style="list-style-type: none"> • Non-randomised • Self-reported measures • Limited to 9th-graders only

Study limitations (reviewer)	None to add
Source of funding	Not reported

Study arms

NoTrap! (N = 234)

4 schools

Control (N = 227)

3 schools

Characteristics

Arm-level characteristics

Characteristic	NoTrap! (N = 234)	Control (N = 227)
Age	14 to 18	14 to 18
Range		
Age	15.6 (0.92)	15.57 (0.88)
Mean (SD)		
Male	n = 67 ; % = 28.6	n = 173 ; % = 76.2

Characteristic	NoTrap! (N = 234)	Control (N = 227)
No of events		
Female	n = 160 ; % = 71.4	n = 55 ; % = 23.8
No of events		

Outcomes

Study timepoints

- Baseline
- 1 year (From baseline)

Behavioural outcomes

Outcome	NoTrap!, Baseline, N = NA	NoTrap!, 1 year, N = NA	Control, Baseline, N = NA	Control, 1 year, N = NA
Male	n = 67 ; % = NA	n = 67 ; % = NA	n = 173 ; % = NA	n = 173 ; % = NA
Sample size				
Male	0.11 (0.09)	0.063 (0.05)	0.099 (0.08)	0.095 (0.1)
Mean (SD)				
Female	n = 167 ; % = NA	n = 167 ; % = NA	n = 54 ; % = NA	n = 54 ; % = NA
Sample size				
Female	0.094 (0.08)	0.068 (0.06)	0.098 (0.07)	0.1 (0.09)

Outcome	NoTrap!, Baseline, N = NA	NoTrap!, 1 year, N = NA	Control, Baseline, N = NA	Control, 1 year, N = NA
Mean (SD)				
Male	n = 67 ; % = NA	n = 67 ; % = NA	n = 173 ; % = NA	n = 173 ; % = NA
Sample size				
Male	0.11 (0.08)	0.068 (0.06)	0.11 (0.08)	0.13 (0.11)
Mean (SD)				
Female	n = 167 ; % = NA	n = 167 ; % = NA	n = 54 ; % = NA	n = 54 ; % = NA
Sample size				
Female	0.084 (0.08)	0.062 (0.06)	0.097 (0.08)	0.079 (0.07)
Mean (SD)				
Male	n = 67 ; % = NA	n = 67 ; % = NA	n = 173 ; % = NA	n = 173 ; % = NA
Sample size				
Male	0.057 (0.07)	0.029 (0.04)	0.053 (0.06)	0.056 (0.08)
Mean (SD)				
Female	n = 167 ; % = NA	n = 167 ; % = NA	n = 54 ; % = NA	n = 54 ; % = NA
Sample size				
Female	0.052 (0.06)	0.055 (0.07)	0.054 (0.07)	0.051 (0.06)
Mean (SD)				
Male	n = 67 ; % = NA	n = 67 ; % = NA	n = 173 ; % = NA	n = 173 ; % = NA
Sample size				

Outcome	NoTrap!, Baseline, N = NA	NoTrap!, 1 year, N = NA	Control, Baseline, N = NA	Control, 1 year, N = NA
Male	0.28 (0.04)	0.016 (0.03)	0.028 (0.03)	0.045 (0.08)
Mean (SD)				
Female	n = 167 ; % = NA	n = 167 ; % = NA	n = 54 ; % = NA	n = 54 ; % = NA
Sample size				
Female	0.02 (0.04)	0.013 (0.03)	0.028 (0.04)	0.028 (0.03)
Mean (SD)				

Victimisation - Polarity - Lower values are better

Bullying - Polarity - Lower values are better

Cyber victimisation - Polarity - Lower values are better

Cyber bullying - Polarity - Lower values are better

Critical appraisal - ROBINS-I: a tool for assessing risk of bias in non-randomised studies of interventions

Behavioural outcomes: Victimisation-Male

Section	Question	Answer
Overall bias	Risk of bias judgement	Serious

Behavioural outcomes: Victimisation-Female

Section	Question	Answer
Overall bias	Risk of bias judgement	Serious

Behavioural outcomes-Bullying-Male

Section	Question	Answer
Overall bias	Risk of bias judgement	Serious

Behavioural outcomes-Bullying-Female-

Section	Question	Answer
Overall bias	Risk of bias judgement	Serious

Behavioural outcomes: Cybervictimisation-Male

Section	Question	Answer
Overall bias	Risk of bias judgement	Serious

Behavioural outcomes: Cybervictimisation-Female

Section	Question	Answer
Overall bias	Risk of bias judgement	Serious

Behavioural outcomes: Cyberbullying-Male

Section	Question	Answer
Overall bias	Risk of bias judgement	Serious

Behavioural outcomes: Cyberbullying-Female

Section	Question	Answer
Overall bias	Risk of bias judgement	Serious

Study arms

NoTrap! (N = NA)

Brief name	P196 The NoTrap! Program (Let's not fall into the trap! program) Third edition
Rationale/theory/Goal	P196 Aims to prevent and combat both traditional bullying and cyberbullying designed to involve working both online and offline.

Materials used	None reported
Procedures used	<p>p196-197</p> <p>Phase 1: Managed by adults (psychologists researchers)</p> <p>Teachers took part in a course on digital communication technology and social networks, risks of online communication, bullying and cyberbullying The program was presented to participating classes raising awareness and improving knowledge in collaboration with a "postal police" psychologist (Italian police unit)</p> <p>Phase 2: Led by peer educators - a group of students who assume the role of responsibility both in their classroom and online after undergoing training. Peer educators enhance awareness and provide support in the virtual context, while in the face-to-face context we stimulate a more cooperative approach in carrying out the activities with their classmates.</p> <p>The new peer educator-led activities involved cooperative work with the other classmates that focused on empathy and problem solving, and targeted the points of view of victim and bystander in order to address the processes that can lead to a change in the role of these participants</p>
Provider	<p>p196</p> <p>Psychologists and peers</p>
Method of delivery	<p>p196</p> <p>Face-to-face</p>
Setting/location of intervention	Not reported
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	<p>p196</p> <p>The revision of the third edition of NoTrap! was to standardise the face to face activities led by peer educators</p>
Unforeseen modifications	Not reported

Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	Not reported

Control (N = NA)

Brief name	Control (not further described)
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	Not reported
Provider	Not reported
Method of delivery	Not reported
Setting/location of intervention	Not reported
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	Not reported

D.1.16 Palladino, 2016b

Bibliographic Reference Palladino, Benedetta E; Nocentini, Annalaura; Menesini, Ersilia; Evidence-based intervention against bullying and cyberbullying: Evaluation of the NoTrap! program in two independent trials. ****TRIAL 1****; Aggressive behavior; 2016; vol. 42 (no. 2); 194-206

Study details

Study design	Non-randomised controlled trial (NRCT)
Trial registration number	Not reported
Study start date	2012
Aim	To evaluate the efficacy of the third Edition of the No Trap! program in accordance with the recent criteria for evidence-based interventions
Country/geographical location	Italy
Setting	8 high schools in Tuscany (provinces of Lucca and Florence)
Inclusion criteria	None reported
Exclusion criteria	None reported
Method of randomisation	Not applicable
Method of allocation concealment	None reported
Unit of allocation	Schools
Unit of analysis	Individual

Statistical method(s) used to analyse the data	<ul style="list-style-type: none">• Missing data handled with a maximum likelihood estimation models• Adjusted for clustering• ANCOVAS used to test the differences between the control and experimental groups
Attrition	The percentage of students who had dropped out was significantly lower for the experimental group than for the control group
Study limitations (author)	<ul style="list-style-type: none">• Non-randomised• Self-reported measures• Limited to 9th-graders only
Study limitations (reviewer)	None to add
Source of funding	Not reported

Study arms

No Trap! (N = 451)

5 schools

Control (N = 171)

3 schools

Characteristics

Arm-level characteristics

Characteristic	No Trap! (N = 451)	Control (N = 171)
Age	14 to 18	14 to 18
Range		
Age	14.79 (1.12)	15.28 (0.15)
Mean (SD)		
Male	n = 257 ; % = 57	n = 118 ; % = 69
No of events		
Female	n = 194 ; % = 43	n = 53 ; % = 31
No of events		

Outcomes

Study timepoints

- Baseline
- 1 year (From baseline)

Behavioural outcomes

Outcome	No Trap!, Baseline, N = NA	No Trap!, 1 year, N = NA	Control, Baseline, N = NA	Control, 1 year, N = NA
Victimisation Florence Bullying-Victimization Scales	n = 389 ; % = NA	n = 338 ; % = NA	n = 130 ; % = NA	n = 112 ; % = NA
Sample size				
Victimisation Florence Bullying-Victimization Scales	0.11 (0.11)	0.059 (0.09)	0.093 (0.1)	0.09 (0.12)
Mean (SD)				
Bullying Florence Bullying-Victimization Scale	n = 387 ; % = NA	n = 330 ; % = NA	n = 131 ; % = NA	n = 110 ; % = NA
Sample size				
Bullying Florence Bullying-Victimization Scale	0.12 (0.13)	0.083 (0.11)	0.11 (0.11)	0.081 (0.11)
Mean (SD)				
Cyber victimisation Florence Bullying-Victimization Scale	n = 378 ; % = NA	n = 323 ; % = NA	n = 129 ; % = NA	n = 108 ; % = NA
Sample size				
Cyber victimisation Florence Bullying-Victimization Scale	0.044 (0.08)	0.015 (0.04)	0.041 (0.07)	0.043 (0.11)
Mean (SD)				

Outcome	No Trap!, Baseline, N = NA	No Trap!, 1 year, N = NA	Control, Baseline, N = NA	Control, 1 year, N = NA
Cyber bullying Florence Bullying-Victimization Scale	n = 378 ; % = NA	n = 325 ; % = NA	n = 126 ; % = NA	n = 108 ; % = NA
Sample size				
Cyber bullying Florence Bullying-Victimization Scale	0.033 (0.07)	0.013 (0.04)	0.031 (0.07)	0.047 (0.11)
Mean (SD)				

Victimisation - Polarity - Lower values are better

Bullying - Polarity - Lower values are better

Cyber victimisation - Polarity - Lower values are better

Cyber bullying - Polarity - Lower values are better

Critical appraisal - ROBINS-I: a tool for assessing risk of bias in non-randomised studies of interventions

Behavioural outcomes: Victimization

Section	Question	Answer
Overall bias	Risk of bias judgement	Serious

Behavioural outcomes-Bullying

Section	Question	Answer
Overall bias	Risk of bias judgement	Serious

Behavioural outcomes: Cybervictimisation

Section	Question	Answer
Overall bias	Risk of bias judgement	Serious

Behavioural outcomes-Cyberbullying

Section	Question	Answer
Overall bias	Risk of bias judgement	Serious

Study arms

No Trap! (N = NA)

Brief name	P196 The NoTrap! Program (Let's not fall into the trap! program) Third edition
Rationale/theory/Goal	P196 Aims to prevent and combat both traditional bullying and cyberbullying designed to involve working both online and offline.

Materials used	None reported
Procedures used	<p>p196-197</p> <p>Phase 1: Managed by adults (psychologists researchers)</p> <p>Teachers took part in a course on digital communication technology and social networks, risks of online communication, bullying and cyberbullying The program was presented to participating classes raising awareness and improving knowledge in collaboration with a "postal police" psychologist (Italian police unit)</p> <p>Phase 2: Led by peer educators - a group of students who assume the role of responsibility both in their classroom and online after undergoing training. Peer educators enhance awareness and provide support in the virtual context, while in the face-to-face context we stimulate a more cooperative approach in carrying out the activities with their classmates.</p> <p>The new peer educator-led activities involved cooperative work with the other classmates that focused on empathy and problem solving, and targeted the points of view of victim and bystander in order to address the processes that can lead to a change in the role of these participants</p>
Provider	<p>p196</p> <p>Psychologists and peers</p>
Method of delivery	<p>p196</p> <p>Face-to-face</p>
Setting/location of intervention	Not reported
Intensity/duration of the intervention	<p>p196</p> <p>The revision of the third edition of NoTrap! was to standardise the face to face activities led by peer educators</p>
Tailoring/adaptation	p196

	The revision of the third edition of NoTrap! was to standardise the face to face activities led by peer educators
Unforeseen modifications	None
Planned treatment fidelity	None reported
Actual treatment fidelity	None reported
Other details	None

Control (N = NA)

Brief name	Control (not further described)
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	Not reported
Provider	Not reported
Method of delivery	Not reported
Setting/location of intervention	Not reported
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported

Actual treatment fidelity	Not reported
Other details	Not reported

D.1.17 Silvia, 2011

Bibliographic Reference	Silvia, Suyapa; Blitstein, Jonathan; Williams, Jason; Ringwalt, Chris; Dusenbury, Linda; Hansen, William; Impacts of a Violence Prevention Program for Middle Schools: Findings after 3 Years of Implementation. NCEE 2011-4017; 2011; 1-217
Secondary publication(s)	Silvia, Suyapa, Blitstein, Jonathan, Williams, Jason et al. (2011) Impacts of a Violence Prevention Program for Middle Schools: Findings after 3 Years of Implementation. Executive Summary. NCEE 2011-4018.: 1-24 Silvia, Suyapa, Blitstein, Jonathan, Williams, Jason et al. (2010) Impacts of a Violence Prevention Program for Middle Schools: Findings from the First Year of Implementation. NCEE 2010-4007.: 1-159

Study details

Study design	Cluster randomised controlled trial
Trial registration number	Not reported
Study start date	Sep-2006
Study end date	May-2009
Aim	To test the impact of a school violence prevention program which combines a curriculum-based program, Responding in Peaceful and Positive Ways (RIPP) and a whole-school approach, Best Behaviour.
Country/geographical location	US
Setting	Middle schools, Grades 6 to 8

Inclusion criteria	<ul style="list-style-type: none"> The school sampling frame was limited to regular (public, noncharter, and nonmagnet) schools including at least grades 6 to 8 with a 6th-grade population of at least 250 students.
Exclusion criteria	<ul style="list-style-type: none"> School districts with fewer than three eligible schools were excluded because they yielded insufficient matched pairs of schools to include in the study. Districts were deemed ineligible to participate if there was a current or planned district mandate for all middle schools to implement curriculum-based or whole-school violence prevention programs that were similar to RiPP or Best Behavior. Similarly, the study excluded schools that were currently implementing or were planning to implement programs similar to RiPP or Best Behavior Schools for which future redistricting plans (e.g., changing feeder patterns) would negatively impact the 6th-grade enrollment levels for the ensuing academic year were excluded. The study also excluded schools that could not accommodate 16 lessons, each lasting 50 minutes, for all 6th- to 8th-graders and that could not identify placement for the RiPP curriculum in the normal academic day.
Method of randomisation	Random assignment to condition was conducted within district, among pair-matched schools. Schools were matched on the proportion of students who receive free or reduced-price lunches (this variable is often employed as a proxy for low socioeconomic condition). No information about randomisation method is provided.
Method of allocation concealment	Not reported
Unit of allocation	School
Unit of analysis	Individuals
Statistical method(s) used to analyse the data	A series of hierarchical, or mixed-effects, regression models were used to evaluate the RiPP and Best Behavior program outcomes. These models account for correlation among responses by allowing for the inclusion of multiple sources of random variation. This is done by creating a series of “nested” models that reflect the research design. The primary outcome models, for example, include student-level models (level one) nested within school-level models (level two). The models predict each outcome (e.g., violence, victimization) as a function of condition (intervention vs. control) and relevant covariates (e.g., demographic characteristics, school characteristics).

Attrition	<p>61% of students enrolled at baseline completed the 3-year follow up assessment, with 3-year follow-up response rates across schools ranging from 40% to 89%. A two-tailed t-test indicated that the mean response rates at 3-year follow-up for intervention (63%) and control groups (62%) were not statistically different.</p> <p>One pair of schools did not participate in the second and third years, while a second pair of schools did not participate in the third year. In each case, the control school was dropped from the study as a result of its paired intervention school ending their participation.</p>
Study limitations (author)	<ul style="list-style-type: none"> • The specific sampling frame used limits generalisability beyond schools that meet the eligibility criteria • Motivation for implementing and completing the program varied across intervention schools, and the intervention was not uniformly implemented with fidelity. • The study tested a combination of two interventions so is not able to provide information on the potential separate impacts of each one. • Self-report student surveys were the only source of outcome data and there is the potential for students to underreport violence or victimisation behaviours when using self-report (although the authors note that underreporting would be expected to occur to the same extent in intervention and control schools).
Study limitations (reviewer)	None
Source of funding	This report was prepared for the National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, under contract no. ED01CO0052/0015.

Study arms

RiPP and Best Behaviour (N = 3198)

20 schools

Control (N = 3418)

20 schools

Characteristics

Arm-level characteristics

Characteristic	RiPP and Best Behaviour (N = 3198)	Control (N = 3418)
Male	n = 1567 ; % = 49	n = 1673 ; % = 49
No of events		
Female	n = 1631 ; % = 51	n = 1743 ; % = 51
No of events		
Hispanic	n = 1258 ; % = 39.34	n = 1021 ; % = 29.87
No of events		
Black - non-Hispanic	n = 776 ; % = 24.25	n = 746 ; % = 21.84
No of events		
White - non-Hispanic	n = 891 ; % = 27.85	n = 1347 ; % = 39.42
No of events		
Other non-Hispanic or mixed	n = 274 ; % = 8.56	n = 305 ; % = 8.91
No of events		
Single parent household	% = 60	% = 60
No of events		

Outcomes

Study timepoints

- Baseline
- 3 year

Behavioural outcomes

Outcome	RiPP and Best Behaviour, Baseline, N = 3198	RiPP and Best Behaviour, 3 year, N = 2784	Control, Baseline, N = 3418	Control, 3 year, N = 3070
Violence (past 30 days, Threats or actual violence, at school) Adapted from the Problem Behavior Frequency Scales Mean (SE)	1.95 (0.14)	2.86 (0.11)	1.85 (0.13)	2.7 (0.1)
Violence (past 30 days, Threats or actual violence, at school) Adapted from the Problem Behavior Frequency Scales Mean (SD)	1.95 (7.92)	2.86 (5.8)	1.85 (7.6)	2.7 (5.54)
Victimisation ((past 30 days, Threats or actual victimisation, at school) Adapted from the Problem Behavior Frequency Scales Mean (SE)	3.88 (0.15)	4.14 (0.11)	4.09 (0.15)	4.18 (0.11)
Victimisation ((past 30 days, Threats or actual victimisation, at school)	3.88 (8.48)	4.14 (5.8)	4.09 (8.77)	4.18 (6.09)

Outcome	RiPP and Best Behaviour, Baseline, N = 3198	RiPP and Best Behaviour, 3 year, N = 2784	Control, Baseline, N = 3418	Control, 3 year, N = 3070
Adapted from the Problem Behavior Frequency Scales				
Mean (SD)				

Violence (past 30 days, Threats or actual violence, at school) - Polarity - Lower values are better

Victimisation ((past 30 days, Threats or actual victimisation, at school) - Polarity - Lower values are better

Paper reported mean/SE only. SD calculated by reviewer

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Behavioural outcomes: Violence

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Victimisation

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Study arms

Intervention (N = 3198)

Brief name	A hybrid intervention model that combines Responding in Peaceful and Positive Ways (RiPP) and Best Behaviour (p. xvii)
Rationale/theory/Goal	<p>This school-based violence prevention program combines a curriculum-based component: the RiPP program, with a whole-school component: Best Behaviour. The two approaches are considered complementary as together they target individual- and school-level change mechanisms (p. xix).</p> <p>RiPP is a universal social-cognitive program that uses the curriculum to promote effective problem-solving skills; increase motivation and self-efficacy to use those skills; and reduce the appeal and perceived utility of violent behaviours. The program is designed to increase social competence and thereby reduce violent behaviour. It assumes that repeated exposure to the problem solving model, increased awareness of nonviolent options, and opportunities for reflection and skills practice will support students learn how to choose prosocial strategies (p. 6). The program also includes training teachers in classroom management techniques and prosocial modelling (p. 7).</p> <p>Best Behaviour is based on the Positive Behaviour Support (PBS) approach (p. 54). It is a whole-school staff development program that targets school practices and policies to improve discipline in schools. The program is designed to be implemented by a school management team and encourages the systematic reorganisation and modification of school strategies, disciplinary policies and enforcement procedures in order to improve school discipline and reduce school violence (pp. 5-7). The role of the school principal is considered critical in communicating enthusiasm and commitment to the intervention and supporting implementation (p. 55).</p>
Materials used	<p>As part of the RiPP component, schools were given curriculum materials for each grade, which included:</p> <ul style="list-style-type: none">• a teaching manual with written lessons and instructions• individual student workbooks with activities keyed to specific lessons• RiPP posters to display in the classroom• PowerPoint presentations for each lesson (p. 49) <p>Members of the school management team were provided with extensive training in Best Behaviour (p. 7)</p> <p>Throughout the intervention, on-site technical assistance was made available to facilitate, coach and monitor the progress and delivery of both programs (p. xix).</p>

Procedures used	<p>The RiPP curriculum comprises 16 50-minute lessons per year for each grade from 6th to 8th grade. Lessons cover a variety of strategies including team building, problem solving, understanding feelings, perspective taking, and avoiding conflict. Lessons include discussion, brainstorming, games, small group work, role playing, rehearsal of specific skills, and didactic learning. Each activity is scripted and tied to a specific objective (p. 48-50). Students are also instructed in the use of the problem solving model <i>SCIDDLE</i> (Stop, Calm down, Identify the problem and your feelings about it, Decide among your options, Do it, Look back, and Evaluate), and <i>RAID</i> (a specific set of options that include Resolve, Avoid, Ignore, and Defuse) (p. 53).</p> <p>The Best Behaviour component is implemented by a school management team comprising teachers and administrators who receive extensive training prior to implementation and in all follow-up years (p. 7). This management team is expected to meet monthly to plan and discuss implementation. The intervention involves 11 specific steps to be completed over the 3 years and provides detailed guidelines for achieving each step. These steps fall into 4 broad sets of activities:</p> <ol style="list-style-type: none"> 1) conducting a schoolwide needs assessment to identify goals 2) defining rules and expectations and teaching them on a regular basis 3) developing a positive behaviour reinforcement system which rewards students for obeying rules and meeting expectations 4) developing a data-based decision making process for identifying and addressing the needs of high-risk students (pp. 55-57).
Provider	<p>RiPP training was delivered by the program developers or others who had direct experience with implementing RiPP in the classroom; all trainers had been involved for at least 5 years in training activities for middle school teachers (p. 58). Best Behaviour training was led by the program developer (p. 59).</p> <p>RiPP lessons were delivered by trained classroom teachers and Best Behaviour was implemented through a team of school staff and administrators (p. 47).</p> <p>Technical assistance was made available throughout the implementation period by on-site implementation liaisons. Liaisons hired for the project were experienced former or current educators. All but two were retired teachers or principals (p. 60).</p>

Method of delivery	Not reported but assumed training workshops were delivered face to face. RiPP lessons delivered face to face. Best Behaviour management team meetings were face to face.
Setting/location of intervention	Middle schools (p. xvii)
Intensity/duration of the intervention	3 years (p. xvii)
Tailoring/adaptation	<p>Both programs in this study were modified. The RiPP developers revised their curriculum so that the number of lessons per year was evenly distributed across the 3 years in order to address concerns about the competing demands on classroom time within a given school year (curriculum changed from 25 lessons in the first year and 12 in years 2 and 3 to 16 lessons each year) (p. 47).</p> <p>The Best Behavior intervention had most frequently been used in elementary schools so the developers revised the approach to make it more acceptable to a middle school population. These modifications focused mainly on language used and rewards that were likely to be acceptable to middle school versus elementary youth (p. 47).</p>
Unforeseen modifications	None reported
Planned treatment fidelity	<p>Program fidelity for RiPP was measured across adherence, program exposure and student responsiveness. For adherence, teachers were required to follow the scripted lesson plan and use the teaching methods prescribed by the curriculum. This was assessed by the evaluation team using classroom observations and coded as <i>well aligned</i>, <i>moderately aligned</i> or <i>poorly aligned</i>. Program exposure was measured by assessing the extent to which all 16 lessons were delivered to the three grades targeted using curriculum implementation records. Student responsiveness was captured through student engagement in lessons, discussions and activities, and was assessed by the evaluation team using classroom observations.</p> <p>Program fidelity for Best Behaviour was assessed through year-end implementation reports which indicated the extent to which schools had achieved each key program practice. Program saturation - the extent to which information concerning schoolwide rules, expectations, discipline and reward policies had reached school staff beyond the management team - was assessed using annual teacher surveys.</p> <p>(pp. 25-27)</p>

Actual treatment fidelity	<p>Most intervention schools delivered all RiPP lessons to a majority of the assigned classrooms. Specifically, in each of the 3 years, between 11 and 13 of the 18 intervention schools (or between 61 percent and 72 percent) delivered all 16 lessons to all classrooms (p. 63). The evaluation team's classroom observations showed that between 44 and 67 percent of schools were rated as well aligned with respect to teachers following lesson plans; between 44 and 56 percent were rated as well aligned with regard to teachers using the correct teaching techniques for each RiPP lesson; and between 67 and 89 percent of schools were well aligned on the measure of student responsiveness (p. 64).</p> <p>For Best Behaviour, monthly implementation progress reports completed by the site liaisons showed school management teams met an average of 5 times in the first year and 8 times each in the second and third years. They also showed that across 6 key practice indicators, between 56 and 100 percent of schools achieved each one apart from 'collecting and reviewing discipline data' which showed only 33 to 44 percent compliance. Teacher data collected to assess saturation showed rates between 54 and 87 percent (pp. 67-69).</p>
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Cluster N = 18

Control (N = 3418)

Brief name	Control group (p. xxi)
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	Control group schools received no intervention beyond that which the schools were already implementing (p. xxi).
Provider	Not reported
Method of delivery	Not reported
Setting/location of intervention	Middle schools (p. xvii)
Intensity/duration of the intervention	3 years (p. xvii)
Tailoring/adaptation	Not reported

Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	By design, no control school implemented RiPP or Best Behavior during the study. However, there were various violence prevention activities already in place in some participating control schools. Between 6 and 7 schools in the control group administered classroom-based education other than RiPP across the 3 years. These included gang resistance programs, character education programs, and individual presentations not part of a curriculum (e.g. speakers or a video) focused on specific topics such as bullying, harassment, and dating violence (p. 46).

Cluster N = 18

D.1.18 Smolkowski, 2017

Bibliographic Reference Smolkowski, Keith; Seeley, John R.; Gau, Jeffery M.; Dishion, Tom J.; Stormshak, Elizabeth A.; Moore, Kevin J.; Falkenstein, Corrina A.; Fosco, Gregory M.; Garbacz, S. Andrew; Effectiveness evaluation of the Positive Family Support intervention: A three-tiered public health delivery model for middle schools; *Journal of school psychology*; 2017; vol. 62; 103-125

Study details

Study design	Cluster randomised controlled trial
Trial registration number	Not reported
Study start date	2009

Study end date	2015
Aim	To evaluate the impact of the Positive Family Support intervention on student academic and behavioural outcomes.
Country/geographical location	USA
Setting	Middle schools (Grades 6 to 8)
Inclusion criteria	Schools with a minimum of 50 students in sixth grade that had implemented schoolwide PBIS systems were eligible for the study.
Exclusion criteria	Not reported
Method of randomisation	Schools were randomly assigned to condition within districts and matched on total enrollment.
Method of allocation concealment	Not reported
Unit of allocation	School
Unit of analysis	Individual
Statistical method(s) used to analyse the data	Intervention effects on each of the primary outcomes were assessed with random coefficients analysis or growth models with students, parents, and teachers nested within schools to account for the intraclass correlation. The analysis tests for condition differences on growth in outcomes from T1 to T4. The basic statistical model includes time, condition, and the Time × Condition interaction.
Attrition	Response rates showed 42% cumulative attrition by T3, with 1075 students missing T2 or T3 data in comparison schools and 1076 missing T2 or T3 data in intervention schools. Attrition rates did not significantly differ between conditions and there was no evidence of differential attrition for any dependent variables.
Study limitations (author)	<ul style="list-style-type: none"> • Some outcome measures showed low reliability which may have reduced sensitivity to intervention effects • The low completion rates of the parent survey raises questions about the representativeness of the respondent sample • Student surveys may have been subjected to self-report biases • Student attrition rates were substantial and may have impacted study findings, particularly because students at highest risk of academic and behavioural problems tend to be the most mobile

Study limitations (reviewer)	Only schools that had implemented schoolwide PBIS systems were eligible for the study, which raises questions about whether the effects observed were solely associated with the Positive Family Support intervention or other PBIS activities initiated by the schools.
Source of funding	The Institute of Education Sciences, U.S. Department of Education, grant R324 A090111 to Oregon Research Institute

Study arms

Positive Family Support (N = 6457)

21 schools

Control (N = 6455)

20 schools

Characteristics

Arm-level characteristics

Characteristic	Positive Family Support (N = 6457)	Control (N = 6455)
Age	12 (1.7)	11.9 (0.9)
Mean (SD)		
Male	n = 3325 ; % = 51.5	n = 3292 ; % = 51
Sample size		

Characteristic	Positive Family Support (N = 6457)	Control (N = 6455)
Female	n = 3132 ; % = 48.5	n = 3163 ; % = 49
Sample size		
American Indian or Native American	% = 19.8	% = 20.1
Sample size		
Asian	% = 6.2	% = 5.9
Sample size		
Black or African American	% = 6	% = 6.6
Sample size		
Hispanic or Latino	% = 22.1	% = 26.3
Sample size		
Native Hawaiian or Pacific Islander	% = 3	% = 3.3
Sample size		
White or Caucasian	% = 69.8	% = 65.4
Sample size		
Other	% = 13.6	% = 13
Sample size		
Not enough to get by	% = 5.6	% = 5.8
No of events		

Characteristic	Positive Family Support (N = 6457)	Control (N = 6455)
Just enough to get by	% = 43.9	% = 46.7
No of events		
We only have worry about money for fun	% = 34.2	% = 34
No of events		
We never have to worry about money	% = 16.3	% = 13.7
No of events		

Outcomes

Study timepoints

- 3 year (Postintervention for cohort 1 only. Includes cohort 2 baseline as data was not disaggregated)

Behavioural outcomes

Outcome	Positive Family Support, 3 year, N = NA	Control, 3 year, N = NA
Family conflict Family Conflict scale	n = 4561 ; % = NA	n = 4553 ; % = NA
Sample size		
Family conflict Family Conflict scale	2.57 (1.33)	2.66 (1.38)
Mean (SD)		

Outcome	Positive Family Support, 3 year, N = NA	Control, 3 year, N = NA
Conduct problems SDQ conduct problems subscale	n = 4331 ; % = NA	n = 4401 ; % = NA
Sample size		
Conduct problems SDQ conduct problems subscale	1.37 (0.37)	1.38 (0.37)
Mean (SD)		

Family conflict - Polarity - Lower values are better

Conduct problems - Polarity - Lower values are better

Emotional distress

Outcome	Positive Family Support, 3 year, N = NA	Control, 3 year, N = NA
Emotional problems SDQ emotional problems subscale	n = 4337 ; % = NA	n = 4409 ; % = NA
Sample size		
Emotional problems SDQ emotional problems subscale	1.54 (0.45)	1.55 (0.45)
Mean (SD)		

Emotional problems - Polarity - Lower values are better

Academic outcomes

Outcome	Positive Family Support, 3 year, N = NA	Control, 3 year, N = NA
Math score Oregon Department of Education (ODE)	n = 4459 ; % = NA	n = 4289 ; % = NA
Sample size		
Math score Oregon Department of Education (ODE)	233.5 (13.7)	233.1 (13.6)
Mean (SD)		
Reading score Oregon Department of Education (ODE)	n = 4427 ; % = NA	n = 4283 ; % = NA
Sample size		
Reading score Oregon Department of Education (ODE)	232.1 (12.4)	231.8 (11.9)
Mean (SD)		

Math score - Polarity - Higher values are better

Reading score - Polarity - Higher values are better

School attendance

Outcome	Positive Family Support, 3 year, N = NA	Control, 3 year, N = NA
Days absent Oregon Department of Education (ODE)	n = 4516 ; % = NA	n = 4462 ; % = NA
Sample size		

Outcome	Positive Family Support, 3 year, N = NA	Control, 3 year, N = NA
Days absent Oregon Department of Education (ODE)	8.91 (8.99)	8.64 (8.67)
Mean (SD)		

Days absent - Polarity - Lower values are better

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Behavioural outcomes: Family conflict

Section	Question	Answer
Overall bias	Risk of bias judgement	High

Behavioural outcomes: Conduct problems

Section	Question	Answer
Overall bias	Risk of bias judgement	High

Emotional distress: Emotional problems

Section	Question	Answer
Overall bias	Risk of bias judgement	High

Academic outcomes: Math score

Section	Question	Answer
Overall bias	Risk of bias judgement	High

Academic outcomes: Reading score

Section	Question	Answer
Overall bias	Risk of bias judgement	High

School attendance: Days absent

Section	Question	Answer
Overall bias	Risk of bias judgement	High

Study arms

Intervention (N = 6457)

Brief name	Positive Family Support (PFS) (p. 104).
Rationale/theory/Goal	<p>The Positive Family Support (PFS) model is a school-based approach to providing family management interventions and academic support, and is a specific subtype of the PBIS approach. It is a multilevel intervention that combines universal, selected and indicated interventions; is assessment driven; and is tailored to the needs of young people and their families:</p> <p><i>Universal</i> level interventions emphasise parents' awareness of school expectations, promote student and parent engagement, and improve teacher-parent communication.</p> <p><i>Selected</i> level interventions provide more intensive support including attendance and homework support, engaging parents in the Check-in/Check-out intervention, and home-school behaviour plans.</p> <p><i>Indicated</i> level interventions include the Family Check Up (FCU) which comprises a family assessment, feedback, and a range of parent support sessions, parent management training and community referrals.</p> <p>(pp. 104-105)</p>
Materials used	<p>Parents received a letter that described the study and a decline postcard to be returned if they did not wish for their child to participate (p. 109).</p> <p>Intervention schools were required to provide a Family Resource Centre (FRC) in their building. From here, trained school personnel disseminated parenting information including brochures, books, worksheets and videos (p. 110).</p> <p>A structured implementation manual was provided and supported with digital materials via a DVD. Parent engagement materials were also provided, such as template letters, parent information night materials, PowerPoint presentations for staff discussions with parents, Excel spreadsheets for analysing screening assessments, and video support materials for indicated interventions (p. 111).</p>
Procedures used	School staff and administrators received training to support them to implement the PFS intervention (p. 106). Pre-implementation workshops were used to provide information about the PFS model, assess staff needs, and identify areas

	<p>that staff were motivated to engage in. Schools were first trained in universal and selected interventions, with subsequent training on indicated interventions delivered once these were in place.</p> <p><i>Universal level:</i> 3 core intervention elements at this level. 1) Establishing a Family Resource Centre from which to disseminate information and materials on approaches to problem solving, improving home-school communication, encouragement, supervision and setting limits. 2) Promoting family-school partnerships through outreach activities, parenting topic nights, family activities at school, etc. 3) Implementing a school-wide system to facilitate early detection of problems and efficient referral to more intensive support.</p> <p><i>Selected level:</i> Schools implement an enhanced version of the Check-In/Check-Out system which enlists students and teachers to track standardised behavioural goals each day (e.g. remaining seated) and students can receive rewards for meeting goals. Additional supports include home-school family management videos and worksheets which provided specific behavioural guidance on a range of issues such as homework and attendance.</p> <p><i>Indicated level:</i> These interventions offer more intensive support for high-risk students using family-centred sessions to help parents effectively implement family management strategies. During these sessions, parents complete a survey and consultants ask them about their concerns and goals. Consultants then give strengths-based feedback and discuss intervention options that parents then select to engage in (e.g. school-based student support; parenting skills programs, community referrals).</p> <p>Ongoing support was provided to schools first weekly, then monthly via group meetings, PBIS team meetings, consultations with administrators and other school staff working to implement the PFS model.</p> <p>(pp. 110-111).</p>
Provider	'Project trainers' delivered all intervention training and workshops and provided ongoing support and technical assistance to ensure ease and efficiency of implementation. School staff, administrators and other school personnel delivered the intervention activities (pp. 110-111).
Method of delivery	Not reported but assumed face-to-face.
Setting/location of intervention	Public middle schools (p. 106)
Intensity/duration of the intervention	Two years (p. 108)

Tailoring/adaptation	Adaptations were required to facilitate the school-based delivery of the Family Check Up (FCU) provided at the indicated level. Standard FCU includes videotaping family interactions but this was removed from the PFS protocol, and the parent and teacher assessment ratings were shortened. This streamlining was to facilitate completion of the FCU within one or two sessions rather than the usual 3 hours (p. 105).
Unforeseen modifications	None reported
Planned treatment fidelity	<p>Independent trained raters assessed implementation fidelity through interviews with the school principal using a tool developed for the study. 22 items assessed universal components of the intervention, 22 items assessed selected or indicated components, and 11 items assessed the availability of resources required for the FRC. These were used to generate 3 fidelity subscale scores which reflected the number of intervention components partially or fully implemented. Fidelity scores showed acceptable to excellent score reliability and interrater reliability (p. 113).</p> <p>The Schoolwide Evaluation Tool (SET) was also used to assess whether the critical features of schoolwide behaviour support was being implemented in schools. It include 28 questions and responses were obtained through a review of school records, direct observations, staff and student interviews. Interrater reliability was excellent (p. 114)</p>
Actual treatment fidelity	All schools were assessed on treatment fidelity. Analyses showed schools that had implemented PFS had significantly greater fidelity scores across all fidelity components than delayed implementation control schools (p. 116).

Cluster N = 21

Control (N = 6455)

Brief name	Delayed implementation condition (control) (p. 107)
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	Schools in the control condition conducted business as usual, including all practices associated with schoolwide PBS. They received access to PFS and all training at the conclusion of the study (p. 111).
Provider	Not reported
Method of delivery	Not reported

Setting/location of intervention	Public middle schools (p. 106)
Intensity/duration of the intervention	Two years (p. 108)
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Cluster N = 20

D.1.19 Sorlie, 2015

Bibliographic Reference Sorlie, Mari-Anne; Ogden, Terje; School-Wide Positive Behavior Support--Norway: Impacts on Problem Behavior and Classroom Climate; International Journal of School & Educational Psychology; 2015; vol. 3 (no. 3); 202-217

Study details

Study design	Non-randomised controlled trial (NRCT)
Trial registration number	None reported
Aim	To investigate the cumulative effects of all three tiers of the SWPBS model

Country/geographical location	Norway
Setting	48 primary schools
Inclusion criteria	Not reported
Exclusion criteria	Not reported
Method of randomisation	Not randomised
Method of allocation concealment	Not reported
Unit of allocation	Schools
Unit of analysis	Individuals
Statistical method(s) used to analyse the data	<ul style="list-style-type: none"> • Longitudinal multilevel analyses • Missing data were estimated using the direct-likelihood method, assuming a missing at random mechanism
Attrition	<p>5379/5748 (93.6%) participated at pretest (T2)</p> <p>5443/5800 (93.8%) participated at T3</p> <p>5086/5536 (91.9%) after 2 years</p> <p>4871/5331 (91.4%) posttest</p>
Study limitations (author)	<ul style="list-style-type: none"> • Non-randomised • Selection biases may have occurred in the process of recruiting schools • There may be undetected differences on non-observed variables • The staff informants were responsible for implementing the intervention which may have created a positive response bias in the assessments of implementation quality and student outcomes
Study limitations (reviewer)	None to add

Source of funding	This research was supported by the Norwegian Center for Child Behavioral Research and in part by a grant from the Norwegian Directorate for Education and Training
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Study arms

N-PALS (N = 3285)

28 schools

BAU (N = 2094)

20 schools

Characteristics

Study-level characteristics

Characteristic	Study (N = NR)
Fourth grade	n = NR ; % = 24.8
No of events	
Fifth grade	n = NR ; % = 25.1
No of events	
Sixth grade	n = NR ; % = 25.5
No of events	

Characteristic	Study (N = NR)
Seventh grade	n = NR ; % = 24.6
No of events	
Male	n = NR ; % = 51
No of events	
Female	n = NR ; % = 49
No of events	
SEND (%)	5.2 (0.34)
Mean (SD)	

Outcomes

Study timepoints

- Baseline
- 3 year (From baseline)

Behavioural outcomes

Outcome	N-PALS vs BAU, 3 year vs Baseline, N2 = NR, N1 = NR
Problem behaviour on common school areas Problem Behavior in the School Environment Last Week scale (15 items)	-1.51
Pre-post change	

Outcome	N-PALS vs BAU, 3 year vs Baseline, N2 = NR, N1 = NR
Problem behaviour on common school areas Problem Behavior in the School Environment Last Week scale (15 items)	0.001
p value	
Problem behaviour in classroom Problem Behavior in the Classroom Last Week (20 items)	-1.14
Pre-post change	
Problem behaviour in classroom Problem Behavior in the Classroom Last Week (20 items)	0.092
p value	

Problem behaviour in classroom - Polarity - Lower values are better

School environment outcomes

Outcome	N-PALS vs BAU, 3 year vs Baseline, N2 = NR, N1 = NR
Classroom climate (student) Classroom Environment Scale	0.10
Pre-post change	
Classroom climate (student) Classroom Environment Scale	0.01
p value	

Classroom climate (student) - Polarity - Higher values are better

Critical appraisal - ROBINS-I: a tool for assessing risk of bias in non-randomised studies of interventions

Behavioural outcomes: Problem behaviour on common school areas

Section	Question	Answer
Overall bias	Risk of bias judgement	Moderate

Behavioural outcomes-Problem behaviour in classroom

Section	Question	Answer
Overall bias	Risk of bias judgement	Moderate

School environment outcomes-Classroom climate(student)

Section	Question	Answer
Overall bias	Risk of bias judgement	Moderate

Study arms

N-PALS (N = NA)

Brief name	P 206
	SWPBS/N-PALS

Rationale/theory/Goal	<p>p206</p> <p>To implement school-wide interventions in order to establish a positive and inclusive learning climate for all students and simultaneously promote long-term changes in the behaviour of high-risk students.</p> <p>The primary aim is to prevent and reduce behavior problems and promote positive student behaviors by altering the school environment through evidence-based interventions and inclusive strategies.</p>
Materials used	<p>P207</p> <p>Handbook</p> <p>The teams received local training and supervision from a certified N-PALS coach for a period of 2 years (2 hr/10 training sessions per year).</p>
Procedures used	<p>p207</p> <p>The core-components of N-PALs are:</p> <ul style="list-style-type: none">• school-wide positive behaviour support strategies including teaching of school rules, positive expectations and social skills and systematic praise and encouragement of positive behaviour• monitoring of student behaviour• collectively applied school-wide corrections with mild and immediate responses• time-limited small group instruction or training in academic or social topics• individual interventions and support plans• classroom management skills for teachers• parent information and collaboration strategies <p>At the selected level, students who do not profit from the universal level are identified and the school behaviour support team plans interventions based on their particular needs (either small group work or Check-In/Check-out)</p> <p>At the indicated level, students who are high-risk are provided with an individualised and functional behavioural support plan which can include family counselling.</p>

Provider	p207 Teachers and school behaviour support team
Method of delivery	P207 Varies depending on the intervention
Setting/location of intervention	p207 School and classroom
Intensity/duration of the intervention	P208 3-5 years duration
Tailoring/adaptation	P 208 The core model components and the basic training and implementation features are common to the Norwegian and U.S. versions. Except for minor adaptations of the training materials (e.g., pictures, videos, response cards, concepts), no changes of the original model were made. The only difference between the U.S. and Norwegian versions is a nationally standardized system of quality assurance. The transportation of SWPBS to the Norwegian context was done carefully and in close cooperation with the University of Oregon
Unforeseen modifications	None reported
Planned treatment fidelity	p209 The Effective Behavior Support Self-Assessment Survey (EBS-SAS, 46 items) was completed by all teachers and school staff in order to assess the implementation quality at the universal, targeted, and individual levels of the N-PALS model in all parts of the school. The staff members rate how statements corresponded with the actual situation at their school, by using a 3-point scale ranging from 1 (in place) to 3 (not in place).

Actual treatment fidelity	<p>P211</p> <p>The implementation quality measures indicated that after three years, 75% of the intervention schools had implemented N-PALS with required fidelity (minimum 80% on EBS-SAS).</p> <p>Components and strategies related to the school-wide, common arenas and the classroom context were well implemented in most schools (86%– 96%).</p> <p>Implementation of model components and interventions for students at moderate to high risk of serious behaviour problems were weaker k in that only 8 (29%) of the schools had reached the 80% threshold by posttest.</p>
Other details	None

BAU (N = NA)

Brief name	<p>p207</p> <p>Business as usual</p>
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	Not reported
Provider	Not reported
Method of delivery	Not reported
Setting/location of intervention	Not reported
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported

Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	Not reported

D.1.20 Tsiantis, 2013

Bibliographic Reference Tsiantis, Alkis Constantine J.; Beratis, Ion N.; Syngelaki, Eva M.; Stefanakou, Anna; Asimopoulos, Charisios; Sideridis, Georgios D.; Tsiantis, John; The Effects of a Clinical Prevention Program on Bullying, Victimization, and Attitudes toward School of Elementary School Students; 2013; 243-257

Study details

Study design	Cluster randomised controlled trial
Trial registration number	Not reported
Study start date	Nov-2011
Study end date	01-May-2012
Aim	To evaluate the effects of a modified Olweus program on the victimization and bullying behaviors of elementary school students.
Country/geographical location	Greece
Setting	20 public elementary schools (fourth, fifth and sixth grade)
Inclusion criteria	None reported

Exclusion criteria	<ul style="list-style-type: none"> No parental consent
Method of randomisation	<ul style="list-style-type: none"> Stratified random sampling Matching adjustments were made to ensure equivalence between school units and their levels of bullying and victimisation
Method of allocation concealment	None reported
Unit of allocation	School
Unit of analysis	Individual
Statistical method(s) used to analyse the data	<ul style="list-style-type: none"> To assess the effectiveness of the intervention, the decreases in rates at posttest, from pretest, for both the experimental and control groups were subjected to an odds ratio test. Odds ratios greater than 4 express large effect sizes Data were also analysed by means of latent class mixture models in an effort to identify classes of students who shared the same experience with regard to various forms of bullying. The superiority of a cluster model was judged by means of a likelihood ratio chi-square test based on the unbiased bootstrap distribution
Attrition	The attrition rate was estimated at 6.9% and was mainly due to students' being absent from school at one of the two phases of data collection.
Study limitations (author)	<ul style="list-style-type: none"> Pilot study with a sample of only 20 schools Limited to only one region (Attica, Greece) Pretest and posttest questionnaires were administered at different time periods of the school year (Seasonal changes, such as amount of group activities, type of between-peer interaction, and critical events such as Christmas and Easter recess and summer break could lead in fluctuation in bullying/victimization prevalence) Gender differences were not systematically explored so positive effects could be partly due to increased social awareness. Intervention was carried out at a time when bullying received a lot of media attention
Study limitations (reviewer)	<ul style="list-style-type: none"> Number of participants and clusters in each arm are not reported so unable to use this study in a meta-analysis.

Source of funding	Not reported
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Study arms

Prevention Program (N = NR)

Total randomised sample was 666, 20 schools

Control (N = NR)

Total randomised sample was 666, 20 schools

Outcomes

Study timepoints

- Baseline
- 6 month (From baseline; endpoint)

Behavioural outcomes

Outcome	Prevention Program, Baseline, N = NR	Prevention Program, 6 month, N = NR	Control, Baseline, N = NR	Control, 6 month, N = NR
Bullying victims the Revised Olweus Bully/Victim Questionnaire	n = NR ; % = 56	n = NR ; % = 25	n = NR ; % = 27	n = NR ; % = 21
No of events				

Outcome	Prevention Program, Baseline, N = NR	Prevention Program, 6 month, N = NR	Control, Baseline, N = NR	Control, 6 month, N = NR
Bullying victims the Revised Olweus Bully/Victim Questionnaire % change from baseline	NA	-55.4	NA	-23.3
Bullies the Revised Olweus Bully/Victim Questionnaire No of events	n = NR ; % = 18	n = NR ; % = 8	n = NR ; % = 13	n = NR ; % = 11
Bullies the Revised Olweus Bully/Victim Questionnaire % change from baseline	NA	-55.6	NA	-15.38
Bullies and victims the Revised Olweus Bully/Victim Questionnaire No of events	n = NR ; % = 6	n = NR ; % = 2	n = NR ; % = 4	n = NR ; % = 2

Bullying victims - Polarity - Lower values are better

Bullies - Polarity - Lower values are better

Bullies and victims - Polarity - Lower values are better

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Behavioural outcomes: Bullying victims

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes-Bullies

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Bullies and victims

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Study arms

Prevention Program (N = NA)

Brief name	Prevention Program (p247)
	Modified Olweus program (p242)
Rationale/theory/Goal	Page 243

	<p>Bullying prevention</p> <p>One of the targets of the program was to increase the positive climate in the school environment. (p253)</p>
Materials used	<p>Page 247</p> <ul style="list-style-type: none"> • Teacher's manual which describes in a detailed and systematic way the various activities to be implemented in the anti-bullying intervention program • The Teacher's Manual was based on the extensive experience that A.P.H.C.A. developed with the coordination of two European DAPHNE funding programs and involves students, teachers, and parents as well as the whole community
Procedures used	<p>Page 247</p> <ul style="list-style-type: none"> • Grade 4 to 6 teachers took part in a 2-day training seminar which consisted of theoretical presentations and group activities • Teachers were informed that they would be supported throughout the implementation of the intervention by two mental health professions, who would act as their program coordinators. • The intervention consisted of 11 weekly workshops that were conducted by the class teacher in 90 minutes (i.e., over two school periods) as well as of two meetings with parents that aimed at increasing parental participation and were also organized by the teacher • At the first meeting parents were informed about the objectives and the procedure of the intervention program. • At the second meeting students presented to their parents work and learning outcomes accomplished throughout the program • The content of the workshops included discussing and eventually signing class rules, conducting discussions with the students that were related to issues around bullying, to playing active games • Students participated in related group activities (art, drama, etc.)
Provider	<p>P247</p> <p>Class teachers supported by mental health professionals and program coordinators</p>

Method of delivery	P247 Group
Setting/location of intervention	P247 Classroom
Intensity/duration of the intervention	p247 11 weekly 90 minute workshops plus 2 parent meetings
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	P248 There was a two-stage approach for evaluating treatment fidelity. <ol style="list-style-type: none"> 1. Necessary steps were monitored and percentage implementation was calculated 2. Treatment fidelity was measured through evaluating team's climate, attitude of the co-ordinator, member engagement, co-operation between members and co-operation between co-ordinator and members. (measured on a 25 item, 5 point Likert scale)
Actual treatment fidelity	P248 The percentage of properly implemented workshops was 81.25% to 95.28% The mean response to treatment fidelity was: <ul style="list-style-type: none"> • climate (M 3.85, SD 5 0.48) • attitude (M 4.16, SD 5 0.35), • engagement (M 4.39, SD 5 0.40), • cooperation between members (M 4.36, SD 5 0.45),

	<ul style="list-style-type: none"> cooperation between members and coordinator (M 4.50, SD 5 0.51).
Other details	None

Control (N = NA)

Brief name	Control (not further described)
Rationale/theory/Goal	None reported
Materials used	None reported
Procedures used	P246 After the completion of the intervention program, control schools received a 2-hour talk, carried out by the members of the implementation team, which aimed at increasing awareness in relation to school bullying
Provider	None reported
Method of delivery	None reported
Setting/location of intervention	None reported
Intensity/duration of the intervention	None reported
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	None reported
Actual treatment fidelity	None reported
Other details	None reported

D.1.21 Ward, 2013**Bibliographic Reference**

Ward, Bryce; Gersten, Russell; A Randomized Evaluation of the Safe and Civil Schools Model for Positive Behavioral Interventions and Supports at Elementary Schools in a Large Urban School District; *School Psychology Review*; 2013; vol. 42 (no. 3); 317-333

Study details

Study design	Cluster randomised controlled trial
Trial registration number	None reported
Study start date	May-2008
Study end date	May-2009
Aim	<p>The following research questions guided the study:</p> <ul style="list-style-type: none"> • To what extent does SCS training lead to improvements in the development and enforcement of school discipline policy, and • to what extent does SCS training lead to improvements in student behavior and measures of academic achievement?
Country/geographical location	USA
Setting	33 elementary schools
Inclusion criteria	None reported
Exclusion criteria	None reported

Method of randomisation	<ul style="list-style-type: none"> • Randomisation was carried out by assigning a random number
Method of allocation concealment	None reported
Unit of allocation	School
Unit of analysis	Individual
Statistical method(s) used to analyse the data	<ul style="list-style-type: none"> • Differences-in-differences analysis • Adjusted for clustering
Attrition	Not reported
Study limitations (author)	<ul style="list-style-type: none"> • SCS training lasted several years but the data was only collected in the first two years • There was potential for contamination of the control as the developer had presented to leaderships of schools including control schools in August 2007 prior to implementation of the intervention. (does not specify if this was before randomisation) • The study only examined a subset of elementary schools in a large urban school district that were identified as having a pressing need for PBIS training
Study limitations (reviewer)	<ul style="list-style-type: none"> • Does not give an indication of how many students were involved in the study
Source of funding	None reported

Study arms

Cohort 1 (N = 17)

Cluster number only, n not reported

Cohort 2 (N = 15)

Cluster number only, n not reported

Characteristics

Study-level characteristics

Characteristic	Study (N = NR)
Socioeconomic status Free or reduced price lunch	n = NR ; % = 90
No of events	

Outcomes

Study timepoints

- 1 year (From baseline. Endpoint)

Behavioural outcomes

Outcome	Cohort 1 vs Cohort 2, 1 year, N2 = NR, N1 = NR
Students: Never pushed or hit by other students California Healthy Kids Survey	reported as statistically significant
Custom value	

Outcome	Cohort 1 vs Cohort 2, 1 year, N2 = NR, N1 = NR
Students: Never pushed or hit by other students California Healthy Kids Survey Odds ratio/SE	0.92 (0.1)
Student: Never had other students spread mean rumours about them California Healthy Kids Survey Custom value	reported as statistically significant
Student: Never had other students spread mean rumours about them California Healthy Kids Survey Odds ratio/SE	1.01 (0.09)

Students: Never pushed or hit by other students - Polarity - Higher values are better

Student: Never had other students spread mean rumours about them - Polarity - Higher values are better

School attendance

Outcome	Cohort 1 vs Cohort 2, 1 year, N2 = NR, N1 = NR
Suspensions Student administrative records Odds ratio/SE	0.78 (0.11)

Suspensions - Polarity - Lower values are better

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Behavioural outcomes: Students - Never pushed or hit by other students

Section	Question	Answer
Overall bias	Risk of bias judgement	High

Behavioural outcomes: Student -Never had other students spread mean rumours about them

Section	Question	Answer
Overall bias	Risk of bias judgement	High

School attendance: Suspensions

Section	Question	Answer
Overall bias	Risk of bias judgement	High

Study arms

SCS (N = NA)

Brief name	Page 317 Safe and Civil Schools (SCS) Model for Positive Behavioral Interventions
Rationale/theory/Goal	Page 318 <ul style="list-style-type: none"> The Safe and Civil Schools (SCS) model is an approach to Positive Behavioural Interventions (PBIS).

	<ul style="list-style-type: none"> it was designed to improve students' social and academic outcomes, and to support staff in their endeavors to teach appropriate behavior and correct misbehavior through "a comprehensive, multimedia program that guides staff through the process of designing a positive and proactive school-wide discipline plan."
Materials used	<p>Page 319</p> <ul style="list-style-type: none"> SCS materials are intended to guide the efforts of administrators, teachers, specialists, paraprofessionals, bus drivers, and others who contribute to the climate of schools.
Procedures used	<p>Page 319</p> <ul style="list-style-type: none"> During the first year of training, each of the schools identified a leadership team involving a school administrator, at least three general education teachers, one special education teacher, and one or two other personnel. The leadership teams participated in 7 days of training facilitated by an SCS consultant The training focused on how to implement improvements related to safety, behaviour and discipline They also learned how to collect data from observations in common areas e.g playground which they used to prioritise areas to focus on Teams were taught skills for training their staff in PBIS (e.g., direct teaching of expectations, active supervision strategies such as circulating, scanning, providing positive feedback and correcting misbehavior calmly and consistently).
Provider	<p>Page 319</p> <ul style="list-style-type: none"> SCS consultant
Method of delivery	Not reported
Setting/location of intervention	Not reported
Intensity/duration of the intervention	1 year (for the trial but intervention is for many years)

Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	Page 321 <ul style="list-style-type: none"> Analysed data from the School-wide Benchmarks of Quality and the district's Positive Behavior Support [PBS] Assessment
Actual treatment fidelity	Page 325 <ul style="list-style-type: none"> statistically significant increases in the odds that staff members responded that statements relating to school policies and training were true about their school frequently or very frequently.
Other details	None

Waiting list (N = NA)

Brief name	Page 319 Wait-list control
Rationale/theory/Goal	None reported
Materials used	None reported
Procedures used	None reported
Provider	None reported
Method of delivery	None reported
Setting/location of intervention	None reported

Intensity/duration of the intervention	None reported
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	None reported
Actual treatment fidelity	None reported
Other details	None reported

D.1.22 Wigelsworth, 2012

Bibliographic Reference	Wigelsworth, Michael; Humphrey, Neil; Lendrum, Ann; A national evaluation of the impact of the secondary Social and Emotional Aspects of Learning (SEAL) programme; Educational Psychology; 2012; vol. 32; 213-238
Secondary publication(s)	<p>Wigelsworth, Michael; Humphrey, Neil; Lendrum, Ann (2013) Evaluation of a school-wide preventive intervention for adolescents: The secondary social and emotional aspects of learning (SEAL) programme. School Mental Health: A Multidisciplinary Research and Practice Journal 5(2): 96-109</p> <p>Lendrum, A.; Humphrey, N.; Wigelsworth, M. (2013) Social and emotional aspects of learning (SEAL) for secondary schools: Implementation difficulties and their implications for school-based mental health promotion. Child and Adolescent Mental Health 18(3): 158-164</p>

Study details

Study design	Non-randomised controlled trial (NRCT)
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Trial registration number	Not reported
Study start date	2007
Aim	To examine the impact of SEAL on social and emotional skills, better behaviour and reduced mental health difficulties.
Country/geographical location	UK
Setting	41 secondary schools
Inclusion criteria	<ul style="list-style-type: none"> • Pupils starting in year 7 in the 2007/2008 school year
Exclusion criteria	None reported
Method of randomisation	Not randomised
Method of allocation concealment	Not reported
Unit of allocation	School
Unit of analysis	Individual
Statistical method(s) used to analyse the data	<ul style="list-style-type: none"> • Descriptive statistics of outcome measures • Hierarchical linear modelling (HLM) to maintain appropriate sample size for each level of the model
Attrition	<p>The overall dropout rate for all schools from baseline to final outcome measurement was 18%.</p> <p>Analyses were carried out to compare the characteristics of those schools who dropped out of the study which found no discernable differences.</p>
Study limitations (author)	<ul style="list-style-type: none"> • Unable to randomly allocate schools to intervention and control groups • Biases in unmeasured variables cannot be ruled out - e.g. why comparison schools had not decided to take part in the SEAL programme • Reliance on pupil self-reported outcome measures with a lack of triangulation from other sources (e.g. parents/teachers) which means that the null results cannot be corroborated.

	<ul style="list-style-type: none">• Study length was probably not long enough to see all impacts of the intervention
Study limitations (reviewer)	None to add

Study arms

SEAL (N = 2360)

22 schools

Control (N = 1991)

19 schools

Characteristics

Study-level characteristics

Characteristic	Study (N = 4351)
Age	11 to 12
Range	

Arm-level characteristics

Characteristic	SEAL (N = 2360)	Control (N = 1991)
Gender	n = NR ; % = 52	n = NR ; % = 52
No of events		
White (white British/Irish/ traveller/any other white background)	n = NR ; % = 82.3	n = NR ; % = 86.2
No of events		
Mixed (mixed Caribbean/mixed African/mixed Asian/any other mixed background)	n = NR ; % = 3.4	n = NR ; % = 1.8
No of events		
Asian (Indian/Pakistani/ Bangladeshi/Chinese/any other Asian background)	n = NR ; % = 7.2	n = NR ; % = 4
No of events		
Black (black Caribbean/black African/any other black background)	n = NR ; % = 2.9	n = NR ; % = 1.4
No of events		
Other	n = NR ; % = 1.2	n = NR ; % = 1
No of events		
Not eligible for free school meals	n = NR ; % = 86.5	n = NR ; % = 88.4
No of events		
No SEN	n = NR ; % = 83.7	n = NR ; % = 81.3
No of events		

Characteristic	SEAL (N = 2360)	Control (N = 1991)
School action (SA)	n = NR ; % = 9.9	n = NR ; % = 14
No of events		
SA plus	n = NR ; % = 4.4	n = NR ; % = 3.5
No of events		
Statement	n = NR ; % = 2	n = NR ; % = 1.2
No of events		

Outcomes

Study timepoints

- Baseline
- 2 year (Postintervention)

Social and emotional skills

Outcome	SEAL, Baseline, N = NA	SEAL, 2 year, N = NA	Control, Baseline, N = NA	Control, 2 year, N = NA
Social and emotional skills Emotional Literacy Assessment and Intervention (ELAI)	n = 1802 ; % = NA	n = 1802 ; % = NA	n = 1504 ; % = NR	n = 1504 ; % = NA
Sample size				

Outcome	SEAL, Baseline, N = NA	SEAL, 2 year, N = NA	Control, Baseline, N = NA	Control, 2 year, N = NA
Social and emotional skills Emotional Literacy Assessment and Intervention (ELAI)	73.72 (8.64)	73.1 (8.27)	74.06 (8.59)	72.59 (8.14)
Mean (SD)				

Social and emotional skills - Polarity - Higher values are better

Behavioural outcomes

Outcome	SEAL, Baseline, N = NA	SEAL, 2 year, N = NA	Control, Baseline, N = NA	Control, 2 year, N = NA
SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) total	n = 2455 ; % = NA	n = 2455 ; % = NA	n = 2004 ; % = NA	n = 2004 ; % = NA
Sample size				
SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) total	12.41 (6)	11.51 (5.87)	12.41 (5.93)	12.06 (5.69)
Mean (SD)				
SDQ (Prosocial subscale)	n = 2477 ; % = NA	n = 2477 ; % = NA	n = 2029 ; % = NA	n = 2029 ; % = NA
Sample size				
SDQ (Prosocial subscale)	7.55 (1.86)	7.14 (2.03)	7.5 (1.91)	7.15 (1.86)
Mean (SD)				

SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) total - Polarity - Lower values are better

SDQ (Prosocial subscale) - Polarity - Higher values are better

Critical appraisal - ROBINS-I: a tool for assessing risk of bias in non-randomised studies of interventions

Social and emotional skills-Social and emotional skills

Section	Question	Answer
Overall bias	Risk of bias judgement	Moderate

Behavioural outcomes-SDQ (emotional symptoms conduct problems, hyperactivity, peer problems) total

Section	Question	Answer
Overall bias	Risk of bias judgement	Moderate

Behavioural outcomes SDQ (Prosocial subscale)

Section	Question	Answer
Overall bias	Risk of bias judgement	Moderate

Study arms

SEAL (N = NA)

Brief name	
	P213

	Social and emotional aspects of learning
Rationale/theory/Goal	<p>p213</p> <p>SEAL is a whole-school approach designed to positively influence a range of pupil outcomes, including increased social and emotional skills, better behaviour and reduced mental health difficulties.</p>
Materials used	<p>P215</p> <p>The curricular materials were developed for use across the school year with pupils in Key Stage 3 (aged 11-14 years)</p>
Procedures used	<p>P214</p> <p>Use of the whole school approach</p> <ul style="list-style-type: none"> • Use of a whole-school approach is the central tenet of secondary SEAL • Definition was "thinking holistically, looking at the whole context including organisation, structures, procedures and ethos, not just at individual pupils or at one part of the picture only" • Schools were encouraged to consider how they might develop the learning climate and physical environment as a means of promoting a positive school ethos. <p>Direct and explicit teaching of social and emotional skills</p> <ul style="list-style-type: none"> • The curricular approach to developing social and emotional competence seen in many of the well-known universal SEL interventions in which pupils, led by an adult facilitator (e.g. teacher, teaching assistant), take part in activities designed to promote SEL • sessions were organised around themes (e.g. managing feelings, learning to be together) that are reflected in broader activity at the school level (e.g. assemblies, displays) to promote consolidation and generalisation.

	<p>The use of teaching and learning approaches that promote a safe and supportive classroom learning environment</p> <ul style="list-style-type: none"> • reflects an attempt to infuse the promotion and consolidation of social and emotional skills throughout the delivery of the academic curriculum • This includes ensuring that the pedagogical approach being adopted in ordinary lessons is consistent with SEAL principles e.g. using teamwork, co-operative learning and group projects as a means of implicitly promoting social skills <p>Staff training and continuing professional development</p> <ul style="list-style-type: none"> • In addition to basic training about the secondary SEAL programme, the guidance suggests a variety of opportunities for professional development that school staff might undertake as part of the school's implementation strategy e.g. mentoring sessions
Provider	Not reported
Method of delivery	p215 Groups
Setting/location of intervention	P215 classroom
Intensity/duration of the intervention	p215 The curricular materials were typically delivered once a week for six weeks during form time (approximately 20 min).

Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	None

Control (N = NA)

Brief name	p219 Practice as usual
Rationale/theory/Goal	Not applicable
Materials used	Not applicable
Procedures used	Not applicable
Provider	Not applicable
Method of delivery	Not applicable
Setting/location of intervention	Not applicable
Intensity/duration of the intervention	Not applicable
Unforeseen modifications	Not applicable
Planned treatment fidelity	Not applicable

Actual treatment fidelity	Not applicable
Other details	Not applicable

D.1.23 Yanagida, 2019

Bibliographic Reference Yanagida, T; Strohmeier, D; Spiel, C; Dynamic Change of Aggressive Behavior and Victimization Among Adolescents: effectiveness of the ViSC Program; Journal of clinical child and adolescent psychology; 2019; vol. 48; 90-s104

Study details

Study design	Cluster randomised controlled trial
Trial registration number	Not reported
Study start date	Dec-2008
Study end date	Jun-2010
Aim	To investigate the effectiveness of the ViSC Social Competence program on aggressive behaviour and victimisation.
Country/geographical location	Austria
Setting	Secondary schools (Grade 5 to 8)
Inclusion criteria	Not reported
Exclusion criteria	Not reported
Method of randomisation	Not reported

Method of allocation concealment	Not reported
Unit of allocation	Schools
Unit of analysis	Individuals
Statistical method(s) used to analyse the data	Structural equation modeling was used to test the main hypotheses of the study; specifically a bivariate multiple group latent change score (LCS) model. This accounted for the covariation between aggressive behavior and victimization and enabled statistical control of pretest scores of aggressive behavior and victimization. Mean centered age was also included as a covariate. Intervention effect was investigated by comparing the difference between the change in intervention and the control group scores, both for the whole sample in Model 1 and for subgroups of girls and boys in Model 2. Moderation effect of gender on program effectiveness was investigated by comparing the intervention effects between girls and boys.
Attrition	Of the 2042 study participants, 515 (25.2%) participated at pre-test only and 403 (19.7%) participated at post-test only. Results of attrition analyses showed no significant differences between students who dropped out of the study, or students who joined the study after pretest, and students with complete data on any study variables.
Study limitations (author)	<ul style="list-style-type: none"> • The study relied on self-assessments which should be interpreted with caution. Aggressive behavior can be underestimated when using self-reports because perpetrators might not report the “true” frequency of their behavior. • The program was evaluated by the program developers, such that evaluations may be positively biased toward program effectiveness. Independent implementation and evaluation is needed. • Only self-selected schools volunteered to take part in this study and may not be representative of all schools
Study limitations (reviewer)	Of 13 schools assigned to the control group, 8 declined participation in the study. Differences between the control schools that remained in the study and those that didn't were not evaluated.
Source of funding	The implementation and evaluation of the ViSC program was funded by the Austrian Federal Ministry for Education, Arts and Cultural Affairs (PI: Christiane Spiel) between 2008 and 2011. The data analyses and writing of the present study was funded by the Platform for Intercultural Competences, University of Applied Sciences Upper Austria (PI: Dagmar Strohmeier) between 2012 and 2015.

Study arms

ViSC Social Competence (N = 1377)

Control (N = 665)

Characteristics

Study-level characteristics

Characteristic	Study (N = 2042)
Age	10 to 15
Range	
Age	11.7 (0.9)
Mean (SD)	
Boys	% = 52.4
Sample size	
Girls	% = 47.6
Sample size	
Nonimmigrant Austrians	% = 46.4
Sample size	

Characteristic	Study (N = 2042)
Immigrants from countries of the former Yugoslavia	% = 20.2
Sample size	
Immigrants from Turkey	% = 14.3
Sample size	
Immigrants from other countries	% = 19.1
Sample size	

Outcomes

Study timepoints

- Baseline
- 1 year

Behavioural outcomes

Outcome	ViSC Social Competence vs Control, 1 year vs Baseline, N2 = NR, N1 = NR
Change in aggression	0.185
Effect size latent d	
Change in aggression	0.253
p value	

Outcome	ViSC Social Competence vs Control, 1 year vs Baseline, N2 = NR, N1 = NR
Boys	0.128
Effect size latent d	
Boys	0.531
p value	
Girls	0.442
Effect size latent d	
Girls	0.122
p value	
Change in victimisation	0.725
Effect size latent d	
Change in victimisation	0.001
p value	
Boys	0.765
Effect size latent d	
Boys	0.01
p value	
Girls	0.775
Effect size latent d	

Outcome	ViSC Social Competence vs Control, 1 year vs Baseline, N2 = NR, N1 = NR
Girls	0.05
p value	

Change in aggression - Polarity - Lower values are better

Change in victimisation - Polarity - Higher values are better

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster trials

Behavioural outcomes: Change in aggression

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Change in aggression-Boys

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Change in aggression-Girls

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Change in victimisation

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Change in victimisation-Boys

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Behavioural outcomes: Change in victimisation-Girls

Section	Question	Answer
Overall bias	Risk of bias judgement	Some concerns

Study arms

Intervention (N = 1377)

Brief name	ViSC Social Competence (p. S91)
Rationale/theory/Goal	<p>Based on a socioecological perspective on development, the ViSC program defines the prevention of aggressive behaviour as a whole-school task and aims to change the behaviour of students at the individual and class level, as well as fostering teachers' competencies in initiating change at the school level. The program acknowledges that aggressive behaviour and victimisation can co-occur and so aims to change these behaviours simultaneously (p. S92).</p> <p>At the <i>individual level</i>, the program recognises that victimised students are heterogenous and trains teachers to recognise and differentiate bullies, victims and bully-victims. At the <i>class level</i>, the goal of the intervention is to train students to intervene in critical situations, learn to recognise and manage their negative emotions in a non-aggressive way, and to empower possible victims to react assertively. At the <i>school level</i>, the goal is to foster shared responsibility amongst teachers so they commit to working together to reduce violence and agree on procedures for tackling acute cases (p. S92).</p>
Materials used	The class level intervention is a fully manualised class project. Each unit is highly structured and contains worksheets, group activities, interactive games and a summary sheet with main messages (p. S92).
Procedures used	<p>The ViSC program is implemented through several in-school teacher training sessions with all school teachers. They are trained to develop a shared understanding of aggressive behaviour and bullying, and trained to develop procedures for tackling cases of bullying as and when they occur (p. S92).</p> <p>Trained teachers also deliver a 13-unit class project that teaches students a broad spectrum of competencies that are considered important for reducing bullying and aggression. Teaching methods include role plays, small group work, class discussions, worksheets and interactive games (p. S92).</p> <p>During program implementation, several routines on the school level (e.g., playground supervision or the handling of acute bullying cases) are targeted (p. S92)</p>

Provider	The intervention follows a cascaded train-the-trainer model where scientists trained ViSC coaches, ViSC coaches trained teachers, and teachers trained their students (p. S93). ViSC coaches were school psychologists or other professionals who had attended 1-year training by the program developers and researchers (p. S92).
Method of delivery	Not reported but assumed face-to-face.
Setting/location of intervention	Secondary schools, grades 5 to 8 (p. S91).
Intensity/duration of the intervention	One school year (p. S92)
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	The paper states that the quality of program implementation was monitored during the whole school year but does not provide information on how this was done (p. S93).
Actual treatment fidelity	Not reported
Other details	None

Cluster N = 13

Control (N = 665)

Brief name	Control (p. S93)
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	Not reported
Provider	Not reported
Method of delivery	Not reported

Setting/location of intervention	Secondary schools, grades 5 to 8 (p. S91).
Intensity/duration of the intervention	One school year (p. S92).
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	None

Cluster N = 5

D.2 Acceptability and barriers and facilitators evidence

D.2.1 Hampton, 2010

Bibliographic Reference	Hampton, Elizabeth; Roberts, Will; Hammond, Nick; Carvalho, Alice; Evaluating the impact of Rtime: An intervention for schools that aims to develop relationships, raise enjoyment and reduce bullying.; Educational and Child Psychology; 2010; vol. 27 (no. 1); 35-51
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Study details

Study design	Qualitative study
Trial registration number	None reported
Study start date	Oct-2019
Aim	The aim of this study was to evaluate the effectiveness of Rtime over time amongst children of different ages, abilities and socioeconomic areas. It is aimed at adding to the evidence base of Rtime and to specifically investigate whether it supports children's social, emotional and personal development (as measured by relationships and friendships and enjoyment of school outcomes), and whether it helps to reduce negative social interactions (as measured by a 'bullying' outcome). It is also aimed at investigating the demands on schools and whether there is a need for Rtime as an additional tool within settings.
Country/geographical location	South-West England
Setting	Primary and secondary schools
Inclusion criteria	<ul style="list-style-type: none"> • Participating schools registered their interest during the 2006/2007 academic year. • Schools were contacted by the city's Psychology Service in October 2007 as they were required to randomly select up to 10 children from across their school that were going to be taking part in the Rtime pilot. • Permission was then obtained from these children's parents for them to participate in a short evaluative questionnaire carried out by a research assistant and a trainee educational psychologist.
Exclusion criteria	None reported
Method of randomisation	Not applicable
Method of allocation concealment	Not applicable
Unit of allocation	Not applicable
Unit of analysis	Not applicable
Attrition	Not applicable

Method(s) used to analyse the data	Thematic analysis of qualitative data
Study limitations (author)	None reported
Study limitations (reviewer)	Ethical approval not reported
Source of funding	Not reported
Ethical approval	Not reported
Theme 1	<p>Impact of Rtime</p> <p>The results supported the hypothesis that Rtime would have a positive impact on children's perceptions towards developing relationships and friendships after participating in Rtime. The only minor negative response was explained by students stating that they were already friends with everybody in the class and so there were no opportunities to make new friends.</p> <p><i>'It tells you how to work with people you don't know how to work with.'</i> [Primary student] <i>'Me and [child] weren't really friends before but now after doing Rtime we are.'</i> [Primary student]The</p> <p>The teachers' responses in the school questionnaire also suggested a positive impact on relationships and friendships. <i>'Random pairing has made a positive impact upon friendship groups.'</i> [Rtime lead teacher]</p> <p>The results showed that there were some positive changes towards the perception of bullying in school after the Rtime programme was implemented.</p> <p><i>'Children much more caring towards others.'</i> [Rtime lead teacher] <i>'Manners, collaboration, willingness to work with a variety of pupils.'</i> [Rtime lead teacher]</p> <p>The results showed a significant decrease in answer to the question "Do you enjoy school?" after the implementation of Rtime. However, the statements students made about doing Rtime during the informal group interviews do not suggest that this was related to the</p>

	<p>initiative itself. This finding indicates that although the children enjoyed Rtime, the programme did not help them to enjoy school more.</p> <p><i>'[I want] to do it every single day because it's that fun.'</i> [Primary student] <i>'It's fun because you get to learn about other people...'</i> [Primary student]</p>
Theme 2	<p>How successful was Rtime?</p> <p>All of the responses from the teachers suggested that Rtime had made a positive impact on the classes using the programme.</p> <p><i>'Good manners being used in everyday classroom activities.'</i> [Rtime lead teacher] <i>'Finally getting the class to work and cooperate.'</i> [Rtime lead teacher]</p>
Theme 3	<p>Most useful aspects of Rtime</p> <ul style="list-style-type: none"> • Overall, the teachers appreciated that the programme was easy to use and had preprepared resources that required minimal effort to implement. • They also appreciated that the impact on the children was evident and they could clearly see the changes that Rtime was bringing about • They could see the benefit of the children working with different people in the class and saw that it was developing collaborative and co-operative working between the children • They identified the resources that were least useful which seemed to be because they had to be adapted for children of lower abilities or they took time to prepare. • Other comments made by teachers related to fitting Rtime into a busy curriculum. <p><i>Some activities have been replaced by other activities deemed more appropriate.'</i> [Rtime lead teacher] <i>'Some resources take a little long to prepare.'</i> [Rtime lead teacher]</p>

Characteristics

Study-level characteristics

Characteristic	Study (N = 149)
Reception (4-5 years)	n = 18 ; % = 12
No of events	
Year 1 (5-6 years)	n = 20 ; % = 13
No of events	
Year 2 (6-7 years)	n = 21 ; % = 14.1
No of events	
Year 3 (7-8 years)	n = 27 ; % = 18.1
No of events	
Year 4 (8-9 years)	n = 13 ; % = 8.7
No of events	
Year 5 (9-10 years)	n = 35 ; % = 23.5
No of events	
Year 6 (10-11 years)	n = 11 ; % = 7.4
No of events	
Year 7 (11-12 years)	n = 0 ; % = 0
No of events	

Characteristic	Study (N = 149)
Year 8 (12-13 years)	n = 2 ; % = 1.3
No of events	
Year 9 (13-14 years)	n = 2 ; % = 1.3
No of events	

Critical appraisal - CASP qualitative checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Moderate
Overall risk of bias and relevance	Relevance	Partially relevant

D.2.2 Hudson, 2020

Bibliographic Reference Hudson, Kristian G; Lawton, Rebecca; Hugh-Jones, Siobhan; Factors affecting the implementation of a whole school mindfulness program: a qualitative study using the consolidated framework for implementation research.; BMC health services research; 2020; vol. 20 (no. 1); 133

Study details

Study design	Interview study
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Trial registration number	Not reported
Study start date	Sep-2014
Study end date	Sep-2017
Aim	To explore participants' attitudes, beliefs and experiences towards a M-WSA in their school, their reasons for taking part in the teacher MBSR and .b/ paws.b training, as well as their views regarding imple mentation processes and progress of the M-WSA.
Country/geographical location	United Kingdom
Setting	Secondary schools
Inclusion criteria	School staff from 5 Cumbrian schools that took up free training for personal well-being (in the for of an 8 week Mindfulness-based Stress Reduction course)
Exclusion criteria	Not reported
Attrition	Not applicable
Method(s) used to analyse the data	<ul style="list-style-type: none"> • Data analysis was guided by the The Consolidated Framework for Implementation Research (CFIR). • Analytic stages included coding for constructs, inter-rater checks, aggregating the data, assigning valence, rating school success in achieving their implementation goals, and matrix creation. • The analysis process meant that every CFIR construct was labelled as strongly distinguishing, weakly distinguishing or not distinguishing between schools.
Study limitations (author)	<ul style="list-style-type: none"> • The number of schools in the study was small, thus limiting generalisability. • Analysts were not blind to the implementation success of schools, so there is a possibility of bias in the ratings. • This study also examined schools in a particular context (i.e. where a charity, Headstart offered schools a range of programs to improve the resilience of 10–16 year olds, and it may be that different offers of support, within different contexts hold different barriers and facilitators to implementation).
Study limitations (reviewer)	Lack of information on exclusion criteria

Source of funding	<ul style="list-style-type: none"> • This report is independent research part-funded by the National Institute for Health Research Applied Research Collaborations Yorkshire and Humber and North West Coast. • Funding was also provided by the University of Leeds and the Cumbria Headstart Mindfulness in Schools Project.
Ethical approval	Ethical approval was obtained from the University of Leeds School of Psychology Ethics Committee (reference: 15–0397; 15–0366, date 01/12/16 and 15/12/16) and consent to participate was received in writing from all participants.
Theme 1	<p>Leadership Engagement</p> <p>In one school, participants perceived engaged leadership to be fundamental to implementation success, largely due to their decision-making powers.</p> <p><i>“because it does take a commitment from her [head teacher] because she is the only person who can make it happen timetable-wise” (S1, P1,T1: assistant head).</i></p>
Theme 2	<p>Relative Priority</p> <p>The level of perceived prioritisation of the intervention appeared strongly associated with schools' implementation activity.</p> <p><i>“It’s about that whole system approach, and it’s about driving it forward and making everybody realise that this is definitely part of us, so it’s here to stay, it’s not something that’s just going to be a flash in the pan” (referring to mindfulness and mental health promotion) (P1: T1: Deputy head).</i></p>
Theme 3	<p>Networks & Communications</p> <p>More successful schools had more effective networks of communications.</p> <p><i>“as a team [...] we use each other’s strengths, and we talk, and we work hard” (S1, P1: T1: Asst head).</i></p>

	<p>In the less successful schools, more barriers to communication were reported, which was perceived to hinder implementation.</p> <p><i>“it goes through me and x to x who then puts it to the senior leadership at their meetings and they then have to decide what is going to happen” (S4: P2: T1: head of year 8:)</i></p>
Theme 4	<p>Formally Appointed Internal Implementation Leaders</p> <p>This theme linked to leadership engagement as leadership was perceived to be influential in the selection of appropriate people to implement the intervention.</p> <p><i>“Who do you really want to target to go on your courses, to deliver this and take this back? Because that is the key to whether it’s in there long term or not” (P1: T1: Curriculum leader)</i></p>
Theme 5	<p>Knowledge & Beliefs about the Innovation</p> <p>It was not the nature of knowledge or beliefs that appeared to shape implementation activity but rather who held those beliefs. In the more successful schools, leadership and management reported good understanding of mindfulness and ‘believed in it’.</p> <p><i>“There is nothing that would prevent me from doing it, you know, or trying it” (S2: P1: T1; head of SEN)</i></p> <p>In less successful schools, leadership knowledge and beliefs appeared less favourable to its implementation.</p> <p><i>“I refute the fact that a teacher who doesn’t find it useful as a person can’t actually put over to children that they might find it useful because of course we can do that” (S4, P4: T1).</i></p>
Theme 6	<p>Executing</p> <p>Participants in more successful schools tended to perceive that their plans had been executed more effectively than participants in lower activity schools.</p>

Study arms**Mindfulness, Whole School Approach (M-WSA) (N = 15)**

Key members of school staff (including 2 head teachers) from 5 UK secondary schools. Context: Teachers received training in mindfulness-based stress reduction and .b (secondary education version of Paws B) prior to teaching (M-WSA).

Critical appraisal - CASP qualitative checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Moderate
Overall risk of bias and relevance	Relevance	Relevant

D.2.3 Humphrey, 2010

Bibliographic Reference Humphrey, Neil, Lendrum, Ann; Wigelsworth, Michael; Social and emotional aspects of learning (SEAL) programme in secondary schools : national evaluation Research Report DFE-RR049; Education; 2010; (no. october2010); 2009-2011

Study details

Study design	Qualitative study
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Trial registration number	None reported See Wigglesworth 2012 for quantitative component
Study start date	2008
Study end date	2010
Aim	To assess the impact of secondary SEAL
Country/geographical location	UK
Setting	9 SEAL schools (2 urban, 4 suburban, 3 semi-rural)
Inclusion criteria	Schools that were taking part in the quantitative component
Exclusion criteria	None reported
Method of randomisation	Not applicable
Method of allocation concealment	Not applicable
Unit of allocation	Not applicable
Unit of analysis	Not applicable
Attrition	Not applicable
Method(s) used to analyse the data	<ul style="list-style-type: none"> • Data collection in the case study schools comprised of observations of lessons and other contexts, interviews and/or focus groups with members of the school community (e.g. pupils, teachers, SEAL leads, head teachers, and LA staff) and analysis of school documents (e.g. SEAL self-evaluation forms, policy documents) • Interviews and observations were semistructured. This supported the collection of equivalent data for comparison across sites and between respondents, allowed for the emergence of unanticipated themes and more detailed exploration or clarification as necessary. [Lendrum 2013] • Data collection took place approximately 1-2 months after the equivalent wave in the quantitative study. • Recorded interviews were anonymised, professionally transcribed and then imported with field notes of observations and reviews of documents into NVivo [Lendrum 2013]

	<ul style="list-style-type: none"> Data were thematically analysed [Lendrum 2013]
Study limitations (author)	<p>[Lendrum 2013]</p> <ul style="list-style-type: none"> The use of qualitative methods necessitated a limited number of case studies in two geographical regions and this may imply that findings are context-specific. Schools volunteered to take part in the study so it can be assumed that they were at least partially receptive to SEAL. The anticipation of regular visits from the researchers is also likely to have affected the implementation process in some of the schools
Study limitations (reviewer)	None to add
Source of funding	Department for Education [Lendrum 2013]
Ethical approval	The study was approved by the University of Manchester Research Ethics Committee [Lendrum 2013]
Theme 1	<p>Implementation of secondary SEAL</p> <p>Securing the vision (links to leadership, management and managing change)</p> <p>Many schools found that the vision for SEAL emerged implicitly but in some cases explicit efforts were made to ensure that all staff contributed to this vision.</p> <p><i>e.g. “During an early staff INSET day, the SEAL working group decided that the best way to facilitate a shared vision of SEAL was for staff to collectively decide what they wanted to achieve through implementation. This was done by small groups developing a picture of a ‘model student’. Most staff contributed to the idea and agreed on the same desired outcomes. Discussion then turned to the importance of staff, and a suggestion was made that the same exercise be repeated for a model member of staff” (Field Notes)</i></p> <p>There were 3 key themes identified for expectations of SEAL:</p>

	<ul style="list-style-type: none">• Changes at pupil level – expectations included changes in clear, tangible variables such as improved attendance fewer exclusions and improved attainment and specifically changes in social and emotional skills: <p><i>“I want the pupils to be motivated to do the best for themselves” (SEAL lead) “That’s one of my hopes – that in three years time we are seeing a little bit more consideration to others” (Headteacher)</i></p> <ul style="list-style-type: none">• Changes at staff level – expectations included improved social and emotional skills, changes in approaches to teaching, better management of pupil behaviour, increased communication and relationships with other members of staff, and increased job satisfaction, enjoyment, morale and attendance.• Changes at the school level – The staff spoke about enhancing the ethos of the school: <p><i>“I think the vision is to build upon what we have at the moment” (SEAL Lead),</i></p> <p><i>“Happy staff and happy children... because the right atmosphere pervades the school” (SEAL Lead)</i></p> <p>The analysis of this data showed that there were a wide range of expectations for SEAL and considerable variability within schools as well as between schools. The authors concluded that there was a limited shared understanding and vision for SEAL.</p>
Theme 2	Leadership, management and managing change

	<p><i>“None of this is going to work if the head teacher doesn’t secure a vision and actually get it out there to all the staff... and make it as important to all the staff and all the children that this is a SEAL school. If the head isn’t saying it and making sure that everybody goes with it, it’s...not going to happen”</i> (SEAL Lead)</p>
<p>Theme 3</p>	<p>Policy development</p> <p>Schools varied in their policy development. Some schools did not provide any information about SEAL in any policy documentation but instead reported intending to review policies at a later date. Other schools provided clear evidence of the integration of SEAL aims, objectives and principles into policy documentation.</p> <p><i>“Whenever any new policies are coming up or policies are being rewritten, SEAL is being written into them. Its written into job descriptions now... and I think that really if its going to become the ethos, its got to come into those areas as well”</i> (SEAL Lead).</p> <p>Having the support of the school management team appears to be a crucial lever in generating action:</p> <p><i>“Obviously I’m further down [the management chain] and it’s a bit hard to move something when you’re there”</i> (SEAL Lead)</p> <p>Some schools felt reluctant to continually update policy documents to take into account what they perceive to be the next in a continuous cycle of new initiatives:</p> <p><i>“SL is concerned about so many new initiatives coming in”</i> (Field notes).</p> <p>Some schools also felt that their existing policies were in line with SEAL principles, meaning they did not think revision was necessary:</p> <p><i>“Is this something new when we’ve been doing this for years?”</i> (Acting SEAL Lead).</p>
<p>Theme 4</p>	<p>Curriculum planning and resourcing</p> <p>The integration of SEAL into the curriculum varied across schools in terms of the range of curriculum subjects in terms of the range of curriculum subjects where integration was evident, the type of activity and the range of year groups where</p>

this practice was explicitly evidenced. There was concern around the extent to which planned activity had actually been implemented in lessons:

“What I could produce and show you would be... the whole of the Year seven schemes of work, areas of study for all the subjects and how they’ve fitted in and jiggged things around to meet the themes that we’re teaching in SEAL. The reality of that – I am honestly not sure if it is happening in reality” (SEAL Lead).

SEAL was most consistently utilised in English, Drama and other subjects where the content and/or natural inclinations of the subject teachers were more attuned to social and emotional learning. The more rationalist subjects such as Maths and Science yield less evidence of integration. Some schools only evidenced this integration in a particular year groups such as Year 7 at the beginning of the evaluation.

With the exception of Art, there is a clear decline in the proportion of pupils reporting that they get the opportunity to talk about feelings and relationships in the various curriculum subjects from Time 1 to Time 3.

SEAL appears to have been most readily integrated into subjects like English and Drama. In terms of an overall trend, even subjects with the highest proportional responses (e.g. Drama) show that only around one in five pupils reported getting the opportunity to talk about feelings and relationships.

One explanation is that teachers feel that they do not have the necessary time to adapt or reconstruct their lessons to accommodate SEAL objectives:

“I don’t feel that we can have a SEAL objective for a lesson... there’s just no way. You’d end up having about ten objectives on the board. It’s got to be manageable” (Teacher).

Although the evidence of the integration of SEAL across the curriculum being patchy, there were some clear examples of teachers skilfully weaving key objectives into the natural subject content of their lessons:

“History lesson: Year seven. Learning objectives included: “To empathize with the villagers of Eyam; and “To understand my emotional reaction to situations”. Lesson objectives on display included: “Use our empathy skills to understand how people react in different ways”. Teacher objectives included: “To encourage pupils to use their empathy skills to gain a more in-depth understanding of the events in Eyam” (Field notes)

Theme 5

Teaching and learning

The integration of SEAL across the curriculum was more varied and complex than anticipated. Discrete opportunities for learning social and emotional skills were presented as regular or occasional 'SEAL lessons', regular or occasional specific learning opportunities within other lessons (e.g. PSHE), ad-hoc use of SEAL materials, SEAL assemblies, and SEAL-themed days or weeks. The provision of these learning opportunities across year groups varied greatly.

One school decided to implement SEAL as a discrete timetabled lesson:

"So the students have had a SEAL lesson a week since September" (SEAL Lead)

"We have SEAL as a separate lesson... it can't be done as tacked onto something else. It can't be part of PSHE – it has to be a separate thing, definitely" (Teacher)

This was not supported by the LA Behaviour and Attendance consultant:

"They have made provision for one hour a week in their timetable to do SEAL which... if you're looking at the philosophy and any implementation and model for SEAL, that's exactly what you don't really want. You don't want it as a bolt-on. You don't want children learning about an aspect of self-awareness and self-control and then going down the corridor and meeting an adult who doesn't know that and doesn't realize what they're modelling or what they're trying to do. It just creates conflict" (LA SL/BA)

In other schools, the decision was taken not to implement SEAL as a specific lesson:

"What we definitely don't want is to be a lesson... of SEAL because the... youngsters and the staff universally value least those subjects as they get older... We needed to have SEAL as something different than 'Here's an hour of SEAL' – that would have just killed it to be honest" (Headteacher)

"We felt the more able pupils, as we have here, had the ability to absorb SEAL through the curriculum and through... whole-school displays which highlight it for them. Most of our pupils don't need things delivered on a platter for them" (SL)

However, this view was not shared by all staff:

"The younger ones, with Year seven and eight... I'm not sure they'd pick up on everything if its cross-curricular. I think actually at the young age they need to be told.. more taught, 'This is what you're doing'" (Teacher)

	<p>Despite there being conflict evident in relation to the notion of specific SEAL lessons, schools responded positively to the guidance and materials relating to the teaching and learning element of SEAL implementation. This is perhaps because it is amongst the most ‘concrete’ and ‘tangible’ aspect of the SEAL programme:</p> <p><i>“Sometimes I will look and think ‘I can pretty much take that straight from there’” (Teacher).</i></p>
Theme 6	<p>Giving pupils a voice</p> <p>There was clear evidence of pupil voice from staff and pupils across all 9 schools:</p> <p><i>“Making the students part of the process - so giving a student voice I think, very much that. It’s about how we involve students as leaders of learning, rather than having a model that’s...you know, they’re receivers of our wisdom. They are a crucial part of the whole process, so if you get them on board, I think we’re more than half way towards achieving our goals” (Teacher).</i></p> <p>However, it was not always clear how much of a voice pupils were given in relation to SEAL as opposed to general matters relating to school development. Some cases showed some clear examples that related to the SEAL initiative:</p> <p><i>“The theme for this term is motivation, one of the five strands, and the Year 10 school council... we have a very active school council, it has a very active pupil voice, has already started to re-evaluate our reward scheme because they feel they’re not motivated by it and this morning in fact, they produced an assembly where they presented a totally different, very new and vibrant reward system which they’re now going to present to the school and all the staff. And this simply was started by the concept of motivation” (SL)</i></p> <p><i>“One citizenship lesson our teacher asked us what type of things we’d like” (Pupil)</i></p> <p><i>“We’re also going to ask students to do detective walks, you know where they have a sheet with them during the day and not necessarily to spy on staff but make a journal for maybe a day or maybe a week of what SEAL’s discussed during their lessons but they’ll need training for that” (SL)</i></p> <p><i>“Pupil feedback forms used through Y7-9 on SEAL theme” (Field Notes)</i></p>

“Student Voice groups have been consulted on the Attendance Policy and Behaviour Policy, providing views which have influenced decisions on numerous areas, e.g. lunchtime activities and anti-bullying systems” (Document analysis)

Other evidence provided relating to pupil voice did not make reference to or directly ‘correlate’ with SEAL aims and principles. Most students in the focus groups talked about school councils as a means of giving pupils a voice, although the content of this discussion typically focused on things like what sports could be played at school, ways to make school more environmentally friendly, the school’s uniform policy and so on. It could be argued that it is the use of pupil voice, and not specifically the use of pupil voice in relation to SEAL per se, that is the fulcrum. If pupils feel that they have a voice in the school, and that their concerns are listened to and acted upon, they will (theoretically) develop a greater attachment to school.

Theme 7

Provision of support services for pupils

The evidence gathered in relation to the provision of support services for pupils suggested that mentoring approaches were the most common utilised method adopted in the case study schools.

“We have learning mentors, we have emotional mentors, we have...people in place for peer mentoring” (Teacher)

“Well they sort of explain it to us and then... they say if we have anything that’s like worrying us we can go and see a certain person” (Pupil)

“There’s like a mentor room where if you’re lonely you can go there and Year eights will look after you” (Pupil)

Other schools used more informal mentoring approaches e.g. lunchtime supervisors acting in a mentoring capacity:

“If they’re walking on their own then we just go up to them to see they’re alright” (LTS)

It was difficult to tease out in some cases whether the approaches being describes had evolved as part of the implementation of SEAL or were already in place:

“Although SEAL has not taken up a lot of time, something very similar to SEAL is something we’ve already been doing” (LM)

	<p>However, the kind of mentoring described was typically in line with SEAL aims and objectives: <i>"It makes you like reassured that you know that you can talk to someone if you have a problem"</i> (Pupil)</p> <p><i>"They're dealing with emotional issues of students, but also behavioural issues as well"</i> (SL)</p> <p><i>"I've got a mentor who I can go to and then she...do you know the room that we were just up to, I've also got that room to go if I've got any problems"</i> (Pupil)</p> <p>Most of the mentoring described was on a "drop in basis" which reflects a greater emphasis on pupil autonomy in secondary education but this raises important issues regarding potentially vulnerable pupils who are not comfortable with seeking help who may not get the support they need in this kind of system</p>
Theme 8	<p>Staff CPD, health and welfare</p> <p>The area of staff development provides a powerful example of how the initial enthusiasm and energy generated around the launch of SEAL in the case study schools seemed to wane over time. Staff in all nine schools engaged in some kind of initial CPD relating to SEAL. In most schools, this training was fairly comprehensive in terms of the range of individuals involved, with both teaching and non-teaching staff present:</p> <p><i>"I've already trained up our cleaners. This term I will be training up our administrative staff and our catering staff"</i> (SL).</p> <p>This initial training tended to be INSET sessions delivered by/with LA consultants (in the case of teaching staff) and/or 'in-house' sessions delivered by the school's SEAL lead (typically the case for nonteaching staff, or follow-up sessions with teaching staff).</p> <p><i>"We had a day for staff dedicated to looking at the new curriculum. And what we used our time for was mapping... SEAL learning outcomes against the new Year seven curriculum. I think what that exercise actually did was make people actually focus on what SEAL really is"</i> (SL)</p> <p>However, this kind of more focused, in-depth follow-up training was not given a high priority in many schools, particularly beyond the first year of SEAL implementation.</p>

	<p><i>“They have needed training and certainly we delivered an INSET day, and that INSET day was very important. Now I don’t think our staff need any more formal training” (SL)</i></p> <p><i>“I don’t think it needs more training. I just think it needs more time spent encouraging staff” (SL)</i></p>
Theme 9	<p>Partnerships with parents, carers and the community</p> <p>There was very limited evidence of schools directly involving parents/carers and/or the local community in their SEAL implementation.</p> <p><i>“Very few parents... know that we are a SEAL school or know that we actually do this and that is something that I have been thinking about. We need to let parents know that this is what we’re doing and exactly what it is” (SL)</i></p> <p><i>“We haven’t explicitly involved the parents yet to my knowledge” (SL)</i></p> <p><i>“I would say that involving parents is not something that we actually do” (SL)</i></p> <p><i>“That’s a way we could go...definitely. The one thing I do want to do soon is obviously raise awareness with parents, so we’re going to put a letter together to send out to explain that we do SEAL in school and let them...have a little brief description and then say, ‘Would you like to know more? Would you like to attend a workshop?’” (SL)</i></p> <p><i>“There hasn’t been any involvement with parents as yet” (SL)</i></p> <p><i>“They [parents] don’t know about SEAL at all” (HT)</i></p> <p>In some schools, parents were actively cited as a negative influence upon children’s behaviour. This does, in part, explain their reluctance to involve parents, but also creates a conundrum whereby difficulties experienced in relation to children’s home/family life are not addressed:</p> <p><i>“There are some parents there that are actively against what we’re doing” (SL)</i></p> <p><i>“I wonder how much some of them are missing out on it at home” (Teacher)</i></p>

	<p><i>“A lot of children will have not had that background at home and this is where it becomes very difficult, when you talk about terms like empathy and self-awareness and thinking about other people, it’s quite difficult”</i> (Acting SL)</p> <p><i>“Biggest barrier cited – influence of the parents and their models of behaviour outside of school”</i> (Field notes)</p> <p>Additional reasons for this failure to actively involve and engage parents varied from school to school. In some it was because attempts to engage parents would not have been well received.</p> <p><i>“I think some of our parents wouldn’t be that understanding - they would think it would be a direct attack on their parenting skills”</i> (SL);</p> <p><i>“We had to be careful because we didn’t want to seem to be patronizing the parents”</i> (SL)</p> <p><i>“I’d like at some point to do some parent workshops, but the only reason I’m not at the moment is because I’m right near the end of my diploma so I’m snowed under”</i> (SL).</p> <p>Other schools saw parental involvement as necessary, but had decided to focus first upon pupils and staff, opting to ‘go beyond the school’ at an unspecified future date:</p> <p><i>“We haven’t explicitly involved the parents yet to my knowledge... that’s certainly somewhere where we should go next perhaps”</i> (SL).</p> <p>Schools did demonstrate clear links with the communities within which they resided. Examples were given of work with the police, community link workers, family support workers, young citizens groups and involvement in various charity and other events. However, this was rarely attributed to SEAL implementation.</p> <p><i>“We can link it to SEAL, but it wasn’t initiated by SEAL at all”</i> (SL)</p> <p><i>“We have parenting groups and that has been going on for a long time and so the things that happen there are things that would be in line with SEAL”</i> (SL)</p>
Theme 10	Assessing, recording and reporting feedback

	<p>Schools' activity in relation to assessing, recording and reporting feedback was naturally tempered by the fact that they were involved in an external evaluation project which provided them with feedback on progress in different areas from year to year.</p> <p>Several schools began their implementation with ambitious plans to demonstrate the impact of SEAL on a variety of proximal (e.g. social and emotional skills) and distal (e.g. attendance, attainment) outcomes:</p> <p><i>"I am hoping next year that we will be looking a lot more carefully at actual data, particularly attendance data, but also behaviour logs, exclusions data, et cetera"</i> (LA SL/BA).</p> <p>A crucial issue recognised by all schools was the difficulty in quantifying progress in social and emotional domains, whether at pupil, staff or school level:</p> <p><i>"It isn't an easy thing to measure but I think most of our schools that are involved in it feel that it's worthwhile"</i> (LA SL/BA) <i>"I don't know how I show these results. That's the problem, how do you show these results?"</i> (SL)</p> <p>There were also difficulties in disentangling the impact of SEAL from other activities happening simultaneously within the school:</p> <p><i>"How do you measure where SEAL has made the difference or where some other aspect of support or teaching and learning has made the difference?"</i> (LA SL/BA).</p>
Theme 11	<p>School culture and environment</p> <p>At the outset it was clear that each school felt that they had the necessary culture to allow SEAL to develop as intended. There was a sense of caring and concern amongst most staff towards their pupils:</p> <p><i>"We've always had a great pastoral rapport with the kids... our strength is that our staff care passionately about the children"</i> (TA)</p>

"On the tour, the SL knew the names of many students and said hello; in turn, many pupils said hello to her. During registration, the teacher allowed a pupil to 'swap roles' and direct the class, which seemed to be a running joke in the class" (Field notes)

"Pupils were not hesitant in addressing staff and discussing various issues during break. The SL affectionately refers to all pupils as 'chicken'. Staff are encouraged to eat on tables with the pupils, and will receive free lunch doing so. There is apparently a strong uptake of this option" (Field notes)

One school was an exception to this trend:

"I observed a pupil being disciplined by a TA in the corridor. The nature of this discipline was the TA screaming loudly in the face of the pupil... During my school tour, each class we visited was followed with the teacher of the class selecting a pupil who had performed some misdemeanour or other for public chastisement by the deputy head (who was conducting the tour)" (Field notes)

The incompatibility of this kind of approach to discipline and the ethos required for effective SEAL implementation was recognised by the SEAL lead in a subsequent visit:

"I actually said, 'No, no, no we can't be doing that'" (SL)

Relationships between staff were also generally positive, and seemed to reflect a sense of community:

"I think as a staff we already work brilliantly as a team and...we get on very well with each other, so I don't know if we were already at that level or whether because of SEAL we're getting even better" (Teacher).

However, staff in some schools expressed concern about pupils' relationships with one another:

"I would certainly hope that in the future students have more respect for each other" (Teacher)

"They need to speak to each other with more respect" (AHT)

	<p><i>“The great difficulty... it’s not particularly their behaviour towards their teacher, it’s their behaviour towards each other”</i> (Teacher)</p> <p>In terms of the physical environment of the school, the ‘presence’ of SEAL was felt through wall charts and displays across all schools, even during early visits. It could be argued that this kind of activity is engaged in more consistently than others because it represents something that is tangible and concrete.</p>
Theme 12	<p>Barriers and facilitators of effective implementation</p> <p>Preplanning and foundations</p> <p>The presence preplanning and foundations in a school provide a fundamental starting point for effective implementation of a programme like secondary SEAL. A lack of awareness among staff provides an initial stumbling block.</p> <p><i>“We’ve had a couple of interviews on it, I am a little bit... still wondering what it is”</i> (FT).</p> <p>Even among staff who are aware of the initiative, the amount of buy-in to SEAL was found to be a key factor in their willingness to engage with implementation:</p> <p><i>“You get the... ‘isn’t it just another one of these ideas from the government that will fade out? We’ll do it for a couple of years and then it’ll be.. we’ve forgot that. We’ve got another idea now’... there is a little cynicism from people [who are] a bit weary of initiative after initiative”</i> (Acting SL)</p> <p><i>“The weakness with regards to SEAL is that it is optional for schools, so people have to opt into it, and then it depends who is driving it and how its driven”</i> (SL)</p> <p>Where initial buy-in is weak, the amount of staff involvement in initial implementation also seems to suffer. In such circumstances, SEAL working groups often operate as somewhat isolated units, which makes effecting whole-school change a difficult process:</p> <p><i>“The biggest thing for me in terms of any kind of negativity is trying to encourage other staff to take it on board”</i> (SL).</p>

	<p>Persuading resistant members of staff to get involved in implementing SEAL becomes a major challenge, especially given the other pressures (e.g. workload) that each face:</p> <p><i>“And the last meeting that we had where four people turned up – that’s the first time that’s happened and I think its because of the workload that the school has given the staff” (SL)</i></p> <p><i>“I suppose as more staff become involved... maybe there will be some effect. I think at the moment its quite difficult because there are those of us who have been involved and we’ve talked quite a lot about SEAL, but... I think a lot of other staff at the moment are a bit bemused by it” (SL)</i></p> <p>There was a feeling in one school that a lack of involvement among staff was related to a preference for long established routines and a lack of incentive to change:</p> <p><i>“[Some teachers have] probably taught the same scheme of work for ten years, fifteen years, twenty years and don’t really want to change because they think there is no need for them to change because they’ve always been successful – so why change something that’s good?” (SL).</i></p> <p>By contrast, where SEAL leads and/or working groups have been able to secure high levels of staff involvement from the outset (or, at the very least accrue ‘converts’ during the early stages), the implementation process appears to be greatly facilitated.</p> <p><i>“The more people you can get involved, the better...so if you’re getting a few people together and facilitating them and feeling ownership of an idea or initiative and then getting them to work with their peers on it too, [then] they too feel a sense of ownership, some kind of power and control... its much more likely to succeed” (SL)</i></p> <p><i>“So I would say the awareness of SEAL in this school is one hundred per cent and enthusiasm for SEAL, I would say we’re getting near seventy five per cent” (SL)</i></p> <p><i>“We built a consensus within a smaller group and now... that group is much larger and we have friends who weren’t part of the group but were ‘very SEAL’, so therefore its proven easier to spread it than might have been the case” (SL)</i></p>
Theme 13	<p>Implementation support system</p> <p>Local Authority staff play a vital role in helping schools to implement programmes such as SEAL.</p>

	<p><i>"[LA B&A consultant] keeps me focused... she keeps me on track... and she does push things forward as well" (SL)</i></p> <p><i>"I've been very much helped by [LA SEAL co-ordinator] at [LA] and she's been in school twice to talk to me specifically about SEAL... because I wasn't totally sure, so she clarified many issues for me" (Acting SL)</i></p> <p><i>"It gives you an extra emphasis when you compare yourself to another school... when the schools feedback to each other and say, 'Well we've been doing this, what have you been doing?'... when we went to that pilot meeting, we realised we hadn't worked hard enough on this and that kind of peer assessment is really important" (SL)</i></p> <p>However, it is clear that the support needs to be substantial, consistent and offered on an ongoing basis if it is to facilitate effective implementation.</p> <p><i>"We could do with more time to help implement SEAL... it isn't going to be her [LA SEAL co-ordinator] because she only works part-time. So we're going to end up with a difficulty there where... someone comes in who doesn't know the school that well" (HT)</i></p> <p>In other schools, the perception was that support at LA level had reduced significantly as time went on, often because of restructuring or changes in priorities.</p> <p><i>"Things changed within the LA, the way that they organised it, so, no, I'll be honest really" (SL).</i></p> <p>Of the elements of LA support that were made available, provision of training about SEAL and related issues was deemed to be the most useful.</p> <p><i>So far... we have had initial training from [SEAL consultant] and that kind of got us excited about SEAL" (SL).</i></p> <p>However, the training needs to be offered on a consistent and continuing basis:</p> <p><i>"I think its because we haven't given up on the training. The training is consistent and it's always about SEAL" (SL).</i></p>
Theme 14	Implementation environment

The amount of perceived investment in and enthusiasm about SEAL at the leadership level was seen as particularly crucial. Where this is high, SEAL is given “credence” and a “stamp of approval” (SL) that means it is taken more seriously by other members of staff. It also increases the probability of key staff being given the time and space to drive forward implementation:

“Support from the head.. [he’s] enthusiastic about it. Yeah, he sees the value in it” (SL)

“There needs to be strong support from somebody on the senior management team. I’m not on the senior management team here, but I’ve got strong support from them and from the head teacher and without that you couldn’t possibly do it because I’ve been given time and all kinds of things” (SL)

“Obviously I’m further down [the management chain] and it’s a bit hard to move something when you’re there” (SL)

In situations where leadership support for SEAL is absent or limited, implementation can suffer.

“None of this is going to work if the head teacher doesn’t secure a vision and actually get it out... and make it as important to all the staff and all the children that this is a ‘SEAL school’. If the head isn’t saying it and making sure that everybody goes with it, its not going to happen” (LA SL/BA).

With or without leadership support, the way in which SEAL is presented to staff clearly impacts upon how easily they feel it can be integrated into other aspects of the school and/or curriculum.

“What’s happening with staff is they’re given a presentation on SEAL and it’s all... communicated as though it’s something new and then they think they’ve got something else to do and...a lot of people could have negative feelings towards that” (CS10, AHT, V2)

“It would be better if the school things were a bit more joined up, so rather than all these initiatives coming from different places and somebody here saying ‘you’ve got to have this initiative in all your lessons’ and somebody here saying ‘you’ve got to have SEAL in all your lessons’ and somebody here saying, ‘and here’s a new Key Stage 3 curriculum’ and all these different things and so people in school saying, ‘Oh right, OK, we’ll put that in, we’ll put that in...’ and it’s left...I think it should be more joined up” (SL)

In contrast, a teacher drew clear links between aspects of SEAL and various ongoing or new initiatives, preferring to see them as related strands of activity that were all designed to lead toward the main goals outlined in Every Child Matters.

“I do find there is quite a lot of overlap between those things, so... its not created too much extra work” (Teacher).

How SEAL is presented – either as an add-on or as something that can be assimilated into existing structures and practices – clearly impacts upon the perceived effort needed to integrate it throughout the school. This inevitably leads into discussions around time constraints – which was one of the most consistently reported barriers to effective implementation.

“If I didn’t have SEAL I’d probably be teaching another lesson” (Teacher).

“I think, if you speak to other people about it, it is all to do with time really ‘cause lots of people are interested and have got lots of ideas, but then it’s about when do you do it?” (Teacher)

“I know that maths, English and science will take priority and I know SEAL... is going to be the bottom of the pile” (SL)

“This could be a job on its own. And it could be, you know, really, a SEAL cocoordinator could be a post in a school. It can’t be somebody doing it in the same allotted time that they were given to do [their other work]” (SL)

A lack of time to engage in implementation interacts strongly with the resources allocated for different kinds of activity.

“The amount of money that is given to SEAL, for us to be in this project as a school is minute and is nowhere near enough to cover the amount of time that is actually needed to make it good quality” (SL)

The amount of openness to change among staff in some schools also proved to be a significant additional barrier.

“I think there are some staff that are resistant because...a) it’s a new thing and there are some teachers that resist change ...b) because it’s something that’s come from up above, as it were, from senior management or from the government and there are people that will always be resistant to that” (Teacher)

	<p>The perception of SEAL as one of multiple initiatives to be ‘juggled’ alongside existing commitments also proved to be a barrier in some schools:</p> <p><i>“There is so much else coming into school and you can only ask people to do so many things. People are pulled in different directions and dedicated staff are pulled in different directions and that’s hard” (SL)</i></p> <p>Set as a background to all of the above factors, the basic climate and general sense of quality of relationships in a given school provides the bedrock for effective implementation.</p> <p><i>“There needs to be a big culture change” (Teacher).</i></p>
<p>Theme 15</p>	<p>Implementer factors</p> <p>Within the implementation environment, factors associated with the implementers themselves (e.g. school staff) are crucial. One of these factors is an attitudinal disposition towards SEAL and related initiatives.</p> <p><i>“There’s one science department in particular who absolutely think it’s a load or rubbish and are not prepared to do anything in their science lessons. They do however do it in form time but obviously don’t see it as being part of the curriculum as well” (SL).</i></p> <p><i>“I’ve got fifty minutes and my priority is that they leave the room... knowing about particle theory, you know, the fact that they’re emotionally illiterate, well really...it’s not your problem is it?” (Teacher)</i></p> <p><i>“SL identifies a key barrier for the successful implementation of SEAL as individuals who lack their own self awareness skills, and wishes to work on this as part of the school strategy” (Field notes)</i></p> <p><i>“Staff is another problem really, because if the staff aren’t emotionally intelligent then the children are going to struggle and I think training the staff is going to be a big problem because obviously...by the time you get to be an adult you’ve got your own ideas of how things go and how you are and what you like and you can’t suddenly make somebody emotionally intelligent by telling them they’ve got to be” (Teacher)</i></p> <p>Where staff members were recognized as being emotionally literate, the benefits were seen not just in the context of SEAL implementation, but more generally in effective classroom management:</p>

	<p><i>“I would say there are some teachers that naturally have the ‘ethos of SEAL’. You can tell that and those teachers are usually the teachers that have the least ...problems of discipline for instance because...they kind of have an empathy as well with the children, so... you don’t have to teach them SEAL... you know, they have it, it’s a natural thing” (Teacher).</i></p>
Theme 16	<p>Programme characteristics</p> <p>Some staff spoke in general terms about the materials, saying for instance: <i>“The good thing about SEAL is that it gives us a format” (AHT).</i></p> <p>Others were more specific, citing features such as the programme website as containing useful information:</p> <p><i>“The website... there is more than enough out there... it is now improving and I think people are finding it more accessible” (SL).</i></p> <p>However, others criticized the quality of the materials available in terms of feasibility, completeness and accuracy:</p> <p><i>“I mean one of the negative things about that particular lesson plan was ... seven objectives that were supposed to be...being achieved and that’s not realistic - it’s impossible to get that across” (FT)</i></p> <p><i>“I have had a complaint from the science department this week about some of the Year seven materials... [that they are] not particularly accurate with regards to science or historical facts, so that’s something to look into. I think this is the danger... highly trained specialists delivering things as form tutors, they are starting to pick up on things. And it does sort of make people think, ‘Oh well does that mean we can rely on all of the materials?’” (Teacher)</i></p> <p>There was also a feeling among staff in some schools that the materials were not pitched at the appropriate level for the children in their school, meaning that significant adaption was required before they were considered fit for purpose.</p> <p><i>“The characters that go with it, is just a little bit too cartoonish and baby like in my eyes” (Teacher)</i></p> <p><i>“Sometimes I look and think, hmmm a good twenty minutes of that lesson, I need to adapt it to make it more high level or low level” (Teacher)</i></p>

“By the time they’ve got to the end of the autumn term when they’re becoming much more mature, the materials are regarded now as too patronizing” (SL)

There were members of staff who clearly felt that the level of the materials was appropriate for their pupils:

“The pupils have liked following that theme through and carrying the same characters through and they can sort of empathize with the characters doing these things because they’re sort of their age, they’re in their situation, so that’s been nice” (Teacher).

Some staff members would prefer the SEAL materials to be ready to use ‘out of the box’.

“There are some nice ideas in there and there are some ideas where...they’re not going to work at all. There are some things that you can tailor a bit and... although there’s a lot of resources provided, there’s very little in there that you can just take out and deliver. You have to do a lot of work, that’s what we have found. We’ve had to do a lot of work ourselves to make them into a form that’s going to be effective as a lesson, to teach to our pupils” (SL).

SEAL leads varied in their views as to whether flexibility, and the potential for multiple models of implementation, operated as a barrier, facilitator or potentially even both:

“I think every school is very different and one of the schools down the way... they don’t have the kind of issues that we might have in a school so therefore they might actually not really need the level that we might feel we need, so it is different isn’t it? But you could have a series of models couldn’t you? And it would be quite nice for people to actually see how that was done a lot more clearly” (SL)

Critical appraisal - CASP qualitative checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Moderate
Overall risk of bias and relevance	Relevance	Highly relevant

D.2.4 O'Hare, 2018

Bibliographic Reference

O'Hare L; Positive Action: Pilot report and executive summary; 2018

Study details

Study design	Interview study
Trial registration number	Not reported
Study start date	Nov-2015
Study end date	Jun-2017
Aim	To test the feasibility of the Positive Action programme and to investigate early evidence of pupil outcome change.
Country/geographical location	United Kingdom
Setting	Primary schools in the Ashford area of Kent
Inclusion criteria	Pupils and teachers
Exclusion criteria	Not reported
Attrition	Not applicable

Method(s) used to analyse the data	Qualitative data was analysed based on the emerging quantitative results; for example, if pupil engagement with lessons was found to be an important implementation factor, then the qualitative data was explored for information that could provide insight into which lessons were more (or less) engaging than others.
Study limitations (author)	Not reported
Study limitations (reviewer)	Lack of information on exclusion criteria and author limitations
Source of funding	The programme was co-funded by the DfE and the KPMG Foundation as part of an EEF funding round on Character Education.
Ethical approval	Ethical approval was granted by the Queen’s University Belfast School of Social Sciences, Education and Social Work ethics committee on 16 February 2016.
Theme 1	<p>Which pupil-level implementation factors (pupil engagement and pupil-teacher relationship) had a significant association with outcome change?</p> <p><u>Aspects of PA lessons which encouraged engagement, as reported by pupils</u></p> <p>Many pupils reported enjoying more ‘doing’-based activities such as colouring, making crafts, or art activities that were incorporated into the PA lessons. Longer running tasks—such as an ongoing art project, working on the Positive Action booklets, or tasks which pupils worked on throughout a whole term—were also popular.</p> <p><u>Barriers to pupil engagement with PA, as reported by pupils</u></p> <p>The context of some stories also seemed to be a potential barrier to engagement.</p> <p><i>‘If you don’t have a sister or brother right now you aren’t learning anything.’ (Pupil)</i></p>

Aspects of PA that improve pupil engagement

An emerging theme for improving engagement with the programme was increased pupil input into the lessons. Pupils also suggested more opportunity to express themselves in the context of the PA lessons.

'We should be able to be more involved in it. We should be able to plan Positive Action.' (Pupil)

Negative aspects of increased classroom activity

Numerous pupils reported that the stories and subsequent questions during lessons appeared repetitive.

Aspects of PA that may have potential impact on pupil-teacher relationships

Pupils reported that they felt PA had helped their teacher become more creative, and improved their perception of the variety of lessons their teacher was providing.

'Positive Action kind of made the teachers get more creative, so our lessons were about Star Wars and Zootropolis. So they like, it makes them want to do the extension.' (Pupil)

Potential barriers to this occur when lessons are perceived as repetitive by the pupils and they become frustrated.

Theme 2

Which school- and class-level implementation factors were associated with outcome change? (Teacher and headteacher perceptions)

Implementation of classroom activities and lessons

Teachers reported finding it difficult to consistently implement three sessions per week. Numerous teachers reported that if there were time constraints during a week, PA would be the lesson that would be cut.

'We plan to have three sessions a week as per the programme but it doesn't always work that way because time within school is obviously very limited and we run out of time.' (Teacher)

Teachers reported that the programme seemed very 'Americanised', but that overall the quality of materials was good. The posters and lesson handbook were found to be useful by teachers. Some teachers felt that the activity book for pupils *'was often not age appropriate'*, however, one school found the songs to be very popular.

Implementation of whole-school activities

Some teachers and headteachers reported that they were reluctant to make whole-school changes. Reluctance to change whole-school policy may be exacerbated by circumstances such as an upcoming Ofsted inspection.

'Did launch assemblies [...] but didn't do as frequently as the programme suggested. Hard to judge if whole-school approach would really work as we didn't change the behaviour policy as much as we could have.' (Teacher)

Best practice for whole-school activities seems to be improved when schools maintain consistency across years and classes in terms of which topics they are covering at a given time with PA.

Teachers found the training to be in-depth and useful. The refresher training at the beginning of the new school year was considered helpful, especially the detail on making minor adaptations to suit the class and the U.K. context. There were consistent comments on the number of lessons being higher than could be delivered in a year and teachers having to 'cherry-pick' which lessons to fit in. Headteachers also commented that it was difficult to schedule all units into a school year.

Study arms

Positive Action (N = NR)

Number of interviewees not reported

Critical appraisal - CASP qualitative checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Low
Overall risk of bias and relevance	Relevance	Highly relevant

D.2.5 Wolpert, 2013

Bibliographic Reference Wolpert, Miranda; Humphrey, Neil; Belsky, Jay; Deighton, Jessica; Embedding Mental Health Support in Schools: Learning from the Targeted Mental Health in Schools (TaMHS) National Evaluation; Emotional & Behavioural Difficulties; 2013; vol. 18 (no. 3); 270-283

Secondary publication(s) Wolpert, Miranda, Humphrey, Neil, Deighton, Jessica et al. (2015) An evaluation of the implementation and impact of England's mandated school-based mental health initiative in elementary schools. School Psychology Review 44(1): 117-138

Study details

Study design	Qualitative study
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Trial registration number	None reported
Study start date	2008
Aim	<p>The overall project was designed to address the following research questions (RQs):</p> <ol style="list-style-type: none"> 1. What is the impact of TaMHS on mental health outcomes of pupils (when compared to provision as usual)? 2. Does the provision of additional support (e.g., ALS, LA booklets, pupil booklets) enhance the effect of TaMHS provision on pupils' mental health? 3. What different approaches and resources are used to provide targeted mental health in schools? 4. What school and individual factors are associated with changes in pupil mental health outcomes in schools implementing TaMHS? 5. How is TaMHS provision (and the support materials designed to enhance the impact of such provision) experienced by project workers, school staff, parents and pupils?
Country/geographical location	UK
Setting	Primary and secondary schools
Inclusion criteria	<ul style="list-style-type: none"> • Selected schools in every local authority (LA) across England
Exclusion criteria	Not reported
Method of randomisation	Not applicable
Method of allocation concealment	Not applicable
Unit of allocation	Not applicable
Unit of analysis	Not applicable
Attrition	Not applicable
Method(s) used to analyse the data	<ul style="list-style-type: none"> • Qualitative interviews with 26 TaMHS workers, 31 school staff, 15 parents and 60 pupils.

Study limitations (author)	It should be noted that the parent sample was drawn from a select group of parents who indicated they would be willing to take part in qualitative interviews so may not be representative of the views of all parents
Study limitations (reviewer)	<ul style="list-style-type: none"> Limited qualitative evidence from stakeholders
Source of funding	Department for Education
Ethical approval	Not reported
Theme 1	<p>Factors that facilitated success</p> <p>This included integration in schools, for example: bringing all mental health support activities into the school setting, building on previous initiatives and being sensitive to the existing context in terms of understanding what has already worked, what issues need addressing and what current ways of working look like.</p> <p><i>"I think one of the principles was around the idea of not replicating what was already there, but finding out what was already there and building on that, and building capacity and starting with interventions that people had already valued, rather than trying to find something totally new and starting afresh."</i> (TaMHS management team, interview)</p> <p>School staff were generally enthusiastic about TaMHS and identified examples of positive change, which they ascribed to the project. Key facilitators identified included having specialist mental health workers based in schools:</p> <p><i>"Putting staff into schools, it's as simple as that. That is the significant difference, having somebody that you can quickly speak to without a long rigmarole of referral and a long waiting time with a perhaps you will, perhaps you won't get some support is actually people that you can say, xx, I've got a problem with this child, can you help us out?"</i> (School staff member, interview in TaMHS school)</p>
Theme 2	<p>Parent acceptability</p> <p>Surveys of parents revealed that they regarded schools as the key point of contact for concerns about mental health issues and regarded teachers as the key group to turn to when worried about their child's mental health. Parents also saw teachers as the persons most helpful in these situations. Parents were generally positive about TaMHS and</p>

	<p>particularly stressed the importance of good communication in working with schools on mental health issues for their children:</p> <p><i>"I mean every teacher that I've spoken to or associate. . . . They seem to have endless amounts of time to talk to you. They never hurry you. It's lovely."</i> (Parent of child in TaMHS school, interview)</p>
Theme 3	<p>Pupil acceptability</p> <p>In the large annual survey of pupil experience, most pupils indicated they had access to mental health support in schools, with those with more difficulties having accessed more help. Pupils also showed an awareness of a range of approaches available in their schools and an appreciation of the ways these could help:</p> <p><i>"Remember it isn't just for people who are getting bullied it is also for people who want to improve their behaviour."</i> (Male pupil, focus-group participant in TaMHS primary school)</p>

Critical appraisal - CASP qualitative checklist

Section	Question	Answer
Overall risk of bias and relevance	Overall risk of bias	Moderate
Overall risk of bias and relevance	Relevance	Relevant

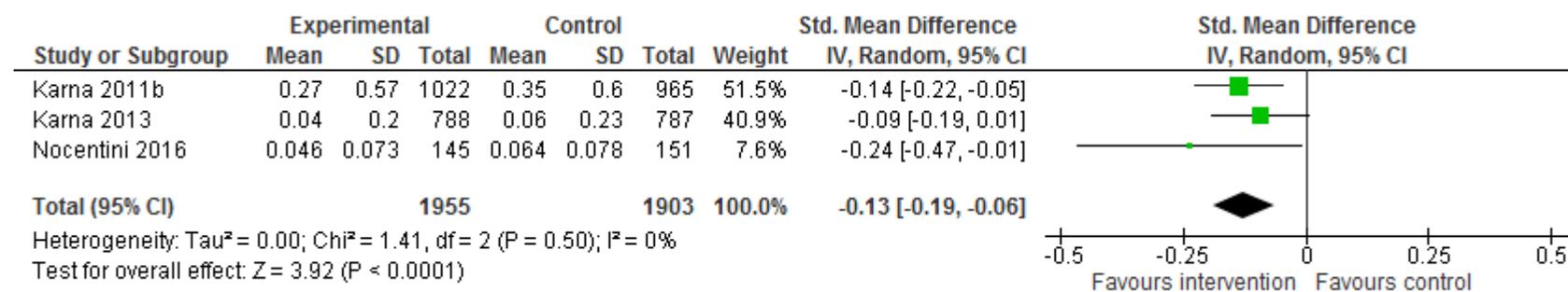
Appendix E – Forest plots

E.1 Primary Education

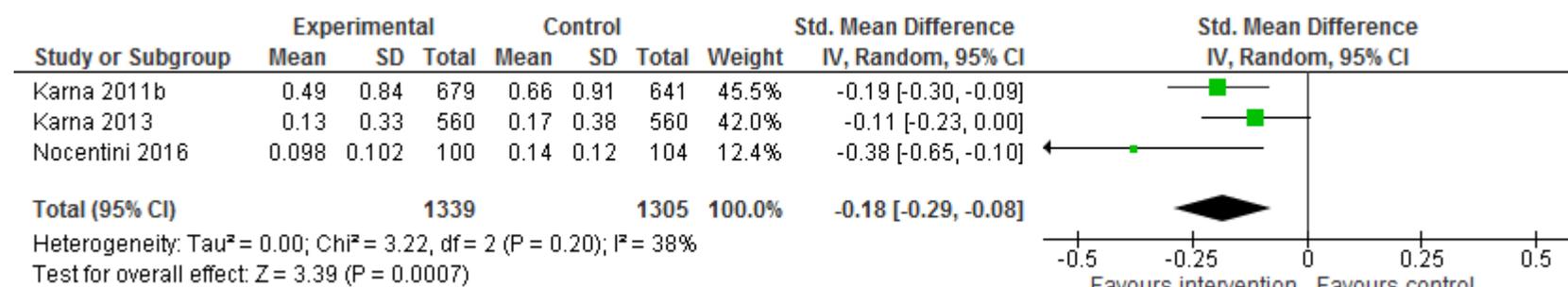
E.1.1 Whole-school approaches to bullying including curriculum plus targeted interventions vs usual practice

E.1.1.1 Outcome: Behavioural outcomes

Bullying perpetration



Bullying victimisation

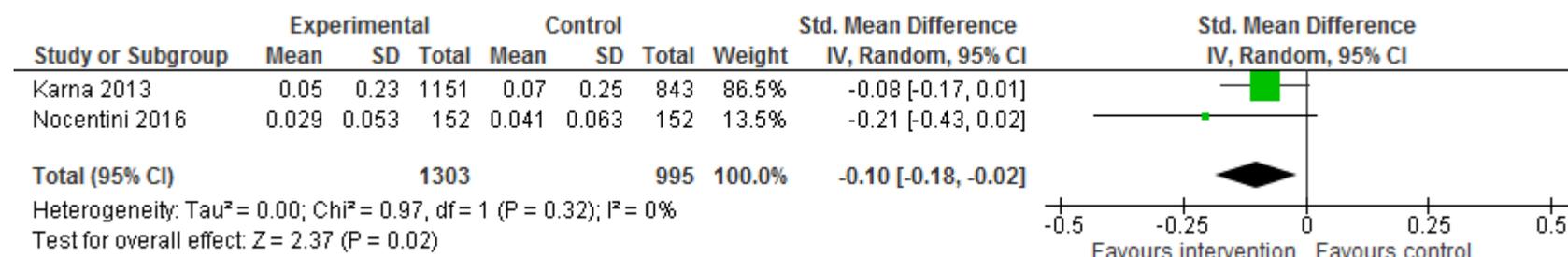


E.2 Secondary Education

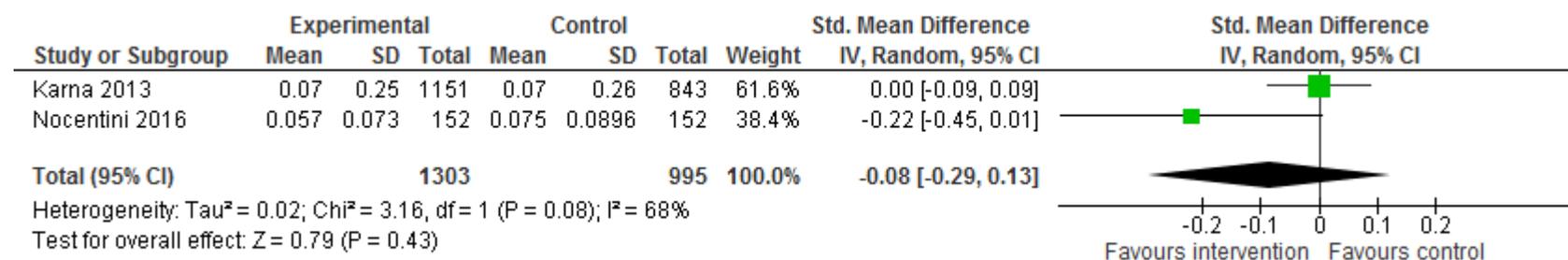
E.2.1 Whole-school approaches to bullying including curriculum plus targeted interventions vs usual practice

E.2.1.1 Outcome: Behavioural outcomes

Bullying perpetration



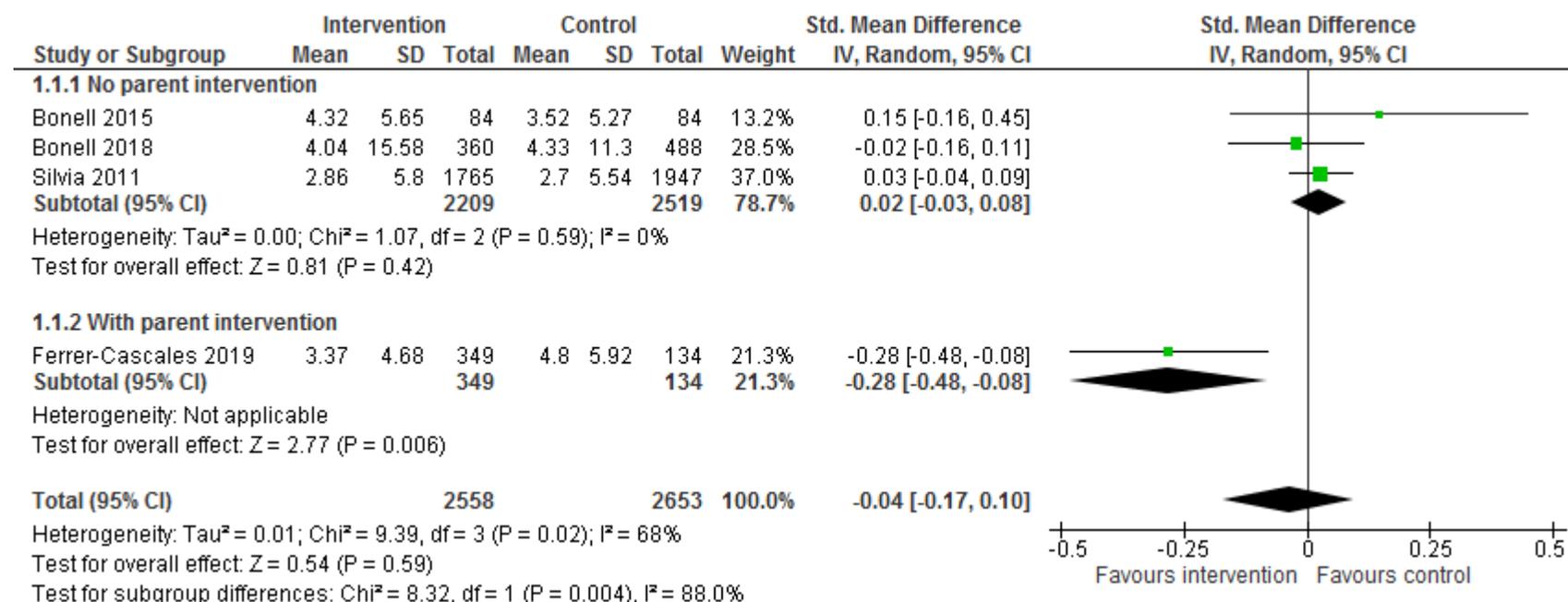
Bullying victimisation



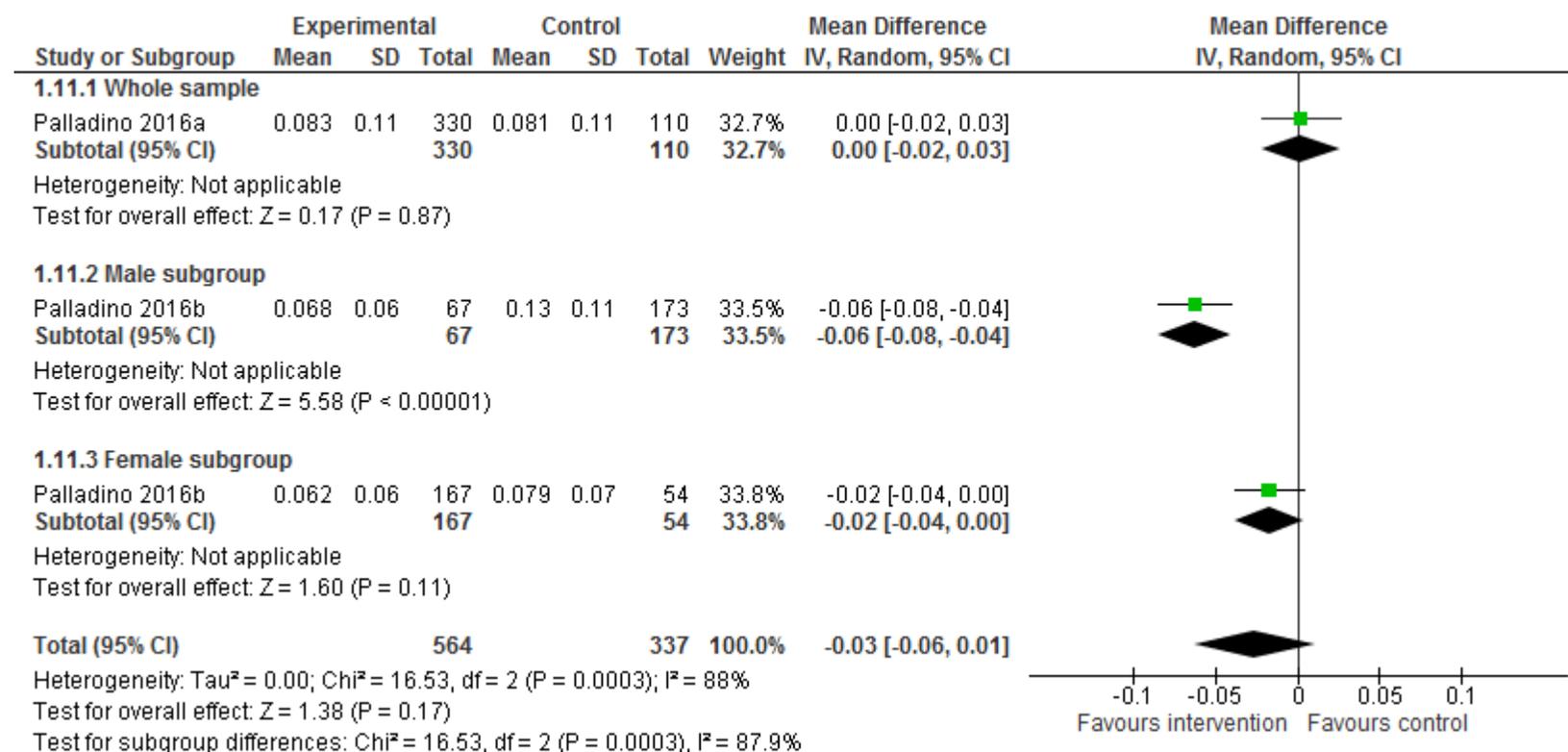
E.2.2 Whole-school approaches to bullying including curriculum vs usual practice

E.2.2.1 Outcome: Behavioural outcomes

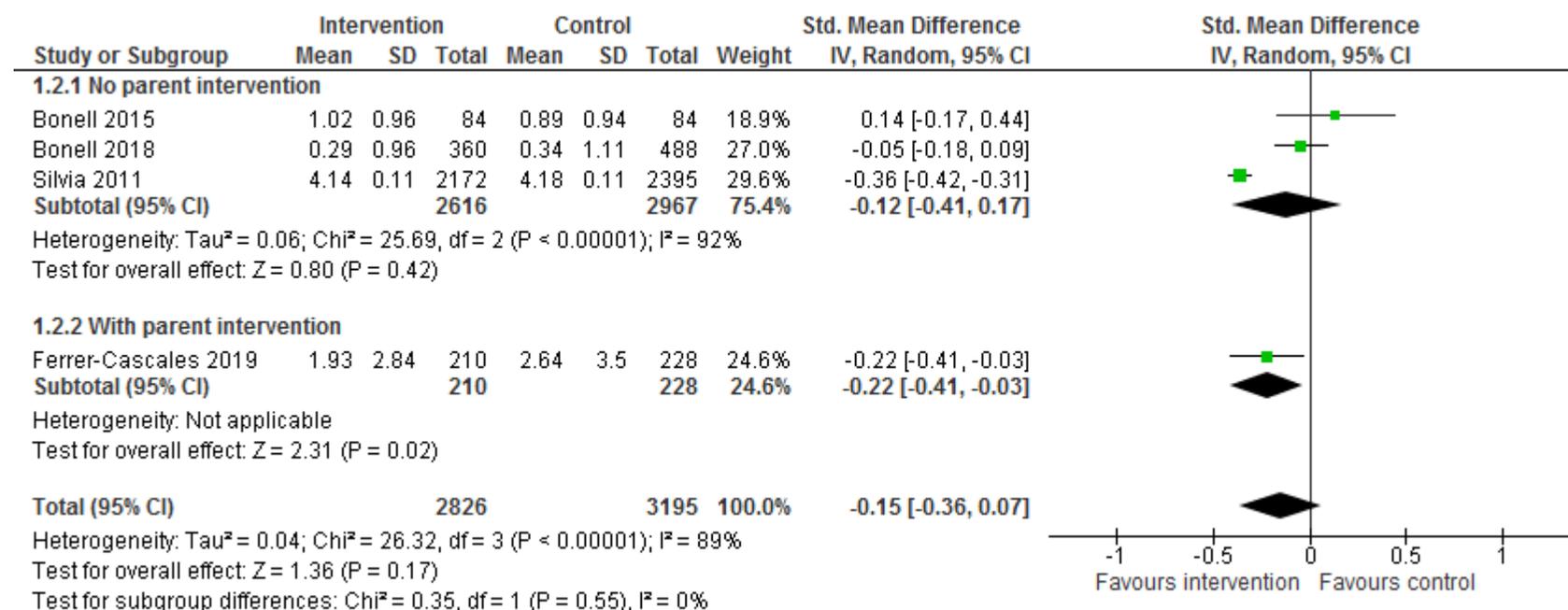
Perpetration (Bullying, aggression, violence) – cRCT



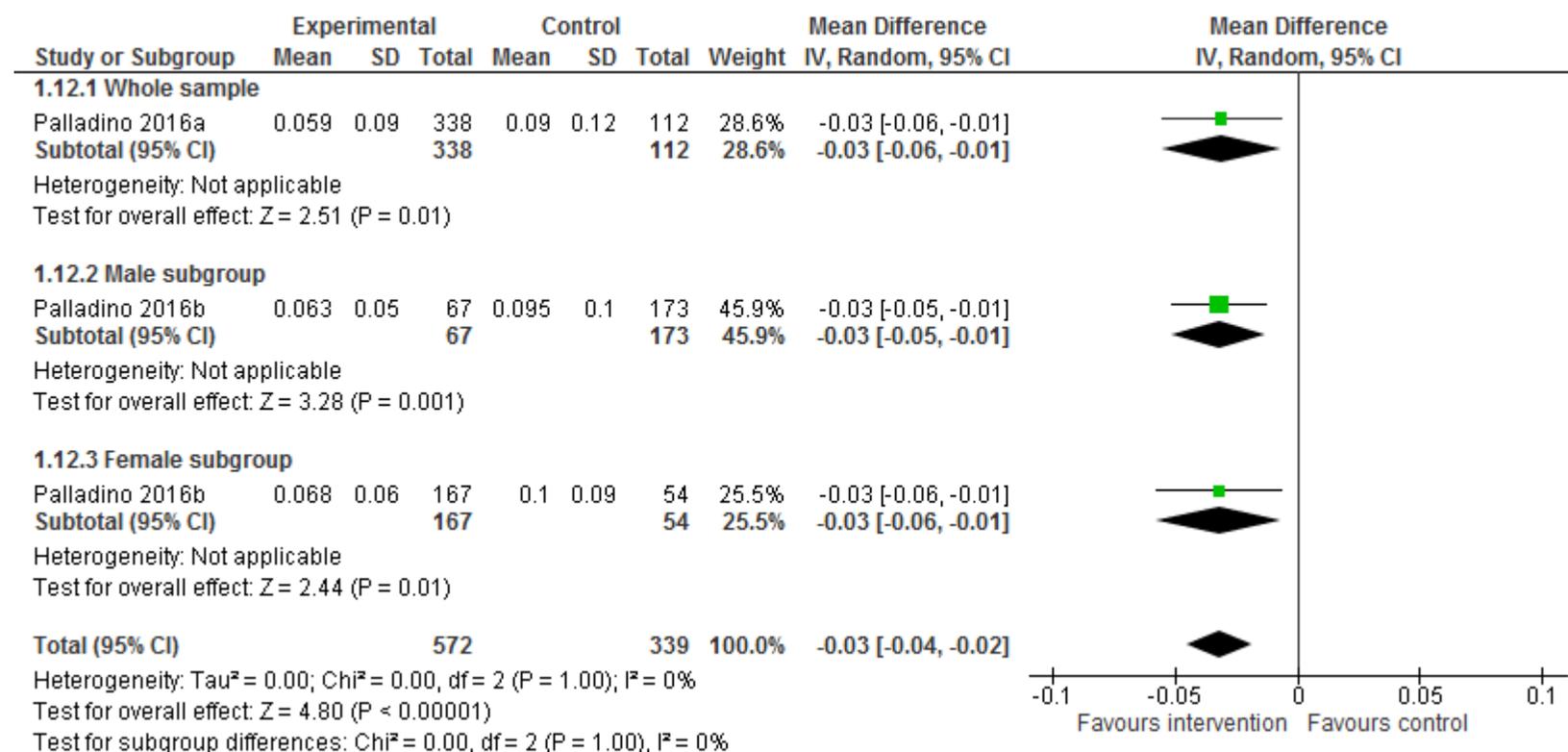
Perpetration (Bullying, aggression, violence) – NRCT



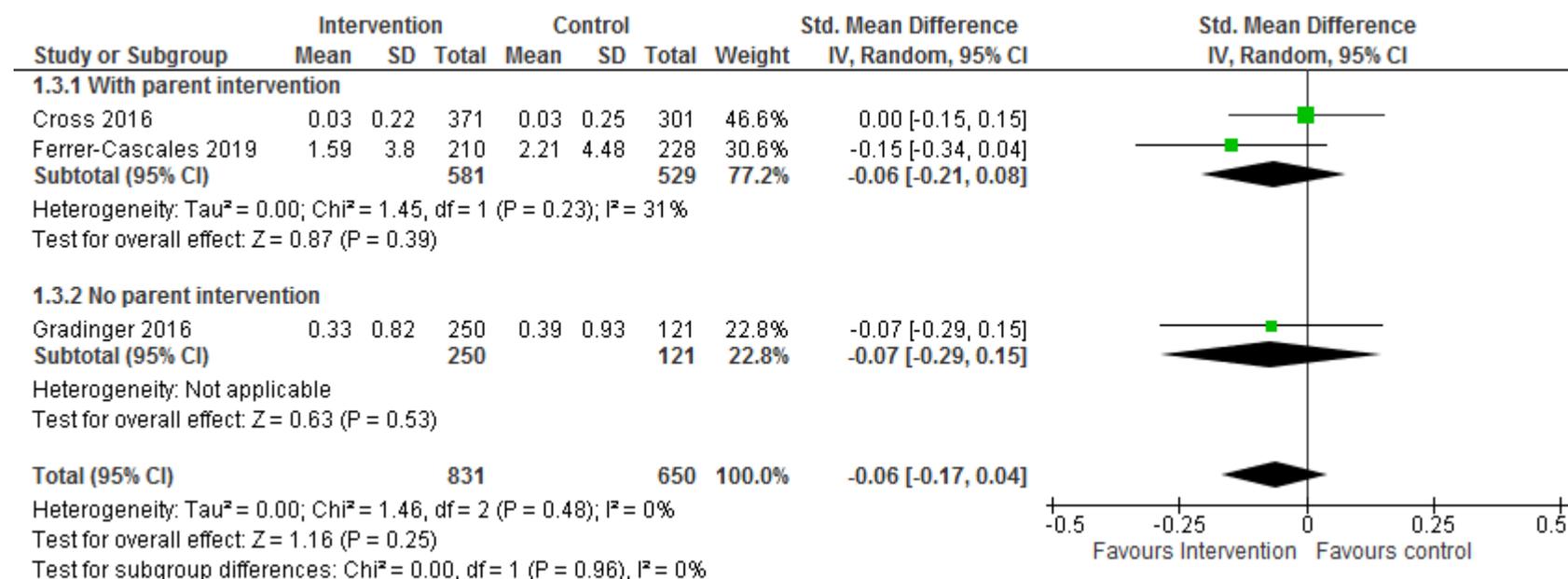
Bullying victimisation – cRCT



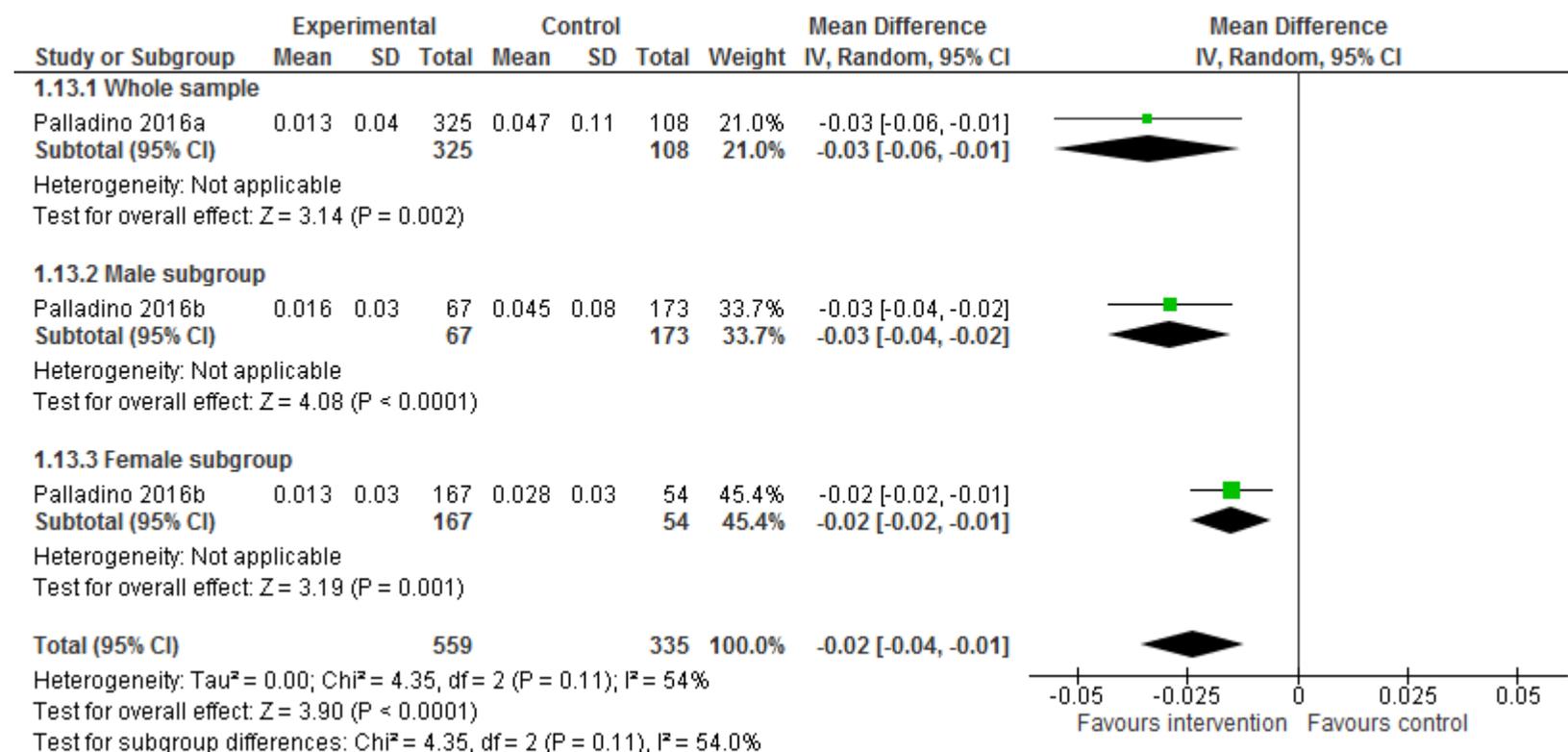
Bullying victimisation - NRCT



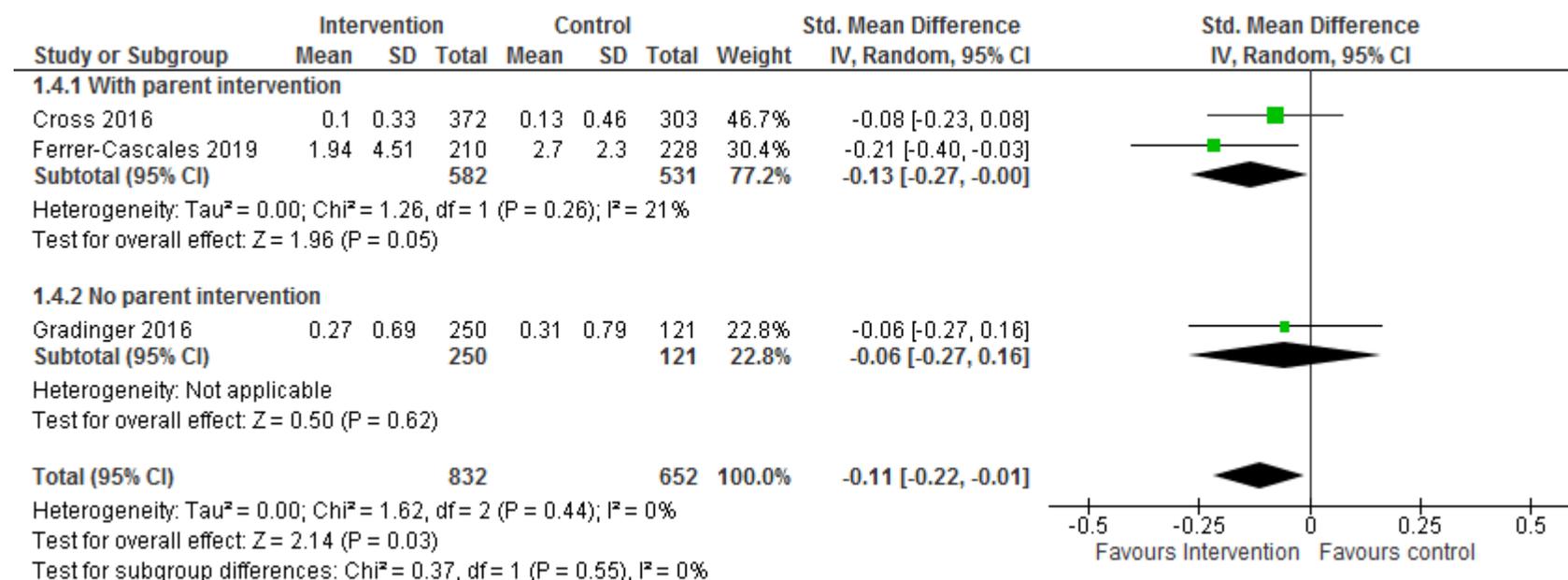
Cyberbullying perpetration - cRCT



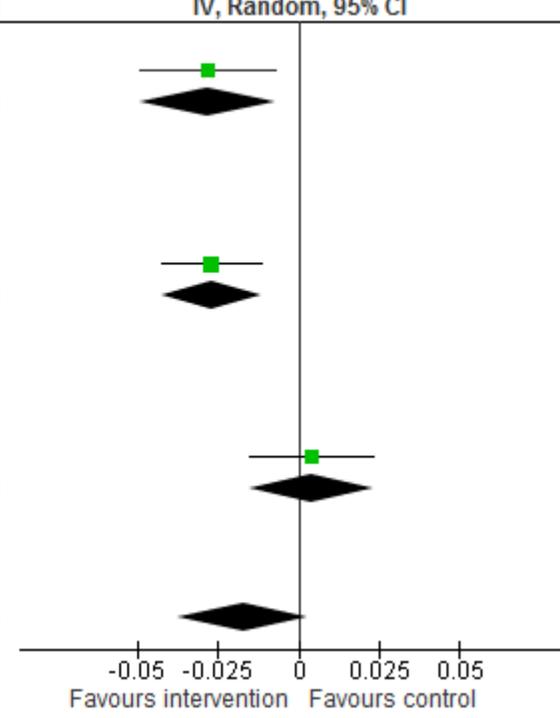
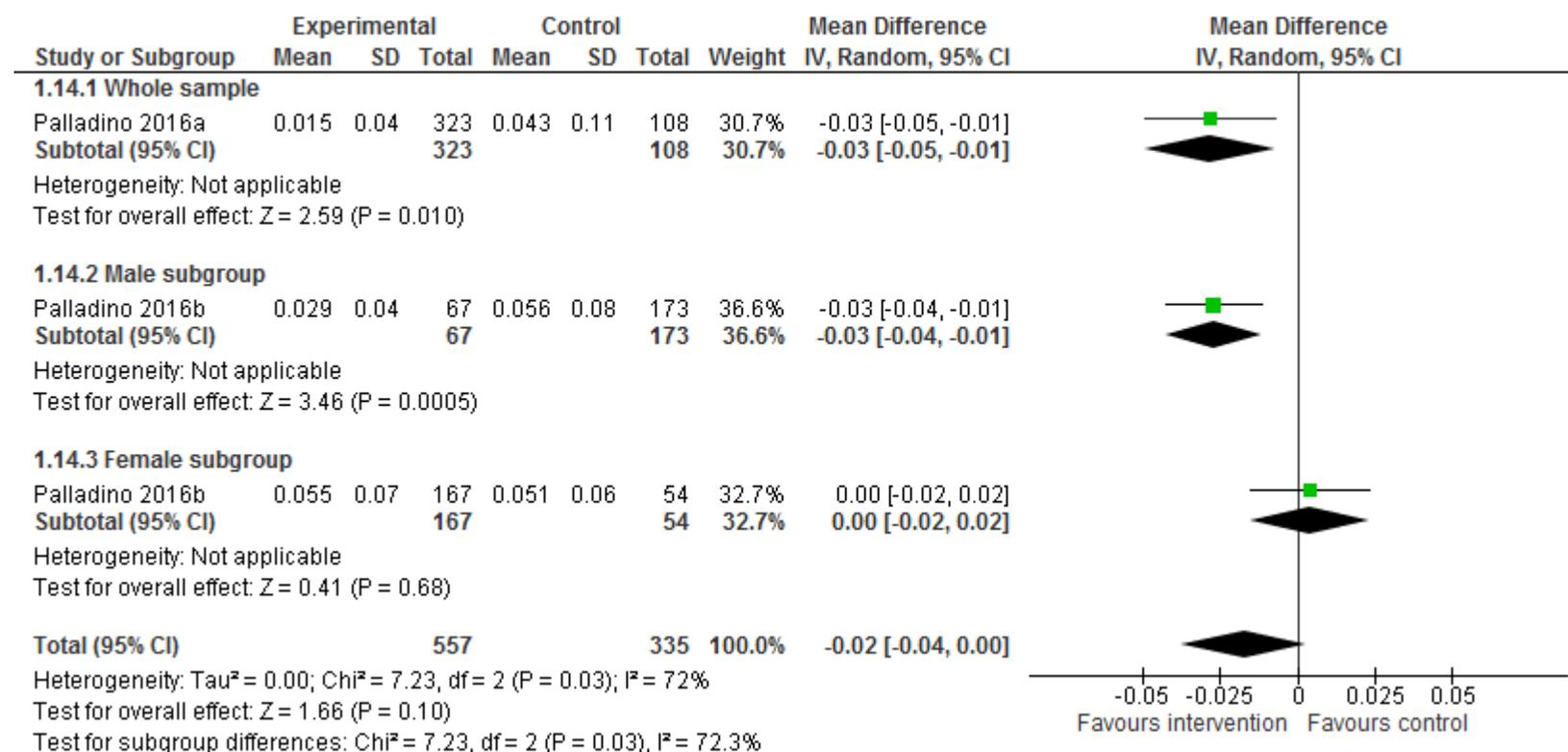
Cyberbullying perpetration - NRCT



Cyberbullying victimisation - cRCT



Cyberbullying victimisation - NRCT

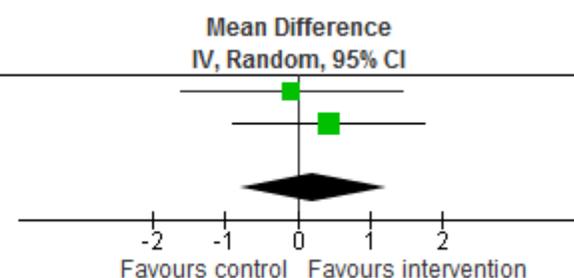


E.2.2.2 Outcome: Emotional distress

Emotional wellbeing

Study or Subgroup	Intervention			Control			Weight	Mean Difference IV, Random, 95% CI
	Mean	SD	Total	Mean	SD	Total		
Bonell 2015	24.13	5.01	84	24.21	5.18	84	42.5%	-0.08 [-1.62, 1.46]
Bonell 2018	23.32	9.07	360	22.88	10.56	488	57.5%	0.44 [-0.89, 1.77]
Total (95% CI)			444			572	100.0%	0.22 [-0.79, 1.22]

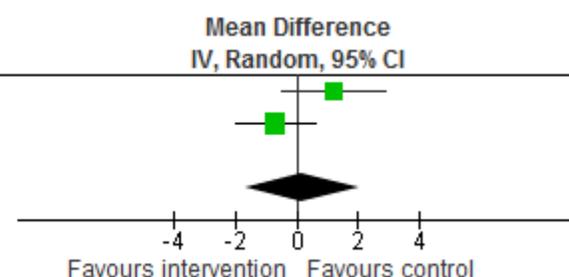
Heterogeneity: Tau² = 0.00; Chi² = 0.25, df = 1 (P = 0.62); I² = 0%
Test for overall effect: Z = 0.43 (P = 0.67)



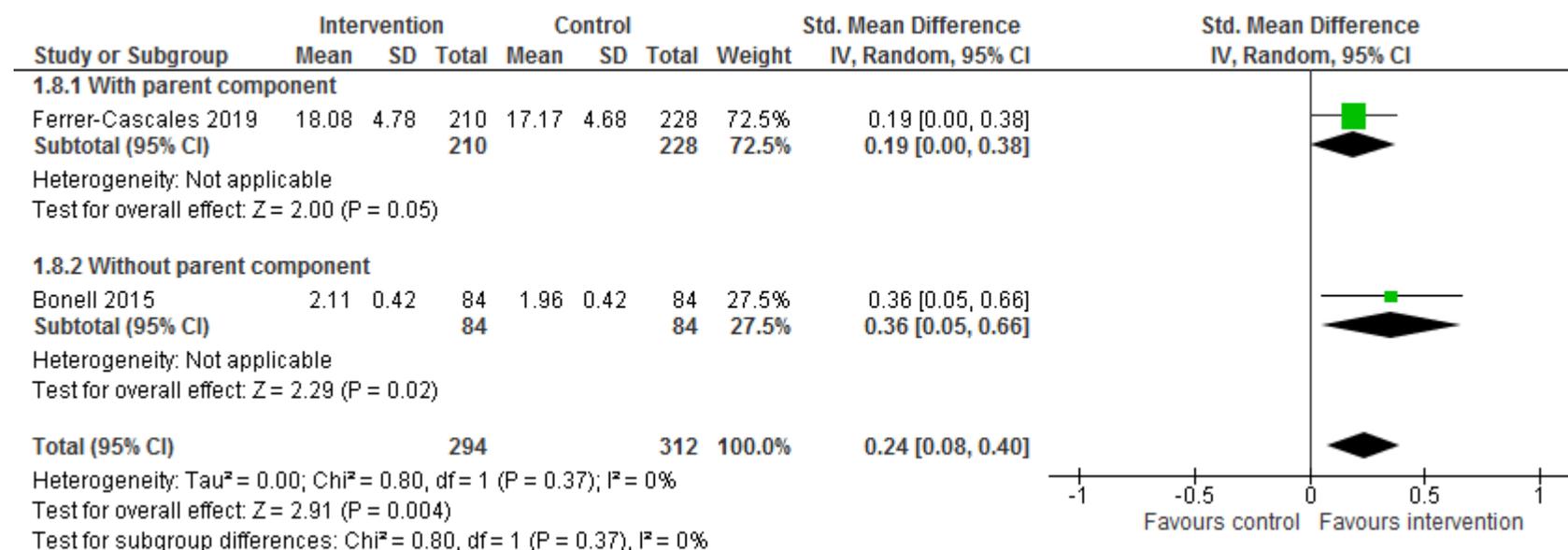
Psychological problems

Study or Subgroup	Intervention			Control			Weight	Mean Difference IV, Random, 95% CI
	Mean	SD	Total	Mean	SD	Total		
Bonell 2015	10.68	5.68	84	9.47	5.42	84	46.1%	1.21 [-0.47, 2.89]
Bonell 2018	11.51	9.46	360	12.2	10	488	53.9%	-0.69 [-2.01, 0.63]
Total (95% CI)			444			572	100.0%	0.19 [-1.67, 2.04]

Heterogeneity: Tau² = 1.21; Chi² = 3.04, df = 1 (P = 0.08); I² = 67%
Test for overall effect: Z = 0.20 (P = 0.84)



E.2.2.3 Outcome: School climate



Appendix F – GRADE tables

F.1 Primary education

F.1.1 Whole-school approaches to bullying with curriculum vs usual practice

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	WSA Bullying (curriculum)	Usual practice	Relative (95% CI)	Absolute		
Student attitudes to bullying (Brown 2011) (Better indicated by lower values)												
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	17	16	-	MD 0.09 higher (1.4 lower to 1.58 higher)	⊕○○○ VERY LOW	
Bullying victimisation (Brown 2011) (Better indicated by lower values)												
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	17	16	-	MD 0.07 lower (0.78 lower to 0.64 higher)	⊕○○○ VERY LOW	
School climate (Brown 2011) (Better indicated by lower values)												
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	17	16	-	MD 0.09 higher (0.28 lower to 0.46 higher)	⊕○○○ VERY LOW	
School connectedness (Brown 2011) (Better indicated by lower values)												
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	17	16	-	MD 0.03 higher (0.43 lower to 0.49 higher)	⊕○○○ VERY LOW	
Perpetration (Bullying, % change) (Tsiantis 2013)												

1	randomised trials	serious ⁴	no serious inconsistency ⁵	no serious indirectness	very serious ⁶	none	- ⁷	-	Not estimable ⁸	-	⊕○○○ VERY LOW	
Victims (Bullying, % change) (Tsiantis 2013)												
1	randomised trials	serious ⁴	no serious inconsistency ⁵	no serious indirectness	very serious ⁶	none	- ⁷	-	Not estimable ⁹	-	⊕○○○ VERY LOW	

¹ Study rated at high risk of bias due to no information on intervention allocation concealment, number of people who took part in the study or attrition data.

² 95% CI crosses line of no effect

⁴ No information on whether participants were aware of intervention allocation where self-reported outcomes were used

⁵ Single study

⁶ Not possible to calculate effect size or 95% CI as study does not report the number of participants.

⁷ Not reported

⁸ Reported as %change in WSA - 55.6% and in control as -15.4%. Classed by paper as significant.

⁹ Reported as % change in WSA -55.4% and in control as -23.3%. Reported as significant by paper

F.1.2 Whole-school approaches to bullying curriculum plus targeted interventions vs usual practice

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	WSA Bullying (curriculum plus targeted)	Usual	Relative (95% CI)	Absolute		
Bullying perpetration (primary school) (Better indicated by lower values) (Karna 2011b, Karna 2013, Nocentini 2016)												
3	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	1955	1903	-	SMD 0.13 lower (0.19 to 0.06 lower)	⊕⊕○○ LOW	
Bullying perpetration (primary school) (Axford 2020)												
1	randomised trials	very serious ²	NA ³	no serious indirectness	serious ⁴	none	NR/1588	NR/1892	OR 0.82 (0.61 to 1.28)	- ⁵	⊕○○○ VERY LOW	
Bullying victimisation (primary school) (Better indicated by lower values) (Karna 2011b, Karna 2013, Nocentini 2016)												

3	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	1339	1305	-	SMD 0.18 lower (0.29 to 0.08 lower)	⊕⊕⊕⊕ LOW	
Well-being at school (Better indicated by lower values) (Karna 2011b)												
1	randomised trials	Serious ²	no serious inconsistency	no serious indirectness	no serious imprecision	none	4201	3965	-	MD 0.12 higher (0.08 to 0.16 higher)	⊕⊕⊕⊕ MODERATE	
School attendance (primary school) (Axford 2020)												
1	randomised trials	very serious ²	NA ³	no serious indirectness	serious ⁷	none	NR/1588	NR/1892	RR 1.04 (0.95 to 1.14)	-. ⁵	⊕⊕⊕⊕ VERY LOW	
Problem behaviour in common school areas (primary school) (Sorlie 2015) (Better indicated by lower values)												
1	observational studies	Serious ⁹	NA ³	no serious indirectness	very serious ¹⁰	none	0	-	-	pre post change 1.51 higher (0 to 0 higher) ¹¹	⊕⊕⊕⊕ VERY LOW	
Problem behaviour in classroom (primary school) (Sorlie 2015) (Better indicated by higher values)												
1	observational studies	serious ⁹	NA ³	no serious indirectness	very serious ¹⁰	none	0	-	-	pre post change 1.14 higher (0 to 0 higher) ¹²	⊕⊕⊕⊕ VERY LOW	
School climate (primary school) (Sorlie 2015) (Better indicated by higher values)												
1	observational studies	serious ⁹	NA ³	no serious indirectness	very serious ¹⁰	none	0	-	-	pre post change 0.1 higher (0 to 0 higher) ¹²	⊕⊕⊕⊕ VERY LOW	

¹ Not clear if the participants were aware of the intervention allocation. One study included 31 schools that were not randomised to the intervention.

² Downgraded twice for high attrition and self-reported outcomes

³ Not applicable as single study

⁴ Downgraded once for crossing one MID

⁵ Not estimable due to lack of event data

⁷ 95% CI crosses line of no effect

⁸ Not clear if participants were aware of intervention allocation

⁹ Study is NRCT so will start at low confidence

¹⁰ Unable to calculate as numbers of participants and confidence intervals not reported

¹¹ Reported as statistically significant

¹² Reported as not significant

F.1.3 Whole-school approaches to bullying without curriculum vs usual practice

Quality assessment	No of patients	Effect	Quality	Importance
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No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	WSA Bullying (no curriculum)	Usual practice	Relative (95% CI)	Absolute		
Never been hit/pushed (primary school) (Ward 2013)												
1	randomised trials	very serious ^{1,2}	no serious inconsistency ³	no serious indirectness	very serious ⁴	none	-	-	OR 0.92 (0 to 0) ⁴	-	⊕○○○ VERY LOW	
								0%		-		
Never experienced rumours (primary school) (Ward 2013)												
1	randomised trials	very serious ^{1,2}	no serious inconsistency ³	no serious indirectness	very serious ⁴	none	-	-	OR 1.01 (0 to 0) ⁴	-	⊕○○○ VERY LOW	
								0%		-		
Suspension (primary school) (Ward 2013)												
1	randomised trials	very serious ^{1,2}	no serious inconsistency ³	no serious indirectness	very serious ⁴	none	- ⁵	-	OR 0.78 (0 to 0) ⁴	-	⊕○○○ VERY LOW	
								0%		-		

¹ Not clear if participants were aware of intervention allocation

² Potential for contamination identified by study authors

³ Single study

⁴ No confidence intervals reported

⁵ Not reported

F.1.4 Whole-school approaches to social and emotional skills vs usual practice

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	WSA Social emotional skills	Usual	Relative (95% CI)	Absolute		
Cooperation - Whole sample (Better indicated by lower values) (Kiviruusu 2016)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	1985	1591	-	MD 0.02 lower (0.23 lower to 0.19 higher)	⊕○○○ LOW	
Cooperation - Male subgroup (Better indicated by lower values) (Kiviruusu 2016)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	987	744	-	MD 0.1 lower (0.39 lower to 0.19 higher)	⊕○○○ LOW	
Cooperation - Female subgroup (Better indicated by lower values) (Kiviruusu 2016)												

1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	998	847	-	MD 0.15 higher (0.13 lower to 0.43 higher)	⊕⊕⊕⊕ LOW	
Empathy - Whole sample (Better indicated by lower values) (Kiviruusu 2016)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	1985	1591	-	MD 0.03 lower (0.15 lower to 0.09 higher)	⊕⊕⊕⊕ LOW	
Empathy - Male subgroup (Better indicated by lower values) (Kiviruusu 2016)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	987	744	-	MD 0.13 lower (0.31 lower to 0.05 higher)	⊕⊕⊕⊕ LOW	
Empathy - Female subgroup (Better indicated by lower values) (Kiviruusu 2016)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	998	847	-	MD 0.12 higher (0.04 lower to 0.28 higher)	⊕⊕⊕⊕ LOW	
SDQ total difficulties - Whole sample (Better indicated by lower values) (Kiviruusu 2016)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	1985	1591	-	MD 0.02 lower (0.38 lower to 0.34 higher)	⊕⊕⊕⊕ LOW	
SDQ total difficulties - Male subgroup (Better indicated by lower values) (Kiviruusu 2016)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	987	744	-	MD 0.58 higher (0.02 to 1.14 higher)	⊕⊕⊕⊕ MODERATE	
SDQ total difficulties - Female subgroup (Better indicated by lower values) (Kiviruusu 2016)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	998	847	-	MD 0.24 lower (0.67 lower to 0.19 higher)	⊕⊕⊕⊕ LOW	
SDQ prosocial - Whole sample (Better indicated by lower values) (Kiviruusu 2016)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	1985	1591	-	MD 0.25 higher (0.11 lower to 0.61 higher)	⊕⊕⊕⊕ LOW	
SDQ prosocial - Male subgroup (Better indicated by lower values) (Kiviruusu 2016)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	987	744	-	MD 0.08 lower (0.31 lower to 0.15 higher)	⊕⊕⊕⊕ LOW	

SDQ prosocial - Female subgroup (Better indicated by lower values) (Kiviruusu 2016)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	998	847	-	MD 0.09 lower (0.28 lower to 0.1 higher)	⊕⊕⊕⊕ LOW	

¹ Not clear if participants were aware of intervention allocation

² 95% CI crosses line of no effect

F.2 Secondary education

F.2.1 Whole-school approaches to bullying with curriculum vs usual practice

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	WSA Bullying (curriculum)	Usual practice	Relative (95% CI)	Absolute		
Perpetration (Bullying, aggression, violence) - No parent intervention (Better indicated by lower values) (Bonell 2015, Bonell 2018, Silvia 2011)												
3	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	2209	2519	-	SMD 0.02 higher (0.03 lower to 0.08 higher)	⊕⊕⊕⊕ LOW	
Perpetration (Bullying, aggression, violence) - With parent intervention (Better indicated by lower values) (Ferrer-Cascales 2019)												
1	randomised trials	serious ³	no serious inconsistency	no serious indirectness	no serious imprecision	none	349	134	-	MD 1.43 lower (2.55 lower to 0.31 lower)	⊕⊕⊕⊕ MODERATE	
Victimisation - No parent intervention (Better indicated by lower values) (Bonell 2015, Bonell 2018, Silvia 2011)												
3	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	2616	2967	-	SMD 0.12 lower (0.41 lower to 0.17 higher)	⊕⊕⊕⊕ LOW	
Victimisation - With parent intervention (Better indicated by lower values) (Ferrer-Cascales 2019)												

1	randomised trials	serious ³	no serious inconsistency	no serious indirectness	no serious imprecision	none	210	228	-	MD 0.71 lower (1.30 to 0.12 lower)	⊕⊕⊕⊕ MODERATE	
Cyberbullying perpetration - With parent intervention (Better indicated by lower values) (Cross 2016, Ferrer-Cascales 2019)												
2	randomised trials	serious ⁴	no serious inconsistency	no serious indirectness	serious ²	none	581	529	-	SMD 0.06 lower (0.21 lower to 0.08 higher)	⊕⊕⊕⊕ LOW	
Cyberbullying perpetration - No parent intervention (Better indicated by lower values) (Grading 2016)												
1	randomised trials	serious ⁴	no serious inconsistency	no serious indirectness	serious ²	none	250	121	-	MD 0.06 lower (0.25 lower to 0.08 higher)	⊕⊕⊕⊕ LOW	
Cyberbullying victimisation - With parent intervention (Better indicated by lower values) (Cross 2016, Ferrer-Cascales 2019)												
2	randomised trials	serious ⁴	no serious inconsistency	no serious indirectness	no serious imprecision	none	582	531	-	SMD 0.13 lower (0.27 lower to 0 higher)	⊕⊕⊕⊕ MODERATE	
Cyberbullying victimisation - No parent intervention (Better indicated by lower values) (Grading 2016)												
1	randomised trials	serious ⁴	no serious inconsistency	no serious indirectness	serious ²	none	250	121	-	MD 0.04 lower (0.20 lower to 0.12 higher)	⊕⊕⊕⊕ LOW	
Emotional wellbeing (Better indicated by lower values) (Bonell 2015, Bonell 2018)												
2	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ²	none	444	572	-	MD 0.22 higher (0.79 lower to 1.22 higher)	⊕⊕⊕⊕ MODERATE	
Psychological problems (Better indicated by lower values) (Bonell 2015, Bonell 2018)												
2	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ²	none	444	572	-	MD 0.19 higher (1.67 lower to 2.04 higher)	⊕⊕⊕⊕ MODERATE	
Quality of Life (Better indicated by lower values) (Bonell 2015)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ²	none	84	84	-	MD 2.18 lower (6 lower to 1.64 higher)	⊕⊕⊕⊕ MODERATE	
School climate - With parent component (Better indicated by lower values) (Ferrer-Cascales 2019)												

1	randomised trials	serious ⁴	no serious inconsistency	no serious indirectness	no serious imprecision	none	210	228	-	MD 0.91 higher (0.02 to 1.80 higher)	⊕⊕⊕⊕ MODERATE	
School climate - Without parent component (Better indicated by lower values) (Bonell 2015)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	84	84	-	MD 0.15 higher (0.02 to 0.28 higher)	⊕⊕⊕⊕ HIGH	
School exclusion (Bonell 2015)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ²	none	32/508 (6.3%)	33/509 (6.5%)	RR 0.97 (0.61 to 1.56)	2 fewer per 1000 (from 25 fewer to 36 more)	⊕⊕⊕⊕ MODERATE	
								6.5%		2 fewer per 1000 (from 25 fewer to 36 more)		
Truancy (Bonell 2015)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ²	none	53/508 (10.4%)	48/509 (9.4%)	RR 1.11 (0.76 to 1.6)	10 more per 1000 (from 23 fewer to 57 more)	⊕⊕⊕⊕ MODERATE	
								9.4%		10 more per 1000 (from 23 fewer to 56 more)		
Perpetration (Bullying, NRCT) - Whole sample (Trial 1) (Better indicated by lower values) (Palladino 2016a)												
1	randomised trials ⁵	very serious ⁶	no serious inconsistency	no serious indirectness	serious ²	none	330	110	-	MD 0 higher (0.02 lower to 0.03 higher)	⊕○○○ VERY LOW	
Perpetration (Bullying, NRCT) - Male subgroup (Trial 2) (Better indicated by lower values) (Palladino 2016b)												
1	randomised trials ⁵	very serious ⁶	no serious inconsistency	no serious indirectness	no serious imprecision	none	67	173	-	MD 0.06 lower (0.08 to 0.04 lower)	⊕⊕○○ LOW	
Perpetration (Bullying, NRCT) - Female subgroup (Trial 2) (Better indicated by lower values) (Palladino 2016b)												
1	randomised trials ⁵	very serious ⁶	no serious inconsistency	no serious indirectness	no serious imprecision	none	167	54	-	MD 0.02 lower (0.04 lower to 0 higher)	⊕⊕○○ LOW	
Victimisation (bullying, NRCT) - Whole sample (Trial 1) (Better indicated by lower values) (Palladino 2016a)												

1	randomised trials ⁵	very serious ⁶	no serious inconsistency	no serious indirectness	no serious imprecision	none	338	112	-	MD 0.03 lower (0.06 to 0.01 lower)	⊕⊕⊕ LOW	
Victimisation (bullying, NRCT) - Male subgroup (Trial 2) (Better indicated by lower values) (Palladino 2016b)												
1	randomised trials ⁵	very serious ⁶	no serious inconsistency	no serious indirectness	no serious imprecision	none	67	173	-	MD 0.03 lower (0.05 to 0.01 lower)	⊕⊕⊕ LOW	
Victimisation (bullying, NRCT) - Female subgroup (Trial 2) (Better indicated by lower values) (Palladino 2016b)												
1	randomised trials ⁵	very serious ⁶	no serious inconsistency	no serious indirectness	no serious imprecision	none	167	54	-	MD 0.03 lower (0.06 to 0.01 lower)	⊕⊕⊕ LOW	
Cyberbullying (NRCT) - Whole sample (Trial 1) (Better indicated by lower values) (Palladino 2016a)												
1	randomised trials ⁵	very serious ⁶	no serious inconsistency	no serious indirectness	no serious imprecision	none	325	108	-	MD 0.03 lower (0.06 to 0.01 lower)	⊕⊕⊕ LOW	
Cyberbullying (NRCT) - Male subgroup (Trial 2) (Better indicated by lower values) (Palladino 2016b)												
1	randomised trials ⁵	very serious ⁶	no serious inconsistency	no serious indirectness	no serious imprecision	none	67	173	-	MD 0.03 lower (0.04 to 0.02 lower)	⊕⊕⊕ LOW	
Cyberbullying (NRCT) - Female subgroup (Trial 2) (Better indicated by lower values) (Palladino 2016b)												
1	randomised trials ⁵	very serious ⁶	no serious inconsistency	no serious indirectness	no serious imprecision	none	167	54	-	MD 0.02 lower (0.02 to 0.01 lower)	⊕⊕⊕ LOW	
Cyberbullying victimisation (NRCT) - Whole sample (Trial 1) (Better indicated by lower values) (Palladino 2016a)												
1	randomised trials ⁵	very serious ⁶	no serious inconsistency	no serious indirectness	no serious imprecision	none	323	108	-	MD 0.03 lower (0.05 to 0.01 lower)	⊕⊕⊕ LOW	
Cyberbullying victimisation (NRCT) - Male subgroup (Trial 2) (Better indicated by lower values) (Palladino 2016b)												
1	randomised trials ⁵	very serious ⁶	no serious inconsistency	no serious indirectness	no serious imprecision	none	67	173	-	MD 0.03 lower (0.04 to 0.01 lower)	⊕⊕⊕ LOW	
Cyberbullying victimisation (NRCT) - Female subgroup (Trial 2) (Better indicated by lower values) (Palladino 2016b)												
1	randomised trials ⁵	very serious ⁶	no serious inconsistency	no serious indirectness	serious ²	none	167	54	-	MD 0 higher (0.02 lower to 0.02 higher)	⊕ VERY LOW	

¹ Some concerns identified in the risk of bias assessments

² 95% CI crosses line of no effect

³ No information on whether participants were aware of intervention allocation where self-reported outcomes were used

⁴ At least one study reported high levels of attrition

⁵ NRCT

⁶ Serious concerns identified in the risk of bias assessment. Study design was NRCT and was downgraded for methodological concerns.

F.2.2 Whole-school approaches to bullying including curriculum plus targeted interventions vs usual practice

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	WSA Bullying (curriculum plus targeted)	Usual	Relative (95% CI)	Absolute		
Bullying perpetration (secondary school) (Better indicated by lower values) (Karna 2013, Nocentini 2016)												
2	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	1303	995	-	SMD 0.1 lower (0.18 to 0.02 lower)	⊕⊕⊕⊕ LOW	
Bullying victimisation (secondary school) (Better indicated by lower values) (Karna 2013, Nocentini 2016)												
2	randomised trials	very serious ¹	no serious inconsistency	serious ²	serious ³	none	1303	995	-	SMD 0.08 lower (0.29 lower to 0.13 higher)	⊕⊕⊕⊕ VERY LOW	
Empathy, self-reported (secondary school) (Acosta 2019) (Better indicated by higher values)												
1	randomised trials	no serious risk of bias	NA ⁴	no serious indirectness	serious ³	none	1794	977	-	SMD 0.51 higher (0.62 lower to 1.61 higher) ⁵	⊕⊕⊕⊕ MODERATE	
Physical bullying (secondary school) (Acosta 2019)												
1	randomised trials	no serious risk of bias	NA ⁴	no serious indirectness	very serious ⁶	none	1794	977	OR 1.18 95% CI 0.72 to 1.93	-	⊕⊕⊕⊕ LOW	

Emotional bullying (secondary school) (Acosta 2019)												
1	randomised trials	no serious risk of bias	NA ⁴	no serious indirectness	very serious ⁶	none	1794	977	OR 1.06 95% CI 0.75 to 1.51	-	⊕⊕⊕⊕ LOW	
Cyberbullying (secondary school) (Acosta 2019)												
1	randomised trials	no serious risk of bias	NA ⁴	no serious indirectness	very serious ⁶	none	1794	977	OR 0.89 95% CI 0.5 to 1.59	-	⊕⊕⊕⊕ LOW	
School climate (secondary school) (Acosta 2019) (Better indicated by higher values)												
1	randomised trials	no serious risk of bias	NA ⁴	no serious indirectness	serious ³	none	1794	977	-	SMD 0.64 higher (0.5 lower to 1.75 higher) ⁵	⊕⊕⊕⊕ MODERATE	
Cyberbullying victimisation; lower values are better; Subgroup: Cyber victims (del Rey 2016)												
1	Observational study	Very serious ⁷	N/A ⁴	No serious indirectness	Very serious ⁸	None	103 Mean 0.12	85 Mean 0.27	Reported as significant	-	⊕⊕⊕⊕ VERY LOW	
Cyberbullying victimisation; lower values are better; Subgroup: Cyber bullies/victims (del Rey 2016)												
1	Observational study	Very serious ⁷	N/A ⁴	No serious indirectness	Very serious ⁸	None	104 Mean 0.18	55 Mean 0.35	Reported as significant	-	⊕⊕⊕⊕ VERY LOW	
Cyberbullying aggression; lower values are better; Subgroup: Cyber bullies (del Rey 2016)												
1	Observational study	Very serious ⁷	N/A ⁴	No serious indirectness	Very serious ⁸	None	36 Mean 0.16	26 Mean 0.18	Reported as non-significant	-	⊕⊕⊕⊕ VERY LOW	
Cyberbullying aggression; lower values are better; Subgroup: Cyber bullies/victims (del Rey 2016)												
1	Observational study	Very serious ⁷	N/A ⁴	No serious indirectness	Very serious ⁸	None	104 Mean 0.16	55 Mean 0.39	Reported as significant	-	⊕⊕⊕⊕ VERY LOW	

- ¹ Not clear if the participants were aware of the intervention allocation. One study included 31 schools that were not randomised to the intervention.
² I² > 50%
³ 95% CI crosses line of no effect
⁴ Not applicable as single study
⁵ SMD as reported by paper
⁶ Downgraded twice for crossing two MIDAs
⁷ Not clear if outcome assessors (participants) were aware of intervention allocation where self-reported outcomes were used. No information on accounting for confounding variables
⁸ Standard deviation not reported so not possible to calculate 95% CI

F.2.3 Whole-school approaches to bullying without curriculum vs usual practice

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	WSA Bullying (no curriculum)	Usual practice	Relative (95% CI)	Absolute		
Conduct problems (Better indicated by lower values) (Smolkowski 2017)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	4331	4401	-	MD 0.01 lower (0.03 lower to 0.01 higher)	⊕⊕⊕⊕ LOW	
Family conflict (Better indicated by lower values) (Smolkowski 2017)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	4561	4553	-	MD 0.09 lower (0.15 to 0.03 lower)	⊕⊕⊕⊕ MODERATE	
Emotional problems (Better indicated by lower values) (Smolkowski 2017)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	4337	4409	-	MD 0.01 lower (0.03 lower to 0.01 higher)	⊕⊕⊕⊕ LOW	
Academic outcomes - Maths (Better indicated by lower values) (Smolkowski 2017)												

1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	4459	4289	-	MD 0.4 higher (0.17 lower to 0.97 higher)	⊕⊕⊕⊕ LOW	
Academic outcomes - Reading (Better indicated by lower values) (Smolkowski 2017)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	4427	4283	-	MD 0.3 higher (0.21 lower to 0.81 higher)	⊕⊕⊕⊕ LOW	
Days absent (Better indicated by lower values) (Smolkowski 2017)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	4516	4462	-	MD 0.27 higher (0.1 lower to 0.64 higher)	⊕⊕⊕⊕ LOW	

¹ Not clear if participants were aware of intervention allocation

² 95% CI crosses line of no effect

F.2.4 Whole-school approaches to social and emotional skills vs usual practice

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	WSA Social emotional skills	Usual	Relative (95% CI)	Absolute		
Social and emotional skills (NRCT) (Better indicated by lower values) (Wigelsworth 2012)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	1802	1504	-	MD 0.51 higher (0.05 lower to 1.07 higher)	⊕⊕⊕⊕ LOW	
SDQ total difficulties (NRCT) (Better indicated by lower values) (Wigelsworth 2012)												
1	randomised trials	Serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	2455	2004	-	MD 0.55 lower (0.89 to 0.21 lower)	⊕⊕⊕⊕ MODERATE	
SDQ prosocial (NRCT) (Better indicated by lower values) (Wigelsworth 2012)												
1	randomised trials	Serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	2477	2029	-	MD 0.01 lower (0.12 lower to 0.1 higher)	⊕⊕⊕⊕ LOW	

¹ Participants were aware of intervention allocation. Study design was NRCT and was downgraded for methodological concerns.

² 95% CI crosses line of no effect

F.2.5 Whole-school approaches to promoting mental health including curriculum vs usual practice

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	WSA Promote MH (curriculum)	Usual	Relative (95% CI)	Absolute		
Mental Health (Better indicated by lower values) (Larsen 2019)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	332	227	-	MD 0.01 lower (0.15 lower to 0.13 higher)	⊕⊕○○ LOW	
Loneliness (Better indicated by lower values) (Larsen 2019)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	332	227	-	MD 0.03 lower (0.17 lower to 0.11 higher)	⊕⊕○○ LOW	

¹ Not clear if participants were aware of intervention allocation

² 95% CI crosses line of no effect

F.2.6 Whole-school approaches to promoting mental health including curriculum plus targeted interventions vs usual practice

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	WSA Promote MH (curriculum plus targeted)	Usual	Relative (95% CI)	Absolute		
Mental Health (Better indicated by lower values) (Larsen 2019)												

1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	378	214	-	MD 0.11 lower (0.25 lower to 0.03 higher)	⊕⊕○○ LOW
Loneliness (Better indicated by lower values) (Larsen 2019)											
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	378	214	-	MD 0.08 lower (0.21 lower to 0.05 higher)	⊕⊕○○ LOW

¹ Not clear if participants were aware of intervention allocation

² 95% CI crosses line of no effect

F.3 GRADE CERQual tables

F.3.1 Acceptability of whole school approaches

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
<p>Implementation of whole school approaches</p> <p>Vision for the intervention In many schools, the vision for SEAL emerged implicitly but there were some cases where explicit efforts were made to ensure that all staff contributed to this vision. The analysis of this data showed that there were a wide range of expectations for SEAL and considerable variability within schools as well as between schools. The authors concluded that there was a limited shared understanding and vision for SEAL.</p>	Humphrey 2010	<p>Minor concerns (Study with moderate risk of bias due to unclear reflexivity)</p>	<p>No concerns Finding reflects the data from study that reports on this theme.</p>	<p>Moderate concerns Limited to data from one study.</p>	<p>No concerns Study related to the views and experiences related to a whole school approach programme.</p>	<p>Moderate confidence Data from a single study and unable to check for inconsistency.</p>

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
<p>Expectations of the intervention</p> <p>Schools expected changes at the pupil level, staff level and school level following implementation of SEAL. For pupils this included improved attendance, reduction in exclusions and improved attainment of social and emotional skills.</p> <p>Staff expectations included improved social and emotional skills, changes in approaches to teaching, better management of pupil behaviour, increased communication and relationships with other members of staff, and increased job satisfaction, enjoyment, morale and attendance. At the school level, there were expectations about enhancing the ethos of the school.</p>						
<p>Curriculum materials</p> <p>Acceptability of the programme</p> <p>There was evidence that Rtime had a positive impact on children’s perceptions towards developing relationships. However, some children felt because they already knew everyone in the class they had fewer opportunities to make new friends. Teachers appreciated that the impact on the children was evident and they could clearly see the changes that Rtime was bringing about</p> <p>Acceptability of the materials</p>	<p>Hampton 2010 Humphrey 2010</p>	<p>Minor concerns (Studies with moderate risk of bias due to unclear reflexivity)</p>	<p>No concerns Finding reflects the data from study that reports on this theme.</p>	<p>No concerns Data from 2 studies and from different informants.</p>	<p>No concerns Study related to the views and experiences related to a whole school approach programme.</p>	<p>High confidence Findings were consistent across both studies.</p>

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
<p>Teachers appreciated that Rtime was easy to use and had pre-prepared resources that required minimum effort to implement. However, they identified the resources that were least useful which seemed to be because they had to be adapted for children of lower abilities or they took time to prepare.</p> <p>Schools responded positively to the guidance and materials relating to the teaching and learning element of SEAL implementation. This is perhaps because it is amongst the most 'concrete' and 'tangible' aspect of the SEAL programme</p>						
<p>Curriculum integration</p> <p>Integration into lessons</p> <p>The integration of SEAL into the curriculum varied across school with some concerns around the extent to which it had actually been implemented. SEAL was most commonly implemented in English or Drama but less so in the more rationalist subjects such as Maths and Science.</p> <p>Some teachers described not having the necessary time to adapt lessons to accommodate SEAL objectives. There were also some examples of SEAL being integrated into lessons successfully.</p> <p>Integration into the timetable</p>	Humphrey 2010	<p>Minor concerns</p> <p>(Study with moderate risk of bias due to unclear reflexivity)</p>	<p>No concerns</p> <p>Finding reflects the data from study that reports on this theme.</p>	<p>Moderate concerns</p> <p>Limited to data from one study.</p>	<p>No concerns</p> <p>Study related to the views and experiences related to a whole school approach programme.</p>	<p>Moderate confidence</p> <p>Data from a single study and unable to check for inconsistency.</p>

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
There were differences in how SEAL was delivered across schools. Discrete opportunities for learning social and emotional skills were presented as regular or occasional 'SEAL lessons', regular or occasional specific learning opportunities within other lessons (e.g. PSHE), ad-hoc use of SEAL materials, SEAL assemblies, and SEAL-themed days or weeks. There were both positive and negative opinions of the approaches						
<p>Ethos and environment</p> <p>Relationships Rtime lead teachers reported a positive impact on the relationships and friendships of children and on the perception of bullying. Teachers reported staff relationships were generally positive and reflected a sense of community after the implementation of SEAL. However, they were concerned about pupils' relationships for one another.</p> <p>School climate Teachers responded that Rtime made a positive impact on classes using the programme. Schools implementing SEAL felt that they had the necessary culture to allow SEAL to develop as intended. The presence of SEAL could be seen through wall charts and displays across all schools, even during early visits.</p>	Hampton 2010 Humphrey 2010	Minor concerns (Studies with moderate risk of bias due to unclear reflexivity)	Minor concerns Finding reflects the data from study that reports on this theme but there are some differences between studies.	No concerns Data from 2 studies and from different informants.	No concerns Study related to the views and experiences related to a whole school approach programme.	Moderate confidence Some inconsistency between studies but this could be due to the different school populations interviewed.
Targeted support approaches	Humphrey 2010	Minor concerns	No concerns	Moderate concerns	No concerns	Moderate confidence

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
Mentoring was the most commonly utilised method adopted by the school including more informal types of mentoring. These were typically in line with SEAL aims and objectives and often delivered on a 'drop in basis'.		(Study with moderate risk of bias due to unclear reflexivity)	Finding reflects the data from study that reports on this theme.	Limited to data from one study.	Study related to the views and experiences related to a whole school approach programme.	Data from a single study and unable to check for inconsistency.
Access to targeted support Most pupils indicated they had access to mental health support in schools, with those with more difficulties having accessed more help. Pupils also showed an awareness of a range of approaches available in their schools and an appreciation of the ways these could help.	Wolpert 2013	Minor concerns (Study with moderate risk of bias due to unclear reflexivity)	No concerns Finding reflects the data from study that reports on this theme.	Moderate concerns Limited to data from one study.	No concerns Study related to the views and experiences related to a whole school approach programme.	Moderate confidence Data from a single study and unable to check for inconsistency.
Parents/carers Parent involvement There was very limited evidence of schools directly involving parents/carers in their SEAL implementation. In some schools, parents were actively cited as a negative influence upon children's behaviour. Some schools were reluctant to involve parents as they felt that attempts to engage parents would not have been well received. Other schools saw parental involvement as necessary, but had decided to focus first upon	Humphrey 2010 Wolpert 2013	Minor concerns (Studies with moderate risk of bias due to unclear reflexivity)	No concerns Finding reflects the data from study that reports on this theme.	No concerns Data from 2 studies and from different informants.	No concerns Study related to the views and experiences related to a whole school approach programme.	High confidence Although there were conflicting opinions from two studies, they were from different groups of informants.

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
<p>pupils and staff, opting to 'go beyond the school' at an unspecified future date.</p> <p>Parent acceptability Parents revealed that they regarded schools as the key point of contact for concerns about mental health issues and regarded teachers as the key group to turn to when worried about their child's mental health. Parents also saw teachers as the persons most helpful in these situations. Parents were generally positive about TaMHS and particularly stressed the importance of good communication in working with schools on mental health issues for their children</p>						
<p>Student voice opportunity There was clear evidence of pupil voice across all schools involved. However, it was not always clear how much of a voice pupils were given in relation to SEAL as opposed to general matters relating to school development</p>	Humphrey 2010	Minor concerns (Study with moderate risk of bias due to unclear reflexivity)	No concerns Finding reflects the data from study that reports on this theme.	Moderate concerns Limited to data from one study.	No concerns Study related to the views and experiences related to a whole school approach programme.	Moderate confidence Data from a single study and unable to check for inconsistency.
<p>Staff development opportunities Staff in all nine schools engaged in some kind of initial CPD relating to SEAL. In most schools, this training was fairly comprehensive in terms of the range of individuals involved, with both teaching and non-teaching staff present. This initial training session tended to be an INSET session delivered</p>	Humphrey 2010	Minor concerns (Study with moderate risk of bias due to unclear reflexivity)	No concerns Finding reflects the data from study that reports on this theme.	Moderate concerns Limited to data from one study.	No concerns Study related to the views and experiences related to a whole school	Moderate confidence Data from a single study and unable to check for inconsistency.

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
by or with Local Authority consultants. However, more focused, in-depth follow-up training was not given high priority in many schools.					approach programme.	
<p>Leadership and management</p> <p>School buy-in SEAL needed to be seen as a school priority embraced by the headteacher and school management team. This was particularly the case for the headteacher role. It was also considered crucial to have the support of the management team to generate any action.</p> <p>Policy Schools varied in their policy development. Some schools did not show evidence of SEAL in any policy but reported intentions to include it at a later date. Other schools provided clear evidence of the integration of SEAL aims, objectives and principles into policy documentation. Some schools also felt that their existing policies were already in line with SEAL principles.</p>	Humphrey 2010	Minor concerns (Study with moderate risk of bias due to unclear reflexivity)	No concerns Finding reflects the data from study that reports on this theme.	Moderate concerns Limited to data from one study.	No concerns Study related to the views and experiences related to a whole school approach programme.	Moderate confidence Data from a single study and unable to check for inconsistency.

F.3.2 Barriers and facilitators to whole school approaches

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
School staff: Barriers <ul style="list-style-type: none"> Lack of staff awareness of the programme is a stumbling block. Where initial staff buy-in is weak, the amount of staff involved in the initial implementation suffers which leads to SEAL groups working in isolation, which makes effecting whole-school change a difficult process. Where there are staff members who lack emotional intelligence or who have limited self-awareness skills could be a barrier to implementation. Persuading resistant members of staff to become involved in implementing SEAL becomes a challenge especially when considering other pressures such as workload. Some staff also are less willing to change especially those with established routines. 	Humphrey 2010	Minor concerns (Study with moderate risk of bias due to unclear reflexivity)	No concerns Finding reflects the data from study that reports on this theme.	Moderate concerns Limited to data from one study.	No concerns Study related to the views and experiences related to a whole school approach programme.	Moderate confidence Data from a single study and unable to check for inconsistency.
School staff: Facilitators <ul style="list-style-type: none"> Where there are high levels of staff involvement from the outset the implementation appeared to be greatly facilitated. Where staff members were recognized as being emotionally literate, the benefits were seen not just in the context of SEAL implementation, but more generally in effective classroom management. 	Humphrey 2010 Wolpert 2013	Minor concerns (Studies with moderate risk of bias due to unclear reflexivity)	No concerns Finding reflects the data from studies that report on this theme.	No concerns Data from 2 studies	No concerns Studies related to the views and experiences related to a whole school approach programme.	High confidence Findings were consistent across both studies.

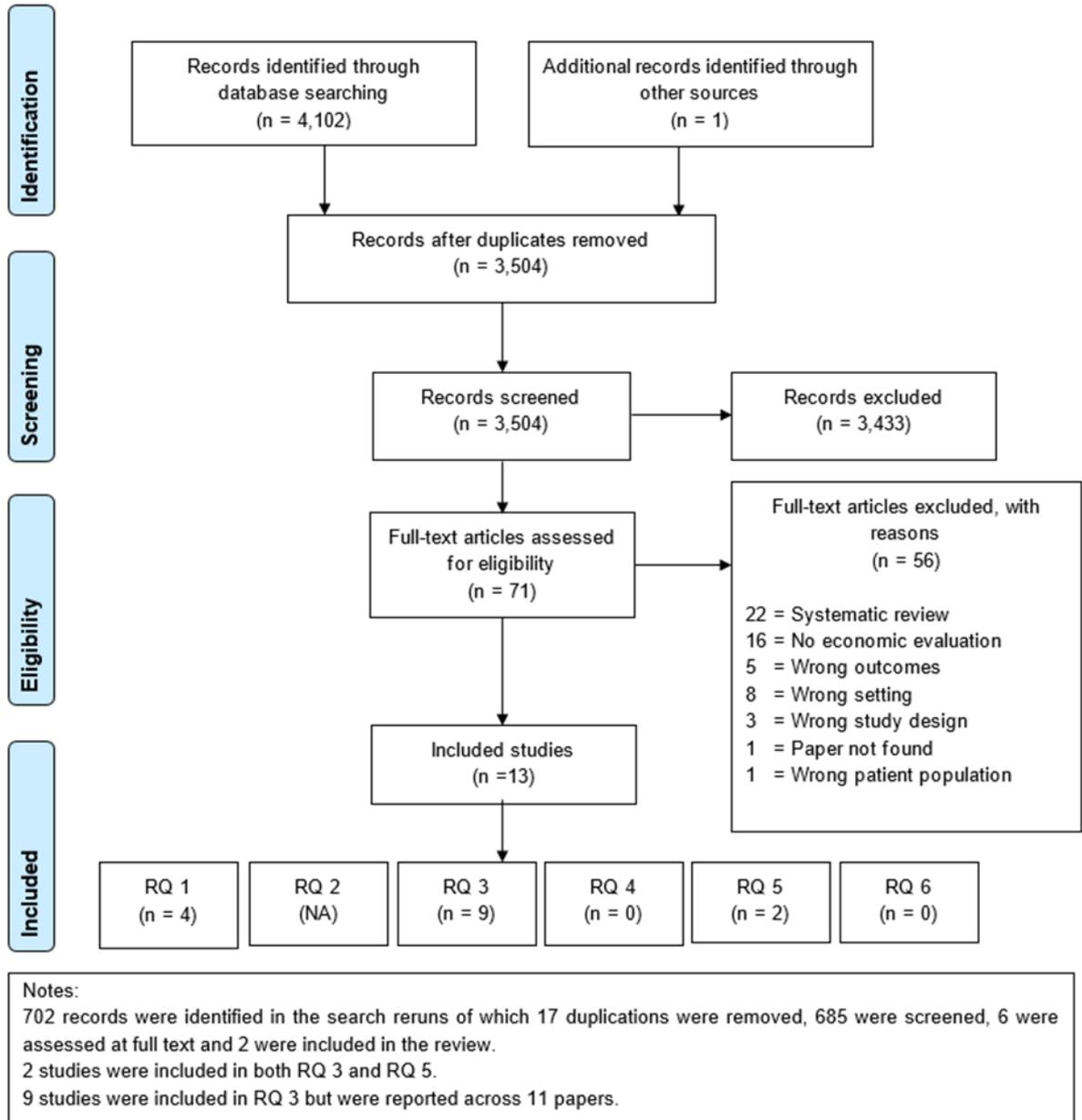
Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
<ul style="list-style-type: none"> One of the key facilitators identified included having specialist mental health workers based in schools. 						
<p>Implementation: Barriers</p> <ul style="list-style-type: none"> Support needs to be substantial, consistent and offered on an ongoing basis. Some schools found that Local authority support significantly reduced over time because of restructuring or change in priorities. Where leadership support is limited or absent, the implementation of the programme can suffer. If the programme is given the 'stamp of approval' by the leadership team, it means it will be taken seriously by other members of staff. The way in which SEAL is presented to staff clearly impacts upon how easily they feel it can be integrated into other aspects of the school and/or curriculum. Where it is presented as a separate initiative, there are often discussions around time constraints and priorities. A lack of time to engage in implementation interacts strongly with the resources allocated for different kinds of activity. Teachers and headteachers reported they were reluctant to change whole-school policy, which may have been exacerbated by an upcoming Ofsted inspection. 	Humphrey 2010 O'Hare 2018	Minor concerns (Study with moderate risk of bias due to unclear reflexivity)	No concerns Finding reflects the data from study that reports on this theme.	Moderate concerns Limited to data from one study.	No concerns Study related to the views and experiences related to a whole school approach programme.	Moderate confidence Data from a single study and unable to check for inconsistency.

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
<p>Implementation: Facilitators</p> <ul style="list-style-type: none"> • Training was an element of the LA support that was considered useful as long as it was provided on a consistent and continuous basis. • Some teachers could draw links between aspects of SEAL and various ongoing or new initiatives, preferring to see them as related strands of activity that were all designed to lead toward the main goals outlined in Every Child Matters. • There was positive feedback on integrating the programme aims with existing school initiatives. For example bringing all mental health support activities into the school setting, building on previous initiatives and being sensitive to the existing context in terms of understanding what has already worked, what issues need addressing and what current ways of working look like. • School staff identified prioritisation in the curriculum and effective networks of communication as effective facilitators to intervention implementation. • Leadership engagement was fundamental to successful implementation, including formal appointment of intervention implementation leaders. • Maintaining consistency across years and classes in terms of which topics they are 	<p>Humphrey 2010 Wolpert 2013 Hudson 2020 O'Hare 2018</p>	<p>Minor concerns (Studies with moderate risk of bias due to unclear reflexivity)</p>	<p>No concerns Finding reflects the data from studies that report on this theme.</p>	<p>No concerns Data from 2 studies</p>	<p>No concerns Studies related to the views and experiences related to a whole school approach programme.</p>	<p>High confidence Findings were consistent across both studies.</p>

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
covering at a given time improved best practice.						
<p>Programme characteristics: Barriers</p> <ul style="list-style-type: none"> Some teachers found that the objectives in some of the materials available on the programme website were not feasible. There were also some inaccuracies which meant they were unsure if they could rely on them. There was a feeling among staff in some schools that the materials were not pitched at the appropriate level for the children in their school, meaning that significant adaption was required before they were considered fit for purpose. Some staff members preferred materials that were ready to use as they found they had to adapt a lot of them. Certain pupils inability to relate to the context of some sessions was identified as a barrier to engagement. 	Humphrey 2010 O'Hare 2018	Minor concerns (Study with moderate risk of bias due to unclear reflexivity)	No concerns Finding reflects the data from study that reports on this theme.	Moderate concerns Limited to data from one study.	No concerns Study related to the views and experiences related to a whole school approach programme.	Moderate confidence Data from a single study and unable to check for inconsistency.
<p>Programme characteristics: Facilitators</p> <ul style="list-style-type: none"> Staff members liked the idea of having materials for the programme as it gives more of a structure and provides useful information. Some teachers felt that the material were age appropriate for their pupils and where this was the case they found that the pupils could relate more to the characters and themes in the materials. 	Humphrey 2010 O'Hare 2018	Minor concerns (Study with moderate risk of bias due to unclear reflexivity)	No concerns Finding reflects the data from study that reports on this theme.	Moderate concerns Limited to data from one study.	No concerns Study related to the views and experiences related to a whole school approach programme.	Moderate confidence Data from a single study and unable to check for inconsistency.

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
<ul style="list-style-type: none"> Pupils reported the presence of more 'doing'-based activities and opportunities to input into lessons were facilitators for pupil engagement. 						

Appendix G – Economic evidence study selection



Appendix H – Economic evidence tables

Beckman (2018)						
Study	Method of Analysis	Costs	Outcomes	Results	Limitations	Comments
<p>Study type: Cost-effectiveness analysis using a decision tree</p> <p>Country: Sweden</p> <p>Population: Children aged 12 to 16</p> <p>Population size: 300 (hypothetical)</p> <p>Intervention: The Olweus Bullying Prevention Program (OBPP) is a whole-school approach to bullying prevention that includes 4 levels: the school, the classroom, the individual and the community</p> <p>Comparator: No intervention (usual practice)</p>	<p>Perspective: Payer perspective (individual municipality)</p> <p>Time horizon: 3-year</p> <p>Discounting: 3% costs 3% effects</p> <p>Data sources Costs: A study surveying the costs of different bullying prevention programmes</p> <p>Effects: Intervention: A systematic review of literature</p> <p>No intervention: A nationally representative survey of Swedish schools</p>	<p>Intervention cost per person; SEK (€): OBPP 4,079 (450) (£392 GBP 2020^b)</p> <p>No intervention 0</p> <p>Currency & cost year: Swedish kronor (SEK)</p> <p>The cost year was unclear but assumed to be 2011 based on the cost data source.</p> <p>Costs were converted to EUR (€) using the 2014 exchange rate 1 SEK = 9.07 EUR</p>	<p>Victim-free years per person; mean: OBPP 2.83</p> <p>No intervention 2.80</p>	<p>ICER^a; SEK (€): OBPP vs. no intervention</p> <p>131,250 (14,470) per spared victim of bullying (£12,613 GBP 2020^b)</p> <p>Uncertainty: Deterministic sensitivity analysis was conducted for annual proportion of exposure to bullying, relative risk reduction OBPP and total cost of OBPP. Changes to relative risk reduction had the largest effect on the ICER. However, all ICERs were still below the 585,000 SEK threshold.</p> <p>In probabilistic sensitivity analysis, there was a 97% probability that OBPP was cost-effective at the 585,000 SEK</p>	<p>Author identified:</p> <ul style="list-style-type: none"> Threshold value was based on a study asking respondents about their willingness to pay for a bullying prevention programme Long term effects were not considered <p>Reviewer identified: None</p>	<p>Source of funding: Not reported</p> <p>Further research: More adequately powered studies in order to evaluate the effectiveness of bullying prevention programmes</p>

Beckman (2018)						
Study	Method of Analysis	Costs	Outcomes	Results	Limitations	Comments
				threshold. (£56,196 GBP 2020 ^b)		
Overall applicability: Partly applicable			Overall quality: Potentially serious limitations			
<i>Abbreviations: ICER: incremental cost-effectiveness ratio; OBPP: Olweus Bullying Prevention Program</i>						
a. It is assumed that incremental costs and effects are rounded. Hence, the incremental costs divided by the incremental effects do not give the exact ICER reported.						
b. Converted by the reviewer using historical exchange rates and PSSRU inflation indices.						

Bowden (2020)						
Study	Method of Analysis	Costs	Outcomes	Results	Limitations	Comments
<p>Study type: An economic evaluation of the costs and benefits of providing comprehensive supports to students in elementary school.</p> <p>Country: USA</p> <p>Population: BPS students, k-5 (i.e., from age 5-6 years to 10-11 years).</p> <p>Sample size: City Connects^a schools: N=2,265; non-programme schools: N=19,979</p> <p>Intervention: City Connects is a comprehensive student support system aimed at addressing the needs and strengths of students in academic, social/emotional,</p>	<p>Perspective: Societal</p> <p>Time horizon: Input (i.e., attendance at a City Connects elementary school) for k-5 (i.e., 6 years), outcomes measured as educational outcomes at grade 6, grade 7 and grade 8</p> <p>Discounting: 3.5% per annum</p> <p>Data sources</p> <p>Costs:</p> <p>Resource use^b <u>Intervention</u> Site level data from two City Connects schools were collected during 2014. Service provision data were collected 10 organisations (5 per school) representing a range of types and intensities of services.</p> <p><u>Comparator</u></p>	<p>Present value cost per student (six years)^d; US\$ City Connects: 9200 (£7070 GBP 2020^e) Non-City Connects: 3800 (£2,913 GBP 2020^e)</p> <p>Annual cost per person; £: City Connects: 1670 (1707 GBP 2020^e) Non-City Connects: 690 (£705 GBP 2020^e)</p> <p>Currency & cost year: US (\$); 2018</p>	<p>It is reported that each new high school graduate yields social benefits of \$281,120 and an effect size gains in achievement of 0.3 yields social benefits of \$10,250 (sources not reported). Assumptions 1 & 2 (below) were applied to this estimate.</p> <p>Benefits of the City Connects programme</p> <p>Assumption 1 - yields 7% additional graduates</p> <p>Assumption 2 - each student obtains effect size gains in achievement of 0.3</p>	<p>Monetary societal benefit; US\$</p> <p>Assumption 1: 19,680 (£15,090 GBP 2020^e) Assumption 2: 10,250 (£7,858 GBP 2020^e) Average of Assumption 1 & Assumption 2: 14,960 (£11,471 GBP 2020^e) Benefit to cost ratio: 3</p> <p>Uncertainty: Results were robust to sensitivity analyses (benefit to cost ratio varied from 1.26 to 6.38)</p> <p>Considering only achievement gains, break even occurred when assuming an effect size of 0.15</p> <p>Considering only effects on high school graduation, break even occurred when assuming that the yield of new graduates was 2 per 100 participants</p>	<p>Author identified:</p> <ul style="list-style-type: none"> Difficulties in accurately reflecting the resources received by students in City Connects and non-City Connects schools. Benefits are conservative as they exclude labour productivity spill overs, the deadweight loss of distortionary taxes and other consequences such as intra-family effects that cannot be monetarised. They also do not include any benefits accrued whilst the student is still attending school. Further they do not include benefits to students to non-marginal students, i.e., those who would have 	<p>Source of funding: Funding was provided by the GHR foundation and the Center for Optimized Student Support at Boston College.</p> <p>Further research: Future research should prospectively explore site-level variations in cost and external services, non-academic benefits, teacher effects, community partner service financing, and the extent to which comprehensive student support programmes offset costs to schools and community partners by streamline the service referral and provision processes.</p>

Bowden (2020)						
Study	Method of Analysis	Costs	Outcomes	Results	Limitations	Comments
<p>health and family domains by building individualised support plans, providing in-school support, and monitoring student progress and needs.</p> <p>Comparator: Non-City Connects BPS elementary schools providing 'Business as usual'. These schools had been involved in one or both earlier effectiveness samples.</p>	<p>Four non-City Connects schools who had staff that were able to provide the relevant information. Data about service provision were collected from the school</p> <p>Costs^c National average prices from public sources.</p>			<p>(i.e., if graduation rate improved by 3%)</p>	<p>graduated without the programme.</p> <ul style="list-style-type: none"> • Projections suggest greater adversity for those with low skills and methods are likely to have understated the returns to education over the long run. <p>Reviewer identified:</p> <ul style="list-style-type: none"> • The methods used to estimate benefits are not described/sources are not referenced and, therefore, the validity of these benefits is unclear. 	
<p>Overall applicability: Directly applicable Overall quality: Potentially serious limitations</p>						
<p><i>Abbreviations: BPS: Boston Public Schools; k-5: kindergarten to grade 5</i></p>						
<p>a. City Connects accesses external services through community-based organisations and service providers. Co-ordinators at each programme site work closely with teachers to assess the strengths and needs of each student and connect students with appropriate services.</p>						
<p>b. Data were collected using site visits (City Connects schools only) and semi-structured interviews.</p>						
<p>c. Prices were drawn from the Center for Benefit-Cost Studies of Education's CostOut (https://www.cbcsecosttoolkit.org/) price database, online data sources (for example, Amazon, Apple) were used for market prices, the life span of durable equipment was assumed to be 30 years (3.5% interest rate)</p>						
<p>d. Costs were primarily driven by personnel, mainly the school co-ordinators, the school's central staff, school administrators and schoolteachers. Furthermore, it is assumed that costs are rounded. Hence, the city connect costs minus non city connects costs do not give the exact incremental costs reported.</p>						
<p>e. Converted by the reviewer using historical exchange rates and PSSRU inflation indices.</p>						

Legood (2021)						
Study	Method of Analysis	Costs	Outcomes	Results	Limitations	Comments
<p>Study type: Cost-utility analysis</p> <p>Country: UK</p> <p>Population: 40 state secondary schools in South East England were randomised (1:1) to the intervention and comparator arms of the Inclusive trial. All students in the school at the end of year 7 (aged 11-12 years) at baseline, and at 2 years (end of year 9) and 3 years (end of year 10; 14-15 year olds) follow up, in addition to school teaching and teaching assistant staff at each time point.</p> <p>Sample size: Intervention N=3320 students in Comparator N=3347 students</p> <p>Intervention:</p>	<p>Perspective: Public sector ^b</p> <p>Time horizon: 3 years</p> <p>Discounting: Costs and outcomes were discounted at 3.5%</p> <p>Data sources Costs: Department of Education website, NHS Reference Costs (2015-16), Curtis (2016), Goodwin (2011) and Heslin et al (2017)</p> <p>Effects: From RCT. Data from the CHU-9D questionnaire were used to estimate QALYs for each participant</p> <p>Other: An analysis was conducted at 2 years (the period when an external facilitator supported the intervention) and at 3</p>	<p>Total cost per person ^c; mean, unadjusted (SD), £:</p> <p>At 2 years Intervention 650 (6203) Comparator 493 (1687)</p> <p>At 3 years Intervention 719 (3485) Comparator 667 (1829)</p> <p>Currency & cost year: GB£; NR</p>	<p>QALYs ^c; mean, unadjusted (SD):</p> <p>At 2 years Intervention 1.6834 (0.1710) Comparator 1.6833 (0.1710)</p> <p>Incremental effect, adjusted (95% CI): 0.0072 (-0.0043 to 0.0188)</p> <p>At 3 years Intervention 2.4937 (0.2473) Comparator 2.4858 (0.2496)</p> <p>Incremental effect, adjusted (95% CI): 0.0148 (-0.0057 to 0.0353)</p>	<p>ICER per QALY gained (adjusted for differences in baseline variables) ^d; £:</p> <p>At 2 years 13,284</p> <p>At 3 years 1,875</p> <p>Uncertainty: Cost-effectiveness acceptability curves were constructed. At a WTP threshold of £20,000 per QALY, the probability of the intervention being cost effective was 65% at 2 years and 90% at 3 years.</p> <p>Further sensitivity analyses (excluding teacher time training, inclusion of NHS costs and inclusion of police costs) had little impact on the results</p> <p>Participants in the intervention arm spent more nights in hospital related to accident or injury than participants</p>	<p>Author identified:</p> <ul style="list-style-type: none"> Confidence intervals around QALYs were wide, reflecting the small difference in utility values between the two trial arms All schools were within the Greater London or surrounding counties area, which has implications for scaling up to other areas. It is not known whether any anti-bullying interventions were being delivered in the control schools and therefore the costs of any such interventions were not included in the analyses. The outcome measure for this school-based intervention was improvements in health-related 	<p>Source of funding: The National Institute for Health Research in England under its Public Health Research Board (12/153/60) and the Education Endowment Foundation</p> <p>Further research: Future research should explore the impact of the intervention on educational outcomes to potentially strengthen schools' incentives to invest in such anti-bullying measures</p>

Legood (2021)						
Study	Method of Analysis	Costs	Outcomes	Results	Limitations	Comments
Learning Together (LT) ^a intervention Comparator: Current service provision	years (when schools implemented the intervention without external support).			in the control arm (At 2 years: 1.03 and 0.59 respectively; Between 2 to 3 years: 0.57 and 0.30 respectively). However, it is not known whether these hospital stays were directly related to bullying.	quality of life. It is unclear, whether school managers would consider this intervention to be within their remit or budget <ul style="list-style-type: none"> The study only considered a 3-year time horizon – the possibility exists that it could be even more cost-effective if longer-term outcomes were considered. Reviewer identified: <ul style="list-style-type: none"> The data used to calculate QALYs were collected using the CHU-9D questionnaire rather than the EQ-5D questionnaire (NICE reference case) The authors highlight that causal links between the effect of the intervention on overnight 	

Legood (2021)						
Study	Method of Analysis	Costs	Outcomes	Results	Limitations	Comments
					hospital stays is unclear. The reviewer considers that this limitation holds for all reported health and police resource use.	
Overall applicability: Directly applicable		Overall quality: Minor limitations				
Abbreviations: CHU-9D: Childhood Utility Index-9 Dimensions; CI: confidence interval; EQ-5D: EuroQol-5 Dimensions; GB: Great Britain; ICER: incremental cost-effectiveness ratio; LT: Learning Together; NHS: National Health Service; NICE: National Institute for Health and Care Excellence; NR: not reported; RCT: randomised control trial; QALY: quality-adjusted life year; SD: standard deviation; WTP: willingness to pay						
a. The Inclusive trial (a cluster randomised controlled trial) assessed the LT intervention versus current service provision. The purpose of the LT intervention was to involve students in efforts to modify their school environment using restorative approaches, student participation in policy, and a social and emotional skills classroom curriculum. The LT intervention comprised: (1) staff training in restorative practices to address interpersonal conflict and improve relationships; (2) provision of a manual, an external facilitator (deployed for the first 2 but not the third year of intervention), and reports of survey data on student needs in that school to help convene an action group comprising a diverse group of at least 6 staff and 6 students to help revise rules and policies; and (3) a social and emotional skills classroom curriculum.						
b. The public sector perspective included education, NHS and police costs						
c. The underlying costs and effects reported for the intervention and control could not be used to calculate the incremental costs and effects i.e. intervention minus control did not give the incremental difference reported.						
d. It is assumed that incremental costs and effects are rounded. Hence, the incremental costs divided by the incremental effects do not give the exact ICER reported.						

Persson (2018)						
Study	Method of Analysis	Costs	Outcomes	Results	Limitations	Comments
Study type: Cost-effectiveness analysis using a Markov cohort model	Perspective: Payer perspective (individual municipality)	Intervention cost per person; SEK: KiVa 3,686 (£350 GBP 2020 ^a)	QALYs per person: KiVa 6.91 SQ 6.88	ICER; SEK (€): KiVa vs SQ 131,321 (£12,484 GBP 2020 ^a) (13,823) per QALY gained	Author identified: • Limited research and data on the effectiveness of the KiVa program	Source of funding: Not reported Further research: Further high-quality RCTs where KiVa is evaluated in
Country:	Time horizon: 9-year	SQ 0				

Persson (2018)						
Study	Method of Analysis	Costs	Outcomes	Results	Limitations	Comments
<p>Sweden</p> <p>Population: Children in an elementary school setting, aged 6 to 16 years old</p> <p>Cohort size: 75 (hypothetical)</p> <p>Intervention: The KiVa program is a whole-school approach to bullying prevention that includes school and class-room level actions and actions directed to handle specific cases on bullying</p> <p>Comparator(s): Status quo (SQ) i.e. treatment as usual</p>	<p>Discounting: 3% costs 3% effects</p> <p>Data sources Costs: Suppliers and KiVa copyright holder together with wage data from Swedish registers</p> <p>Effects: Treatment effect based on a systematic review of literature</p> <p>Utilities: Published literature</p>	<p>Currency & cost year: Swedish kronor (SEK); 2017</p> <p>Costs data in Euros were adjusted using the exchange rate 1 EUR = 9.5 SEK</p>	<p>Victim-free years per person; mean: KiVa 8.59</p> <p>SQ 8.04</p>	<p>7,789 (829) per victim free year (£740 GBP 2020^a)</p> <p>Uncertainty: Deterministic sensitivity analysis found that the discount rate, total cost of the program, cohort size, and initial bullying prevalence rates did not impact the cost-effectiveness by a large magnitude. Assuming KiVa was less effective, with a relative risk of 0.7, the cost per gained QALY and cost per victim-free year increase to 79,664 SEK (£7,753 GBP 2020^a) (€18,912) and 10,780 SEK (£1,025GBP 2020^a)(€1135). Assuming that KiVa was implemented over 3 years (grades 7–9) implied a cost per QALY of 604,988 SEK (£57,512 GBP 2020^a) (€63,683) and a cost per victim-free year of 36,229 SEK (£3,445 GBP 2020^a) (€3814).</p>	<ul style="list-style-type: none"> • Long term effects were not considered <p>Reviewer identified: Based on the underlying values provided in the study, the reviewer was unable to replicate the ICER values stated. However, the values were similar and did not change the conclusions.</p>	<p>different school contexts</p>

Persson (2018)						
Study	Method of Analysis	Costs	Outcomes	Results	Limitations	Comments
				At a threshold of 500,000 SEK per QALY (£47,532 GBP 2020 ^a) (€52,632), the probability that KiVa was cost-effective was close to 100%. At a threshold of 100,000 SEK per QALY (£9,506 GBP 2020 ^a) (€10,526) and 200,000 SEK per QALY (£19,012 GBP 2020 ^a) (€21,053), the probability that KiVa was cost-effective was 68% and 96%, respectively.		
Overall applicability: Partly applicable			Overall quality: Minor limitations			
<i>Abbreviations: ICER: incremental cost-effectiveness ratio; QALY: quality-adjusted life year</i>						
7 <i>Converted by the reviewer using historical exchange rates and PSSRU inflation indices.</i>						

Appendix I – Health economic model

A bespoke model was developed to capture the costs and consequences of an intervention, or combination of interventions, that promote social, emotional and mental wellbeing in children and young people in primary and secondary education. It covers more than 1 evidence review in the guideline so the full write up is contained in a separate document rather than in appendix I (see Evidence review J).

Appendix J – Excluded studies

Study	Code [Reason]
(2010) The Effects of a Multiyear Universal Social-Emotional Learning Program: the Role of Student and School Characteristics. <i>Journal of consulting and clinical psychology</i> 78(2): 156-168	- Control group not defined in detail
(2007) Caring School Community[™] (Formerly, The Child Development Project). Revised. <i>What Works Clearinghouse Intervention Report.</i> : 1-35	- Review of Caring School Community
(2012) <i>What Works Clearinghouse Quick Review: "Findings from a Randomized Experiment of Playworks".</i> : 1-2	- Commentary on an intervention study
(2013) WWC Review of the Report "Findings from a Randomized Experiment of Playworks: Selected Results from Cohort 1." <i>What Works Clearinghouse Single Study Review.</i> : 1-7	- Commentary on an intervention study
Ahlqvist, G, Larsson J, O, von, Rosen et al. (2019) The Savsjo-school-project: a cluster-randomized trial aimed at improving the literacy of beginners-achievements, mental health, school satisfaction and reading capacity at the end of grade three using an alternative school curriculum. <i>Child and adolescent psychiatry and mental health</i> 13: 27	- Intervention - not a formal programme (only principles) so was delivered differently in different schools
Akrimi, S, Raynor, S, Johnson, R et al. (2008) Evaluation of SHINE - Make Every Child Count: a school-based community intervention programme. <i>JOURNAL OF PUBLIC MENTAL HEALTH</i> : 7-17	- Qualitative - Study is not concerned with a whole-school approach
Athanasiades, Christina, Kamariotis, Harris, Psalti, Anastasia et al. (2015) Internet use and cyberbullying among adolescent students in Greece: The "Tabby" project. <i>Hellenic Journal of Psychology</i> 12(1): 14-39	- Quantitative - Study is not concerned with a whole-school approach
Avery, Julie C., Morris, Heather, Galvin, Emma et al. (2020) <i>Systematic Review of School-Wide Trauma-Informed Approaches.</i> <i>Journal of Child and Adolescent Trauma</i>	- No outcomes of interest
Bauer, Nerissa S; Lozano, Paula; Rivara, Frederick P (2007) The effectiveness of the Olweus Bullying Prevention Program in public middle schools: a controlled trial. <i>The Journal of adolescent health : official publication of the Society for Adolescent Medicine</i> 40(3): 266-74	- Study conducted before 2007
Bavarian, N, Lewis, KM, Dubois, DL et al. (2013) Using social-emotional and character development to improve academic outcomes: a matched-pair, cluster-randomized controlled trial in low-income, urban schools. <i>Journal of school health</i> 83(11): 771-779	- Control group not defined in detail

Study	Code [Reason]
Beets, Michael W, Flay, Brian R, Vuchinich, Samuel et al. (2009) Use of a social and character development program to prevent substance use, violent behaviors, and sexual activity among elementary-school students in Hawaii. American journal of public health 99(8): 1438-45	- Study conducted before 2007
Berg, Juliette K. and Aber, J. Lawrence (2015) The Direct and Moderating Role of School Interpersonal Climate on Children's Academic Outcomes in the Context of Whole-School, Social-Emotional Learning Programs.: 1-11	- Conference abstract.
Berg, Juliette, Torrente, Catalina, Aber, J. Lawrence et al. (2010) Using Administrative Data to Evaluate Impacts in a School-Randomized Trial of the 4Rs Program.: 1-8	- Conference abstract.
Berg, Tricia Ann-Rees (2018) Can We Increase Attendance and Decrease Chronic Absenteeism with a Universal Prevention Program? A Randomized Control Study of Attendance and Truancy Universal Procedures and Interventions.: 1-138	- Quantitative - Study is not concerned with a whole-school approach
Bettters-Bubon, Jennifer (2013) A developmental examination of School-Wide Positive Behavior Support in elementary school: Behavior patterns, school climate, and academic achievement. Dissertation Abstracts International Section A: Humanities and Social Sciences 74(1ae): no-specified	- Paper unavailable
Bevington, Terence J. (2015) Appreciative Evaluation of Restorative Approaches in Schools. Pastoral Care in Education 33(2): 105-115	- Qualitative - no qualitative data reported
Bleeker, Martha, James-Burdumy, Susanne, Beyler, Nicholas et al. (2012) Findings from a Randomized Experiment of Playworks: Selected Results from Cohort 1.: 1-46	- Quantitative - Study is not concerned with a whole-school approach
Bolton, Alexandra (2019) CREATING HEALING SCHOOL COMMUNITIES: SCHOOL-BASED INTERVENTIONS FOR STUDENTS EXPOSED TO TRAUMA. Drama Therapy Review 5(1): 157-161	- Book review
Boulton, Michael John (2014) High School Pupils' Understanding of Peer Counselling and Willingness to Use it for Different Types of Bullying. Pastoral Care in Education 32(2): 95-103	- Qualitative - Study focused on a single aspect of whole school approach
Bowllan, Nancy M (2011) Implementation and evaluation of a comprehensive, school-wide bullying prevention program in an urban/suburban middle school. The Journal of school health 81(4): 167-73	- Evaluation of Olweus programme which was originally implemented on Norway in 1983 and evaluated in the UK in 1997. The majority of the evidence for this intervention is pre-2007

Study	Code [Reason]
Brackett, Marc A., Reyes, Maria R., Rivers, Susan E. et al. (2012) Assessing Teachers' Beliefs about Social and Emotional Learning. <i>Journal of Psychoeducational Assessment</i> 30(3): 219-236	- Qualitative study conducted outside of uK
Bradley, Ryan (2016) "Why Single Me Out?" Peer Mentoring, Autism and Inclusion in Mainstream Secondary Schools. <i>British Journal of Special Education</i> 43(3): 272-288	- Quantitative - Study focused on a single aspect of whole school approach
Bradshaw, Catherine P., Koth, Christine W., Bevans, Katherine B. et al. (2008) The Impact of School-Wide Positive Behavioral Interventions and Supports (PBIS) on the Organizational Health of Elementary Schools. <i>School Psychology Quarterly</i> 23(4): 462-473	- Study conducted before 2007
Bradshaw, Catherine P.; Mitchell, Mary M.; Leaf, Philip J. (2010) Examining the Effects of Schoolwide Positive Behavioral Interventions and Supports on Student Outcomes: Results from a Randomized Controlled Effectiveness Trial in Elementary Schools. <i>Journal of Positive Behavior Interventions</i> 12(3): 133-148	- Study conducted before 2007
Bradshaw, Catherine P., Reinke, Wendy M., Brown, Louis D. et al. (2008) Implementation of School-Wide Positive Behavioral Interventions and Supports (PBIS) in Elementary Schools: Observations from a Randomized Trial. <i>Education and Treatment of Children</i> 31(1): 1-26	- Study conducted before 2007
Bradshaw, Catherine P.; Waasdorp, Tracy E.; Leaf, Philip J. (2015) Examining Variation in the Impact of School-Wide Positive Behavioral Interventions and Supports: Findings from a Randomized Controlled Effectiveness Trial. <i>Journal of Educational Psychology</i> 107(2): 546-557	- Study conducted before 2007
Bradshaw, Catherine P, Koth, Christine W, Thornton, Leslie A et al. (2009) Altering school climate through school-wide Positive Behavioral Interventions and Supports: findings from a group-randomized effectiveness trial. <i>Prevention science : the official journal of the Society for Prevention Research</i> 10(2): 100-15	- Study conducted before 2007
Bradshaw, CP; Waasdorp, TE; Leaf, PJ (2012) Effects of school-wide positive behavioral interventions and supports on child behavior problems. <i>Pediatrics</i> 130(5): e1136-45	- Study conducted before 2007
Brincks, Ahnalee, Perrino, Tatiana, Howe, George et al. (2021) Familias Unidas Prevents Youth Internalizing Symptoms: a Baseline Target Moderated Mediation (BTMM) Study. <i>Prevention science : the official journal of the Society for Prevention Research</i>	- No usable data

Study	Code [Reason]
Busch, Vincent, De Leeuw, Johannes Rob Josephus, Zuithoff, Nicolaas P A et al. (2015) A Controlled Health Promoting School Study in the Netherlands: Effects After 1 and 2 Years of Intervention. <i>Health promotion practice</i> 16(4): 592-600	- Intervention - Not a SEW focus
Caldarella, Paul, Shatzer, Ryan H., Gray, Kristy M. et al. (2011) The Effects of School-Wide Positive Behavior Support on Middle School Climate and Student Outcomes. <i>RMLE Online: Research in Middle Level Education</i> 35(4): 1-14	- Study conducted before 2007
Carbonero, Miguel A, Martin-Anton, Luis J, Otero, Lourdes et al. (2017) Program to promote personal and social responsibility in the secondary classroom. <i>Frontiers in Psychology</i> 8	- Control group not defined in detail
Challen, Amy, Noden, Philip, West, Anne et al. (2011) UK resilience programme evaluation: final report. <i>Dfe Research Report</i> : 84	- Quantitative - Study is not concerned with a whole-school approach
Coates, Janine K. and Pimlott-Wilson, Helena (2019) Learning While Playing: Children's Forest School Experiences in the UK. <i>British Educational Research Journal</i> 45(1): 21-40	- Qualitative - Study is not concerned with a whole-school approach
Comiskey, Catherine M, O'Sullivan, Karin, Quirke, Mary B et al. (2012) Baseline results of the first healthy schools evaluation among a community of young, Irish, urban disadvantaged children and a comparison of outcomes with international norms. <i>The Journal of school health</i> 82(11): 508-13	- No control group
Connolly, Jennifer, Josephson, Wendy, Schnoll, Jessica et al. (2015) Evaluation of a youth-led program for preventing bullying, sexual harassment, and dating aggression in middle schools. <i>The Journal of Early Adolescence</i> 35(3): 403-434	- Quantitative - Study focused on a single aspect of whole school approach
Cornell, Dewey G.; Allen, Korrie; Fan, Xitao (2012) A Randomized Controlled Study of the Virginia Student Threat Assessment Guidelines in Kindergarten through Grade 12. <i>School Psychology Review</i> 41(1): 100-115	- Quantitative - Study is not concerned with a whole-school approach
Corrieri, Sandro; Conrad, Ines; Riedel-Heller, Steffi G (2014) Do 'school coaches' make a difference in school-based mental health promotion? Results from a large focus group study. <i>Psychiatria Danubina</i> 26(4): 319-29	- Qualitative study conducted outside of uK
Corrin, William, Parise, Leigh M., Cerna, Oscar et al. (2015) Case Management for Students at Risk of Dropping Out: Implementation and Interim Impact Findings from the Communities in Schools Evaluation.: 1-135	- Quantitative - Study focused on a single aspect of whole school approach

Study	Code [Reason]
Corrin, William, Sepanik, Susan, Gray, Aracelis et al. (2014) Laying Tracks to Graduation: The First Year of Implementing Diplomas Now.: 1-176	- Qualitative study conducted outside of uK
Corrin, William, Sepanik, Susan, Rosen, Rachel et al. (2016) Addressing Early Warning Indicators: Interim Impact Findings from the Investing in Innovation (i3) Evaluation of Diplomas Now.: 1-126	- Intervention - Not a SEW focus
Cowie, Helen and Oztug, Ozhan (2008) Pupils' Perceptions of Safety at School. Pastoral Care in Education 26(2): 59-67	- Qualitative - Study focused on a single aspect of whole school approach
Coyle, H. Elizabeth (2008) School Culture Benchmarks: Bridges and Barriers to Successful Bullying Prevention Program Implementation. Journal of School Violence 7(2): 105-122	- Qualitative study conducted outside of uK
Crooks, Claire V, Scott, Katreena, Ellis, Wendy et al. (2011) Impact of a universal school-based violence prevention program on violent delinquency: distinctive benefits for youth with maltreatment histories. Child abuse & neglect 35(6): 393-400	- Study conducted before 2007
Cross, D., Monks, H., Hall, M. et al. (2011) Three-year results of the Friendly Schools whole-of-school intervention on children's bullying behaviour. British Educational Research Journal 37(1): 105-129	- Study conducted before 2007
Cross, Donna, Lester, Leanne, Pearce, Natasha et al. (2018) A group randomized controlled trial evaluating parent involvement in whole-school actions to reduce bullying. The Journal of Educational Research 111(3): 255-267	- Study conducted before 2007
Cross, Donna, Waters, Stacey, Pearce, Natasha et al. (2012) The Friendly Schools Friendly Families Programme: Three-Year Bullying Behaviour Outcomes in Primary School Children. International Journal of Educational Research 53: 394-406	- Study conducted before 2007
Daugherty, Carolyn Spears (2012) Principal and teacher perceptions of the effectiveness of the Olweus Bullying Prevention Program. Dissertation Abstracts International Section A: Humanities and Social Sciences 73(2a): 461	- Paper unavailable
Daunic, Ann (2013) A school-based behavioral intervention program demonstrates improvement in individual student behavior. The Journal of Pediatrics 162(3): 652-653	- Correspondence

Study	Code [Reason]
Destin, Mesmin; Castillo, Claudia; Meissner, Lynn (2018) A field experiment demonstrates near peer mentorship as an effective support for student persistence. <i>Basic and Applied Social Psychology</i> 40(5): 269-278	- Quantitative - Study focused on a single aspect of whole school approach
Dimitrellou, E. and Hurry, J. (2019) School belonging among young adolescents with SEMH and MLD: the link with their social relations and school inclusivity. <i>European Journal of Special Needs Education</i> 34(3): 312-326	- Qualitative - Study is not concerned with a whole-school approach
Dion, Lisa A. (2017) The relationship of school-wide positive behavior supports to school climate and student behavior. <i>Dissertation Abstracts International Section A: Humanities and Social Sciences</i> 77(9ae): no-specified	- Paper unavailable
Dix, Katherine L, Slee, Phillip T, Lawson, Michael J et al. (2012) Implementation quality of whole-school mental health promotion and students' academic performance. <i>Child and adolescent mental health</i> 17(1): 45-51	- No control group
Domino, Meg (2013) Measuring the Impact of an Alternative Approach to School Bullying. <i>Journal of School Health</i> 83(6): 430-437	- Quantitative - Study is not concerned with a whole-school approach
Downey, Chris and Williams, Clare (2010) Family SEAL-A home-school collaborative programme focusing on the development of children's social and emotional skills. <i>Advances in School Mental Health Promotion</i> 3(1): 30-41	- Quantitative - Study focused on a single aspect of whole school approach
Edmondson, Lynne and Hoover, John (2008) Process Evaluation of a Bullying Prevention Program: A Public School-County Health Partnership. <i>Reclaiming Children and Youth: The Journal of Strength-based Interventions</i> 16(4): 25-33	- Single arm study.
Eiraldi, Ricardo, McCurdy, Barry, Khanna, Muniya et al. (2014) A cluster randomized trial to evaluate external support for the implementation of positive behavioral interventions and supports by school personnel. <i>Implementation science : IS</i> 9: 12	- Quantitative - Study is not concerned with a whole-school approach
Espelage, Dorothy L, Low, Sabina, Polanin, Joshua R et al. (2013) The impact of a middle school program to reduce aggression, victimization, and sexual violence. <i>The Journal of Adolescent Health : official publication of the Society for Adolescent Medicine</i> 53(2): 180-6	- Quantitative - Study is not concerned with a whole-school approach
Espelage, Dorothy L, Low, Sabina, Van Ryzin, Mark J et al. (2015) Clinical trial of Second Step Middle School Program: Impact on bullying, cyberbullying, homophobic teasing, and sexual harassment perpetration. <i>School Psychology Review</i> 44(4): 464-479	- Quantitative - Study is not concerned with a whole-school approach

Study	Code [Reason]
Farrell, Albert D, Sullivan, Terri N, Sutherland, Kevin S et al. (2018) Evaluation of the Olweus Bully Prevention Program in an Urban School System in the USA. <i>Prevention science : the official journal of the Society for Prevention Research</i> 19(6): 833-847	- No usable data - No descriptive statistics provided
Fekkes, M, van de Sande, M. C. E, Gravesteyn, J. C et al. (2016) Effects of the Dutch Skills for Life Program on the health behavior, bullying, and suicidal ideation of secondary school students. <i>Health Education</i> 116(1): 2-15	- Quantitative - Study is not concerned with a whole-school approach
Flannery, K. B., Fenning, P., Kato, M. McGrath et al. (2014) Effects of School-Wide Positive Behavioral Interventions and Supports and Fidelity of Implementation on Problem Behavior in High Schools. <i>School Psychology Quarterly</i> 29(2): 111-124	- No usable data
Flynn, D., Joyce, M., Weihrach, M. et al. (2018) Innovations in Practice: Dialectical behaviour therapy - skills training for emotional problem solving for adolescents (DBT STEPS-A): evaluation of a pilot implementation in Irish post-primary schools. <i>Child and Adolescent Mental Health</i> 23(4): 376-380	- Quantitative - Study is not concerned with a whole-school approach
Fonagy, P., Twemlow, S. W., Vernberg, E. M. et al. (2009) A cluster randomized controlled trial of child-focused psychiatric consultation and a school systems-focused intervention to reduce aggression. <i>Journal of Child Psychology and Psychiatry and Allied Disciplines</i> 50(5): 607-616	- Study conducted before 2007
Formby, Eleanor (2011) "It's Better to Learn about Your Health and Things That Are Going to Happen to You than Learning Things That You Just Do at School": Findings from a Mapping Study of PSHE Education in Primary Schools in England. <i>Pastoral Care in Education</i> 29(3): 161-173	- Qualitative - Study is not concerned with a whole-school approach
Franze, M. and Paulus, P. (2009) MindMatters--A Programme for the Promotion of Mental Health in Primary and Secondary Schools: Results of an Evaluation of the German Language Adaptation. <i>Health Education</i> 109(4): 369-379	- Qualitative study conducted outside of uK
Gaffney, H., Farrington, D.P., Espelage, D.L. et al. (2019) Are cyberbullying intervention and prevention programs effective? A systematic and meta-analytical review. <i>Aggression and Violent Behavior</i> 45: 134-153	- Systematic review References to be checked
Gaffney, H.; Ttofi, M. M.; Farrington, D. P. (2019) Evaluating the effectiveness of school-bullying prevention programs: An updated meta-analytical review. <i>Aggression and Violent Behavior</i> 45: 111-133	- Systematic review References to be checked
Gage, Nicholas A., Lee, Ahhyun, Grasley-Boy, Nicolette et al. (2018) The Impact of School-Wide Positive Behavior	- Control group not defined in detail

Study	Code [Reason]
Interventions and Supports on School Suspensions: A Statewide Quasi-Experimental Analysis. <i>Journal of Positive Behavior Interventions</i> 20(4): 217-226	
Gage, Nicholas A., Leite, Walter, Childs, Karen et al. (2017) Average Treatment Effect of School-Wide Positive Behavioral Interventions and Supports on School-Level Academic Achievement in Florida. <i>Journal of Positive Behavior Interventions</i> 19(3): 158-167	- Control group not defined in detail
Gage, Nicholas A.; Sugai, George; Lewis, Timothy J. (2013) Academic Achievement and School-Wide Positive Behavior Interventions and Supports.: 1-25	- Conference abstract.
Gage, Nicholas A.; Whitford, Denise K.; Katsiyannis, Antonis (2018) A Review of Schoolwide Positive Behavior Interventions and Supports as a Framework for Reducing Disciplinary Exclusions. <i>Journal of Special Education</i> 52(3): 142-151	- Systematic review References to be checked
Gol-Guven, Mine (2017) The Effectiveness of the "Lions Quest Program: Skills for Growing" on School Climate, Students' Behaviors, Perceptions of School, and Conflict Resolution Skills. <i>European Early Childhood Education Research Journal</i> 25(4): 575-594	- Quantitative - Study focused on a single aspect of whole school approach
Goldberg, Jochem M, Sklad, Marcin, Elfrink, Teuntje R et al. (2019) Effectiveness of interventions adopting a whole school approach to enhancing social and emotional development: a meta-analysis. <i>European Journal of psychology of Education</i> 34(4): 755-782	- No usable data
Gomez, Soledad Andres and Gaymard, Sandrine (2014) The Perception of School Climate in Two Secondary Schools during the Implementation of a Peer Support Program. <i>Electronic Journal of Research in Educational Psychology</i> 12(2): 509-540	- Qualitative study conducted outside of uK
Graham, Anne, Phelps, Renata, Maddison, Carrie et al. (2011) Supporting children's mental health in schools: Teacher views. <i>Teachers and Teaching: Theory and Practice</i> 17(4): 479-496	- Qualitative study conducted outside of uK
Grillich, Ludwig, Kien, Christina, Takuya, Yanagida et al. (2016) Effectiveness evaluation of a health promotion programme in primary schools: a cluster randomised controlled trial. <i>BMC public health</i> 16: 679	- Quantitative - Study is not concerned with a whole-school approach
Hallam, Susan (2009) An Evaluation of the Social and Emotional Aspects of Learning (SEAL) Programme: Promoting Positive Behaviour, Effective Learning and Well-	- Single arm study.

Study	Code [Reason]
Being in Primary School Children. Oxford Review of Education 35(3): 313-330	
Harris, Alma and Goodall, Janet (2008) Do parents know they matter? Engaging all parents in learning. Educational Research 50(3): 277-289	- Qualitative - Study focused on a single aspect of whole school approach
Haymovitz, Ethan, Houseal-Allport, Pia, Lee, R. Scott et al. (2018) Exploring the Perceived Benefits and Limitations of a School-Based Social-Emotional Learning Program: A Concept Map Evaluation. Children & Schools 40(1): 45-54	- Qualitative study conducted outside of UK
Herrera, C, Grossman, JB, Kauh, TJ et al. (2011) Mentoring in schools: an impact study of big brothers big sisters school-based mentoring. Child development 82(1): 346-361	- Quantitative - Study focused on a single aspect of whole school approach
Hirschi, Cody Guy (2017) A study of school-wide positive behavior support and behavior intervention support teams and their impact on student behavior in six Missouri middle schools. Dissertation Abstracts International Section A: Humanities and Social Sciences 77(7ae): no-specified	- Dissertation
Hoglund, Wendy L. G; Hosan, Naheed E; Leadbeater, Bonnie J (2012) Using your WITS: A 6-year follow-up of a peer victimization prevention program. School Psychology Review 41(2): 193-214	- Study conducted before 2007
Holtzapple, Carol K, Griswold, J. Suzy, Cirillo, Kathleen et al. (2011) Implementation of a school-wide adolescent character education and prevention program: Evaluating the relationships between principal support, faculty implementation, and student outcomes. Journal of Research in Character Education 9(1): 71-90	- Control group not defined in detail
Honest, Andrea and Hunter, Deborah (2014) Teacher perspectives on the implementation of the PATHS curriculum. Educational Psychology in Practice 30(1): 51-62	- Qualitative - universal intervention
Horner, Robert H., Sugai, George, Smolkowski, Keith et al. (2009) A randomized, wait-list controlled effectiveness trial assessing school-wide positive behavior support in elementary schools. Journal of Positive Behavior Interventions 11(3): 133-144	- Study conducted before 2007
Huang, Sharon (2009) Cost-effectiveness of an enhanced whole-school social competency intervention. Dissertation Abstracts International Section A: Humanities and Social Sciences 70(1a): 101	- Dissertation
Hunt, C. (2007) The effect of an education program on attitudes and beliefs about bullying and bullying behaviour in	- Study conducted before 2007

Study	Code [Reason]
junior secondary school students. <i>Child and Adolescent Mental Health</i> 12(1): 21-26	
James, Alana I.; Smith, Peter K.; Radford, Lorraine (2014) <i>Becoming Grown-Ups: A Qualitative Study of the Experiences of Peer Mentors. Pastoral Care in Education</i> 32(2): 104-115	- Qualitative - Study focused on a single aspect of whole school approach
James-Burdumy, Susanne, Bleeker, Martha, Beyler, Nicholas et al. (2013) <i>Does Playworks Work? Findings from a Randomized Controlled Trial.</i> : 1-6	- Conference abstract.
Jenson, Jeffrey M, Brisson, Daniel, Bender, Kimberly A et al. (2013) <i>Effects of the Youth Matters prevention program on patterns of bullying and victimization in elementary and middle school. Social Work Research</i> 37(4): 361-372	- Quantitative - Study focused on a single aspect of whole school approach
Jimenez Barbero, Jose Antonio, Ruiz Hernandez, Jose Antonio, Esteban, Bartolome Llor et al. (2012) <i>Effectiveness of antibullying school programmes: A systematic review by evidence levels. Children and Youth Services Review</i> 34(9): 1646-1658	- Systematic review References to be checked
Jimenez-Barbero, Jose Antonio, Ruiz-Hernandez, Jose Antonio, Llor-Zaragoza, Laura et al. (2016) <i>Effectiveness of anti-bullying school programs: A meta-analysis. Children and Youth Services Review</i> 61: 165-175	- Systematic review References to be checked
Johnston, April D., Midgett, Aida, Doumas, Diana M. et al. (2018) <i>A Mixed Methods Evaluation of the "Aged-Up" STAC Bullying Bystander Intervention for High School Students. Professional Counselor</i> 8(1): 73-87	- Qualitative study conducted outside of uK
Jones, SM, Brown, JL, Hoglelund, WL et al. (2010) <i>A school-randomized clinical trial of an integrated social-emotional learning and literacy intervention: impacts after 1 school year. Journal of consulting and clinical psychology</i> 78(6): 829-842	- Study conducted before 2007
Karna, Antti, Voeten, Marinus, Little, Todd D. et al. (2011) <i>Going to Scale: A Nonrandomized Nationwide Trial of the KiVa Antibullying Program for Grades 1-9. Journal of Consulting and Clinical Psychology</i> 79(6): 796-805	- NRCT - Intervention also evaluated in an RCT
Kempf, Katelyn (2020) <i>Integrating a Mindfulness-Based Curriculum into an Elementary School Counseling Small Group.</i>	- Dissertation
Kendal, Sarah; Keeley, Philip; Callery, Peter (2011) <i>Young people's preferences for emotional well-being support in high school--a focus group study. Journal of child and adolescent psychiatric nursing : official publication of the Association of Child and Adolescent Psychiatric Nurses, Inc</i> 24(4): 245-53	- Qualitative - Study is not concerned with a whole-school approach

Study	Code [Reason]
Kendziora, Kimberly and Osher, David (2016) Promoting Children's and Adolescents' Social and Emotional Development: District Adaptations of a Theory of Action. Journal of clinical child and adolescent psychology : the official journal for the Society of Clinical Child and Adolescent Psychology, American Psychological Association, Division 53 45(6): 797-811	- Qualitative study conducted outside of uK
Kidger, J., Gunnell, D., Biddle, L. et al. (2010) Part and parcel of teaching? Secondary school staff's views on supporting student emotional health and well-being. British Educational Research Journal 36(6): 919-935	- Qualitative - Not focused on an intervention
Kidger, Judi, Donovan, Jenny L, Biddle, Lucy et al. (2009) Supporting adolescent emotional health in schools: a mixed methods study of student and staff views in England. BMC public health 9: 403	- Qualitative - Not focused on an intervention
Kjobli, John and Sorlie, Mari-Anne (2008) School outcomes of a community-wide intervention model aimed at preventing problem behavior. Scandinavian journal of psychology 49(4): 365-75	- Study conducted before 2007
Kourmoulaki, Athina (2013) Nurture Groups in a Scottish Secondary School: Purpose, Features, Value and Areas for Development. Emotional & Behavioural Difficulties 18(1): 60-76	- Qualitative - Study is not concerned with a whole-school approach
Kutash, Krista, Duchnowski, Albert J, Green, Amy L et al. (2013) Effectiveness of the Parent Connectors program: Results from a randomized controlled trial. School Mental Health: A Multidisciplinary Research and Practice Journal 5(4): 192-208	- Quantitative - Study is not concerned with a whole-school approach
Kyriakides, Leonidas, Creemers, Bert P. M., Muijs, Daniel et al. (2014) Using the Dynamic Model of Educational Effectiveness to Design Strategies and Actions to Face Bullying. School Effectiveness and School Improvement 25(1): 83-104	- No usable data
Kyriakides, Leonidas, Creemers, Bert P. M., Papastilianou, Dona et al. (2014) Improving the School Learning Environment to Reduce Bullying: An Experimental Study. Scandinavian Journal of Educational Research 58(4): 453-478	- Secondary publication - No usable data
Lam, Sarah KY and Hui, Eadaoin KP (2010) Factors affecting the involvement of teachers in guidance and counselling as a whole-school approach. British Journal of Guidance & Counselling 38(2): 219-234	- Qualitative study conducted outside of uK

Study	Code [Reason]
Leadbeater, Bonnie and Sukhawathanakul, Paweena (2011) Multicomponent programs for reducing peer victimization in early elementary school: a longitudinal evaluation of the WITS Primary Program. <i>Journal of Community Psychology</i> 39(5): 606-620	- Study conducted before 2007
Lee, Patricia C. and Stewart, Donald E. (2013) Does a Socio-Ecological School Model Promote Resilience in Primary Schools?. <i>Journal of School Health</i> 83(11): 795-804	- Study conducted before 2007
Leos-Urbel, Jacob and Sanchez, Monika (2015) The Relationship between Playworks Participation and Student Attendance in Two School Districts.: 1-30	- Quantitative - Study is not concerned with a whole-school approach
Lester, Leanne, Pearce, Natasha, Waters, Stacey et al. (2017) Family involvement in a whole-school bullying intervention: Mothers' and fathers' communication and influence with children. <i>Journal of Child and Family Studies</i> 26(10): 2716-2727	- Study conducted before 2007
Lewis, Kendra M, Vuchinich, Samuel, Ji, Peter et al. (2016) Effects of the Positive Action Program on Indicators of Positive Youth Development Among Urban Youth. <i>Applied developmental science</i> 20(1): 16-28	- Study conducted before 2007
Lewis, KM, DuBois, DL, Bavarian, N et al. (2013) Effects of Positive Action on the emotional health of urban youth: a cluster-randomized trial. <i>Journal of adolescent health</i> 53(6): 706-711	- Study conducted before 2007
Lewis, KM, Schure, MB, Bavarian, N et al. (2013) Problem behavior and urban, low-income youth: a randomized controlled trial of positive action in Chicago. <i>American journal of preventive medicine</i> 44(6): 622-630	- Study conducted before 2007
London, Rebecca A, Westrich, Lisa, Stokes-Guinan, Katie et al. (2015) Playing fair: the contribution of high-functioning recess to overall school climate in low-income elementary schools. <i>The Journal of school health</i> 85(1): 53-60	- Qualitative study conducted outside of uK
Lordan, Grace and McGuire, Alistair (2019) Widening the high school curriculum to include soft skill training: impacts on health, behaviour, emotional wellbeing and occupational aspirations.	- No usable data
Madigan, Kathleen, Cross, Richard W., Smolkowski, Keith et al. (2016) Association between Schoolwide Positive Behavioural Interventions and Supports and Academic Achievement: A 9-Year Evaluation. <i>Educational Research and Evaluation</i> 22(78): 402-421	- Study conducted before 2007

Study	Code [Reason]
<p>Malloy, Margaret, Acock, Alan, DuBois, David L. et al. (2015) Teachers' Perceptions of School Organizational Climate as Predictors of Dosage and Quality of Implementation of a Social-Emotional and Character Development Program. <i>Prevention science : the official journal of the Society for Prevention Research</i> 16(8): 1086-95</p>	<p>- Qualitative study conducted outside of uK</p>
<p>Maunder, Rachel E and Tattersall, Andrew J (2010) Staff experiences of managing bullying in secondary schools: The importance of internal and external relationships in facilitating intervention. <i>Educational and Child Psychology</i> 27(1): 116-128</p>	<p>- Qualitative - Not focused on an intervention</p>
<p>Maynard, Brandy R.; Kjellstrand, Elizabeth K.; Thompson, Aaron M. (2014) Effects of Check & Connect on Attendance, Behavior, and Academics: A Randomized Effectiveness Trial.: 1-11</p>	<p>- Conference abstract.</p>
<p>McDaniel, Sara C.; Kim, Sunyoung; Guyotte, Kelly W. (2017) Perceptions of Implementing Positive Behavior Interventions and Supports in High-Need School Contexts through the Voice of Local Stakeholders. <i>Journal of At-Risk Issues</i> 20(2): 35-44</p>	<p>- Qualitative study conducted outside of uK</p>
<p>McIntosh, Kent, Predy, Larissa K., Upreti, Gita et al. (2014) Perceptions of Contextual Features Related to Implementation and Sustainability of School-Wide Positive Behavior Support. <i>Journal of Positive Behavior Interventions</i> 16(1): 31-43</p>	<p>- Qualitative study conducted outside of uK</p>
<p>Mcloughlin, Caven S (2009) Positive peer group interventions: An alternative to individualized interventions for promoting prosocial behavior in potentially disaffected youth. <i>Electronic Journal of Research in Educational Psychology</i> 7(3): 1131-1156</p>	<p>- Quantitative - Study is not concerned with a whole-school approach</p>
<p>Melendez-Torres, G J, Allen, Elizabeth, Viner, Russell et al. (2021) Effects of a Whole-School Health Intervention on Clustered Adolescent Health Risks: Latent Transition Analysis of Data from the INCLUSIVE Trial. <i>Prevention science : the official journal of the Society for Prevention Research</i></p>	<p>- No outcomes of interest</p>
<p>Menard, Scott and Grotper, Jennifer K. (2014) Evaluation of Bully-Proofing Your School as an Elementary School Antibullying Intervention. <i>Journal of School Violence</i> 13(2): 188-209</p>	<p>- Study conducted before 2007</p>
<p>Meyers, Duncan C, Domitrovich, Celene E, Dissi, Rawan et al. (2019) Supporting systemic social and emotional learning with a schoolwide implementation model. <i>Evaluation and program planning</i> 73: 53-61</p>	<p>- Control group - Not usual practice</p>

Study	Code [Reason]
Motoca, Luci M, Farmer, Thomas W, Hamm, Jill V et al. (2014) Directed consultation, the SEALS model, and teachers' classroom management. <i>Journal of Emotional and Behavioral Disorders</i> 22(2): 119-129	- Population - teachers only
Multisite Violence Prevention, Project (2013) The moderating role of developmental microsystems in selective preventive intervention effects on aggression and victimization of aggressive and socially-influential students. <i>Prevention science : the official journal of the Society for Prevention Research</i> 14(4): 390-9	- Study conducted before 2007
Nelen, Monique J. M., Scholte, Ron H. J., Blonk, Anita M. et al. (2021) School-Wide Positive Behavioral Interventions and Supports in Dutch Elementary Schools: Exploring Effects. <i>Psychology in the Schools</i> 58(6): 992-1006	- No control group
Nese, Rhonda N T, Horner, Robert H, Dickey, Celeste Rossetto et al. (2014) Decreasing bullying behaviors in middle school: expect respect. <i>School psychology quarterly : the official journal of the Division of School Psychology, American Psychological Association</i> 29(3): 272-286	- Quantitative - Study is not concerned with a whole-school approach
Newgent, Rebecca A., Featherston, Larry W., Stegman, Charles E. et al. (2009) A Collaborative School-Based Mental Health Program that Helps Students Succeed. <i>ERS Spectrum</i> 27(2): 29-41	- Quantitative - Study is not concerned with a whole-school approach
Nielsen, Line, Meilstrup, Charlotte, Nelausen, Malene Kubstrup et al. (2015) Promotion of social and emotional competence: Experiences from a mental health intervention applying a whole school approach. <i>Health Education</i> 115(34): 339-356	- Single arm study.
Nitsch, E., Hannon, G., Rickard, E. et al. (2015) Positive parenting: A randomised controlled trial evaluation of the Parents Plus Adolescent Programme in schools. <i>Child and Adolescent Psychiatry and Mental Health</i> 9(1): 43	- Quantitative - Study is not concerned with a whole-school approach
Ogden, T.; Sorlie, M.-A.; Hagen, K.A. (2007) Building strength through enhancing social competence in immigrant students in primary school. A pilot study. <i>Emotional and Behavioural Difficulties</i> 12(2): 105-117	- Study conducted before 2007
Oliver, Regina M.; Lambert, Matthew C.; Mason, W. Alex (2019) A Pilot Study for Improving Classroom Systems within Schoolwide Positive Behavior Support. <i>Journal of Emotional and Behavioral Disorders</i> 27(1): 25-36	- Quantitative - Study is not concerned with a whole-school approach

Study	Code [Reason]
Olweus, Dan; Solberg, Mona E; Breivik, Kyrre (2018) Long-term school-level effects of the Olweus Bullying Prevention Program (OBPP). Scandinavian journal of psychology	- Study conducted before 2007
Ostrander, Jason, Melville, Alysse, Bryan, Janelle K et al. (2018) Proposed modification of a school-wide bully prevention program to support all children. Journal of School Violence 17(3): 367-380	- Qualitative study conducted outside of uK
Paige, Rachael (2020) Creating a Positive Culture within Primary Schools: Whole School Initiatives to Foster Effective Social Learning Relationships. Social and Learning Relationships in Primary Schools: 73	- Study is not an intervention study
Pas, E. T.; Waasdorp, T. E.; Bradshaw, C. P. (2015) Examining Contextual Influences on Classroom-Based Implementation of Positive Behavior Support Strategies: findings from a Randomized Controlled Effectiveness Trial. Prevention science 16(8): 1096-1106	- Study conducted before 2007
Pas, Elise T., Ryoo, Ji Hoon, Musci, Rashelle J. et al. (2019) A state-wide quasi-experimental effectiveness study of the scale-up of school-wide Positive Behavioral Interventions and Supports. Journal of school psychology 73: 41-55	- Study used a non-equivalent control group
Pas, Elise T., Ryoo, Ji Hoon, Musci, Rashelle et al. (2019) A State-Wide Quasi-Experimental Effectiveness Study of the Scale-up of School-Wide Positive Behavioral Interventions and Supports.: 1-48	- Study used a non-equivalent control group
Pas, Elise T and Bradshaw, Catherine P (2012) Examining the association between implementation and outcomes : state-wide scale-up of school-wide positive behavior intervention and supports. The journal of behavioral health services & research 39(4): 417-33	- Study used a non-equivalent control group
Patalay, P., Giese, L., Stankovic, M. et al. (2016) Mental health provision in schools: priority, facilitators and barriers in 10 European countries. Child and Adolescent Mental Health 21(3): 139-147	- Survey data - Barriers and facilitators UK data not disaggregated
Paul, Simone; Smith, Peter K.; Blumberg, Herbert H. (2012) Comparing Student Perceptions of Coping Strategies and School Interventions in Managing Bullying and Cyberbullying Incidents. Pastoral Care in Education 30(2): 127-146	- Qualitative - no qualitative data reported
Pffner, LJ, Rooney, M, Haack, L et al. (2016) 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 55(9): 762-770	- Quantitative - Study is not concerned with a whole-school approach

Study	Code [Reason]
Pieschl, Stephanie; Kourteva, Penka; Stauf, Leonie (2017) Challenges in the Evaluation of Cyberbullying Prevention-- Insights from Two Case Studies. <i>International Journal of Developmental Science</i> 11(12): 45-54	- Quantitative - Study focused on a single aspect of whole school approach
Pippa Lord, Ben Styles, Jo Morrison, Richard White, Joana Andrade, Susie Bamford, Clare Lushey, Megan Lucas, Robert Smith (2018) Families and Schools Together (FAST): Evaluation report and executive summary.	- Quantitative - Study focused on a single aspect of whole school approach
Powers, Joelle D, Swick, Danielle C, Wegmann, Kate M et al. (2016) Supporting prosocial development through school-based mental health services: A multisite evaluation of social and behavioral outcomes across one academic year. <i>Social Work in Mental Health</i> 14(1): 22-41	- Quantitative - Study is not concerned with a whole-school approach
Rawlings, Jared R and Stoddard, Sarah A (2019) A Critical Review of Anti-Bullying Programs in North American Elementary Schools. <i>The Journal of school health</i> 89(9): 759-780	- Systematic review References to be checked
Rhodes, Jean E., Camic, Paul M., Milburn, Michael et al. (2009) Improving Middle School Climate through Teacher-Centered Change. <i>Journal of Community Psychology</i> 37(6): 711-724	- Study conducted before 2007
Rishel, Carrie W., Tabone, Jiyoung K., Hartnett, Helen P. et al. (2019) Trauma-Informed Elementary Schools: Evaluation of School-Based Early Intervention for Young Children. <i>Children & Schools</i> 41(4): 239-248	- No outcomes of interest
Roach, Gareth (2014) A helping hand? A study into an England-wide peer mentoring program to address bullying behavior. <i>Mentoring & Tutoring: Partnership in Learning</i> 22(3): 210-223	- Quantitative - Study focused on a single aspect of whole school approach
Ryoo, Ji Hoon and Hong, Saahoon (2011) Investigating the Effectiveness of SW-PBIS on School's Accountability at Both Elementary and Middle Schools.: 1-20	- Conference abstract.
Sawyer, MG, Harchak, TF, Spence, SH et al. (2010) School-based prevention of depression: a 2-year follow-up of a randomized controlled trial of the beyondblue schools research initiative. <i>Journal of adolescent health</i> 47(3): 297-304	- Study conducted before 2007
Schroeder, Betsy A, Messina, Allison, Schroeder, Diana et al. (2012) The implementation of a statewide bullying prevention program: preliminary findings from the field and the importance of coalitions. <i>Health promotion practice</i> 13(4): 489-95	- Control group not defined in detail

Study	Code [Reason]
Schwager, Susanne, Berger, Uwe, Glaeser, Anni et al. (2019) Evaluation of "Healthy Learning. Together", an Easily Applicable Mental Health Promotion Tool for Students Aged 9 to 18 Years. <i>International journal of environmental research and public health</i> 16(3)	- Quantitative - Study is not concerned with a whole-school approach
Schwartz, Sarah E. O; Rhodes, Jean E; Herrera, Carla (2012) The influence of meeting time on academic outcomes in school-based mentoring. <i>Children and Youth Services Review</i> 34(12): 2319-2326	- Quantitative - Study focused on a single aspect of whole school approach
Shaw, Therese; Cross, Donna; Zubrick, Stephen R (2015) Testing for Response Shift Bias in Evaluations of School Antibullying Programs. <i>Evaluation review</i> 39(6): 527-54	- No usable data
SHAYKHI, Farzin; GHAYOUR-MINAIE, Matin; TOUMBOUROU John, W. (2018) Impact of the Resilient Families intervention on adolescent antisocial behavior: 14-month follow-up within a randomized trial. <i>Children and Youth Services Review</i> 93: 484-491	- Quantitative - Study is not concerned with a whole-school approach
Shek, Daniel T L and Sun, Rachel C F (2010) Effectiveness of the Tier 1 Program of Project P.A.T.H.S.: findings based on three years of program implementation. <i>TheScientificWorldJournal</i> 10: 1509-19	- Quantitative - Study conducted in a non-OECD country
Sheridan, Susan M., Bovaird, James A., Glover, Todd A. et al. (2012) A Randomized Trial Examining the Effects of Conjoint Behavioral Consultation and the Mediating Role of the Parent-Teacher Relationship. <i>School Psychology Review</i> 41(1): 23-46	- Quantitative - Study is not concerned with a whole-school approach
Sheridan, Susan M., Glover, Todd, Kwon, Kyongboon et al. (2009) Conjoint Behavioral Consultation: Preliminary Findings of Child Outcomes and the Mediating Effect of Parent-Teacher Relationships.: 1-9	- Conference abstract.
Sheridan, Susan M., Witte, Amanda L., Kunz, Gina M. et al. (2018) Rural Teacher Practices and Partnerships to Address Behavioral Challenges: The Efficacy and Mechanisms of Conjoint Behavioral Consultation. <i>Elementary School Journal</i> 119(1): 99-121	- Quantitative - Study is not concerned with a whole-school approach
Sheridan, Susan M, Witte, Amanda L, Holmes, Shannon R et al. (2017) The efficacy of conjoint behavioral consultation in the home setting: Outcomes and mechanisms in rural communities. <i>Journal of school psychology</i> 62: 81-101	- Quantitative - Study is not concerned with a whole-school approach
Sheridan, Susan M, Witte, Amanda L, Wheeler, Lorey A et al. (2019) Conjoint behavioral consultation in rural schools: Do	- Quantitative - Study is not concerned with a whole-school approach

Study	Code [Reason]
student effects maintain after 1 year?. School psychology (Washington, D.C.) 34(4): 410-420	
Silverstone, Peter H., Bercov, Marni, Suen, Victoria Y. M. et al. (2017) Long-term Results from the Empowering a Multimodal Pathway Toward Healthy Youth Program, a Multimodal School-Based Approach, Show Marked Reductions in Suicidality, Depression, and Anxiety in 6,227 Students in Grades 6-12 (Aged 11-18). <i>Frontiers in psychiatry</i> 8: 81	- Quantitative - Study is not concerned with a whole-school approach
Smith, Paula, O'Donnell, Lisa, Easton, Claire et al. (2007) Secondary Social, Emotional and Behavioural Skills (SEBS) Pilot Evaluation. Research Report No. DCFS-RR003.: 1-137	- Study conducted before 2007
Snyder, FJ, Acock, AC, Vuchinich, S et al. (2013) Preventing negative behaviors among elementary-school students through enhancing students' social-emotional and character development. <i>American journal of health promotion</i> 28(1): 50-58	- Study conducted before 2007
Snyder, FJ, Vuchinich, S, Acock, A et al. (2012) Improving elementary school quality through the use of a social-emotional and character development program: a matched-pair, cluster-randomized, controlled trial in Hawai'i. <i>Journal of school health</i> 82(1): 11-20	- Study conducted before 2007
Snyder, Frank J. (2012) Enhancing social-emotional and character development for youths' success: A theoretical orientation and an evaluation using a cluster-randomized design. <i>Dissertation Abstracts International: Section B: The Sciences and Engineering</i> 72(10b): 5926	- Dissertation
Snyder, Frank, Flay, Brian, Vuchinich, Samuel et al. (2010) Impact of a social-emotional and character development program on school-level indicators of academic achievement, absenteeism, and disciplinary outcomes: A matched-pair, cluster randomized, controlled trial. <i>Journal of research on educational effectiveness</i> 3(1): 26-55	- Study conducted before 2007
Sorlie, Mari-Anne and Ogden, Terje (2007) Immediate Impacts of PALS: A School-Wide Multi-Level Programme Targeting Behaviour Problems in Elementary School. <i>Scandinavian Journal of Educational Research</i> 51(5): 471-492	- Study conducted before 2007
Spanemberg, L.; Salum, G.A.; Bado, P. (2020) How can schools be integrated in promoting well-being, preventing mental health problems and averting substance-use disorders in urban populations?. <i>Current Opinion in Psychiatry</i> 33(3): 255-263	- No usable data

Study	Code [Reason]
Sprague JR, Biglan A, Rusby J GJAVC (2017) Implementing School wide PBIS in Middle Schools: Results of a Randomized Trial. <i>Journal of Health Science & Education</i> 1(2)	- Control group - Not usual practice
Stjernqvist, Nanna W, Sabinsky, Marianne, Morgan, Antony et al. (2018) Building school-based social capital through 'We Act - Together for Health' - a quasi-experimental study. <i>BMC public health</i> 18(1): 1141	- Intervention - Not a SEW focus
Strohmeier, Dagmar, Hoffmann, Christine, Schiller, Eva-Maria et al. (2012) ViSC Social Competence Program. <i>New directions for youth development</i> 2012(133): 71-84	- Overview of ViSC social competence program
Swift, Lauren E, Hubbard, Julie A, Bookhout, Megan K et al. (2017) Teacher factors contributing to dosage of the KiVa anti-bullying program. <i>Journal of school psychology</i> 65: 102-115	- Single arm study.
Tangen, Donna and Campbell, Marilyn (2010) Cyberbullying prevention: One primary school's approach. <i>Australian Journal of Guidance and Counselling</i> 20(2): 225-234	- Quantitative - Study is not concerned with a whole-school approach
Tanrikulu, Ibrahim (2018) Cyberbullying Prevention and Intervention Programs in Schools: A Systematic Review. <i>School Psychology International</i> 39(1): 74-91	- Systematic review References to be checked
Thorburn, Malcolm (2017) Evaluating Efforts to Enhance Health and Wellbeing in Scottish Secondary Schools. <i>Journal of Curriculum Studies</i> 49(5): 722-741	- Qualitative - Not focused on an intervention
Toner, Barbara K. (2011) The implementation of the bully prevention program: Bully Proofing Your School and its effect on bullying and school climate on sixth grade suburban students. <i>Dissertation Abstracts International Section A: Humanities and Social Sciences</i> 71(7a): 2314	- Dissertation
Top, Namik (2016) Social-emotional skills, parental monitoring, and behavioral and academic outcomes in 5th to 8th grade students: A longitudinal study on character development. <i>Dissertation Abstracts International Section A: Humanities and Social Sciences</i> 77(4ae): no-specified	- Dissertation
Top, Namik; Liew, Jeffrey; Luo, Wen (2017) Family and School Influences on Youths' Behavioral and Academic Outcomes: Cross-Level Interactions between Parental Monitoring and Character Development Curriculum. <i>The Journal of genetic psychology</i> 178(2): 108-118	- No usable data
Tyre, Ashli, Feuerborn, Laura, Beaudoin, Kathleen et al. (2020) Middle School Teachers' Concerns for Implementing	- Intervention - not a formal programme (only principles) so

Study	Code [Reason]
the Principles of SWPBIS. Journal of Positive Behavior Interventions 22(2): 93-104	was delivered differently in different schools
Upp, Ashlee A (2021) Mindful Mindset: A Study of the Implementation of Schoolwide Mindful Practices.	- Dissertation
Valdebenito, Sara, Eisner, Manuel, Farrington, David P. et al. (2019) What can we do to reduce disciplinary school exclusion? A systematic review and meta-analysis. Journal of Experimental Criminology: no-specified	- Systematic review and references checked
van der Ploeg, Rozemarijn; Steglich, Christian; Veenstra, Rene (2016) The support group approach in the Dutch KiVa anti-bullying programme: Effects on victimisation, defending and well-being at school. Educational Research 58(3): 221-236	- Both arms received WSA
van Niejenhuis, Coby; Huitsing, Gijs; Veenstra, Rene (2019) Working with parents to counteract bullying: A randomized controlled trial of an intervention to improve parent-school cooperation. Scandinavian journal of psychology	- Both arms received WSA
Van Ryzin, Mark J. and Roseth, Cary J. (2018) Cooperative Learning in Middle School: A Means to Improve Peer Relations and Reduce Victimization, Bullying, and Related Outcomes. Journal of educational psychology 110(8): 1192-1201	- Quantitative - Study is not concerned with a whole-school approach
Waasdorp, TE; Bradshaw, CP; Leaf, PJ (2012) The impact of schoolwide positive behavioral interventions and supports on bullying and peer rejection: a randomized controlled effectiveness trial. Archives of pediatrics & adolescent medicine 166(2): 149-156	- Study conducted before 2007
Walter, Heather J, Gouze, Karen, Cicchetti, Colleen et al. (2011) A pilot demonstration of comprehensive mental health services in inner-city public schools. The Journal of school health 81(4): 185-93	- Study conducted before 2007
Wang, Weijun, Vaillancourt, Tracy, Brittain, Heather L. et al. (2014) School Climate, Peer Victimization, and Academic Achievement: Results from a Multi-Informant Study. School Psychology Quarterly 29(3): 360-377	- Study is not an intervention study
Washburn, IJ, Acock, A, Vuchinich, S et al. (2011) Effects of a social-emotional and character development program on the trajectory of behaviors associated with social-emotional and character development: findings from three randomized trials. Prevention science 12(3): 314-323	- Overview of Positive action

Study	Code [Reason]
Webster, R. and Blatchford, P. (2013) The educational experiences of pupils with a Statement for special educational needs in mainstream primary schools: results from a systematic observation study. <i>European Journal of Special Needs Education</i> 28(4): 463-479	- Qualitative - Study is not concerned with a whole-school approach
WEGMANN Kate, M.; POWERS Joelle, D.; BLACKMAN, Kate (2013) Supporting vulnerable families through school-based mental health services: results of caregiver and teacher focus groups. <i>Journal of Family Social Work</i> 16(4): 297-313	- Qualitative study conducted outside of UK
Whitcomb, Sara A.; Woodland, Rebecca H.; Barry, Shannon K. (2017) An Exploratory Case Study of PBIS Implementation Using Social Network Analysis. <i>International Journal of School & Educational Psychology</i> 5(1): 52-64	- Single arm study.
White, Andrew Jonathan, Wertheim, Eleanor H., Freeman, Elizabeth et al. (2013) Evaluation of a Core Team Centred Professional Development Programme for Building a Whole-School Cooperative Problem Solving Approach to Conflict. <i>Educational Psychology</i> 33(2): 192-214	- Quantitative - Study is not concerned with a whole-school approach
Winther, Jo; Carlsson, Anthony; Vance, Alasdair (2014) A pilot study of a school-based prevention and early intervention program to reduce oppositional defiant disorder/conduct disorder. <i>Early intervention in psychiatry</i> 8(2): 181-9	- Study concerned with conduct disorder
Yang, An and Salmivalli, Christina (2015) Effectiveness of the KiVa Antibullying Programme on Bully-Victims, Bullies and Victims. <i>Educational Research</i> 57(1): 80-90	- Single arm study.
Yeager, David Scott, Fong, Carlton J, Lee, Hae Yeon et al. (2015) Declines in efficacy of anti-bullying programs among older adolescents: Theory and a three-level meta-analysis. <i>Journal of Applied Developmental Psychology</i> 37: 36-51	- Systematic review and references checked
Yeung, Alexander Seeshing, Mooney, Mary, Barker, Katrina et al. (2009) Does School-Wide Positive Behaviour System Improve Learning in Primary Schools? Some Preliminary Findings. <i>New Horizons in Education</i> 57(1): 17-32	- No outcomes of interest

Excluded economic studies

Reference	Reason for exclusion
Anderson, R., et al. (2014). Cost-effectiveness of classroom-based cognitive behaviour therapy in reducing symptoms of depression in adolescents: a trial-based analysis. <i>Journal of Child Psychology and Psychiatry</i> 55(12) 1390-1397.	NA

Reference	Reason for exclusion
Anttila S, Clausson E, Eckerlund I, Helgesson G, Hjern A, Hakansson PA, et al. Methods of preventing mental ill-health among schoolchildren. The Swedish Council on Health Technology A; 05 May 2010 2010. Available from: http://www.crd.york.ac.uk/CRDWeb/ShowRecord.asp?ID=3201000471 .	Paper not found
Bak PL, Midgley N, Zhu JL, Wistoft K, Obel C. The Resilience Program: preliminary evaluation of a mentalization-based education program. <i>Frontiers in psychology</i> . 2015;6:753.	No economic evaluation
Bannink R, Joosten-van Zwanenburg E, van de Looij-Jansen P, van As E, Raat H. Evaluation of computer-tailored health education ('E-health4Uth') combined with personal counselling ('E-health4Uth + counselling') on adolescents' behaviours and mental health status: design of a three-armed cluster randomised controlled trial. <i>BMC public health</i> . 2012;12:1083.	No economic evaluation
Belfield C, Bowden AB, Klapp A, Levin H, Shand R, Zander S. The Economic Value of Social and Emotional Learning. <i>Journal of Benefit-Cost Analysis</i> . 2015;6(3):508-44.	Wrong outcomes
Borman GD, Rozek CS, Pyne J, Hanselman P. Reappraising academic and social adversity improves middle school students' academic achievement, behavior, and well-being. <i>Proceedings of the National Academy of Sciences of the United States of America</i> . 2019;116(33):16286-91.	No economic evaluation
Bungay H, Vella-Burrows T. The effects of participating in creative activities on the health and well-being of children and young people: A rapid review of the literature. <i>Perspectives in Public Health</i> . 2013;133(1):44-52.	Systematic review
Cook PJ, Dodge K, Farkas G, Fryer RG, Jr., Guryan J, Ludwig J, et al. The (Surprising) Efficacy of Academic and Behavioral Intervention with Disadvantaged Youth: Results from a Randomized Experiment in Chicago. 2014	No economic evaluation
Das JK, Salam RA, Arshad A, Finkelstein Y, Bhutta ZA. Interventions for Adolescent Substance Abuse: An Overview of Systematic Reviews. <i>Journal of Adolescent Health</i> . 2016;59(2 Supplement):S61-S75.	Systematic review
Domitrovich CE, Durlak JA, Staley KC, Weissberg RP. Social-Emotional Competence: An Essential Factor for Promoting Positive Adjustment and Reducing Risk in School Children. <i>Child development</i> . 2017;88(2):408-16.	Systematic review
Ekwaru JP, Ohinmaa A, Tran BX, Setayeshgar S, Johnson JA, Veugelers PJ. Cost-effectiveness of a school-based health promotion program in Canada: A life-course modeling approach. <i>PLoS ONE</i> . 2017;12(5):e0177848.	Wrong outcomes

Reference	Reason for exclusion
Ford T, Hayes R, Byford S, Edwards V, Fletcher M, Logan S, et al. The effectiveness and cost-effectiveness of the Incredible Years Teacher Classroom Management programme in primary school children: results of the STARS cluster randomised controlled trial. <i>Psychological medicine</i> . 2019;49(5):828-42.	NA
Foster EM, Johnson-Shelton D, Taylor TK. Measuring time costs in interventions designed to reduce behavior problems among children and youth. <i>American journal of community psychology</i> . 2007;40(1-2):64-81.	Wrong study design
Foster EM. Costs and Effectiveness of the Fast Track Intervention for Antisocial Behavior. <i>Journal of Mental Health Policy and Economics</i> . 2010;13(3):101-19.	Wrong outcomes
Frick KD, Carlson MC, Glass TA, McGill S, Rebok GW, Simpson C, et al. Modeled cost-effectiveness of the Experience Corps Baltimore based on a pilot randomized trial. <i>Journal of Urban Health</i> . 2004;81(1):106-17.	Wrong patient population
Garmy P, Clausson EK, Berg A, Steen Carlsson K, Jakobsson U. Evaluation of a school-based cognitive-behavioral depression prevention program. <i>Scandinavian journal of public health</i> . 2019;47(2):182-89.	NA
Garmy P, Jakobsson U, Carlsson KS, Berg A, Clausson EK. Evaluation of a school-based program aimed at preventing depressive symptoms in adolescents. <i>The Journal of school nursing : the official publication of the National Association of School Nurses</i> . 2015;31(2):117-25.	No economic evaluation
George M, Taylor L, Schmidt SC, Weist MD. A review of school mental health programs in SAMHSA's national registry of evidence-based programs and practices. <i>Psychiatric services (Washington, D.C.)</i> . 2013;64(5):483-6.	Systematic review
Grimes KE, Schulz MF, Cohen SA, Mullin BO, Lehar SE, Tien S. Pursuing cost-effectiveness in mental health service delivery for youth with complex needs. <i>Journal of Mental Health Policy and Economics</i> . 2011;14(2):73-86.	Wrong setting
Guo JJ, Wade TJ, Keller KN. Impact of school-based health centers on students with mental health problems. <i>Public Health Reports</i> . 2008;123(6):768-80.	No economic evaluation
Haynes NM. Addressing students' social and emotional needs: The role of mental health teams in schools. <i>Journal of Health and Social Policy</i> . 2002;16(1-2):109-23.	No economic evaluation
Herman PM, Chinman M, Cannon J, Ebener P, Malone PS, Acosta J, et al. Cost Analysis of a Randomized Trial of Getting to Outcomes Implementation Support of CHOICE in Boys and Girls Clubs in Southern California. <i>Prevention science : the</i>	Wrong setting

Reference	Reason for exclusion
official journal of the Society for Prevention Research. 2020;21(2):245-55.	
Houri AK, Thayer AJ, Cook CR. Targeting parent trust to enhance engagement in a school-home communication system: A double-blind experiment of a parental wise feedback intervention. <i>School psychology (Washington, D.C.)</i> . 2019;34(4):421-32.	No economic evaluation
Hoven CW, Doan T, Musa GJ, Jaliashvili T, Duarte CS, Ovuga E, et al. Worldwide child and adolescent mental health begins with awareness: a preliminary assessment in nine countries. <i>International review of psychiatry (Abingdon, England)</i> . 2008;20(3):261-70.	No economic evaluation
Humphrey, N., et al. (2018). The PATHS curriculum for promoting social and emotional well-being among children aged 7-9 years: a cluster RCT. <i>Public Health Research</i> 6(10).	NA
Hunter LJ, DiPerna JC, Hart SC, Crowley M. At what cost? Examining the cost effectiveness of a universal social-emotional learning program. <i>School psychology quarterly : the official journal of the Division of School Psychology, American Psychological Association</i> . 2018;33(1):147-54.	NA
Iemmi V, Knapp M, Brown FJ. Positive behavioural support in schools for children and adolescents with intellectual disabilities whose behaviour challenges: An exploration of the economic case. <i>Journal of Intellectual Disabilities</i> . 2016;20(3):281-95.	Wrong outcomes
Jones DE, Karoly LA, Crowley DM, Greenberg MT. Considering Valuation of Noncognitive Skills in Benefit-Cost Analysis of Programs for Children. <i>Journal of Benefit-Cost Analysis</i> . 2015;6(3):471-507.	Systematic review
Kautz T, Heckman JJ, Diris R, ter Weel B, Borghans L. <i>Fostering and Measuring Skills: Improving Cognitive and Non-Cognitive Skills to Promote Lifetime Success</i> . 2014	Systematic review
Kolbe LJ. School Health as a Strategy to Improve Both Public Health and Education. <i>Annual Review of Public Health</i> . 2019;40:443-63.	Systematic review
Kuklinski MR, Briney JS, Hawkins JD, Catalano RF. Cost-benefit analysis of communities that care outcomes at eighth grade. <i>Prevention science : the official journal of the Society for Prevention Research</i> . 2012;13(2):150-61.	Wrong setting
Kuo E, Vander Stoep A, McCauley E, Kernic MA. Cost-effectiveness of a school-based emotional health screening program. <i>Journal of School Health</i> . 2009;79(6):277-85.	Wrong outcomes

Reference	Reason for exclusion
Kutcher S, Wei Y. Mental health and the school environment: Secondary schools, promotion and pathways to care. <i>Current Opinion in Psychiatry</i> . 2012;25(4):311-16.	Systematic review
Le LK-D, Esturas AC, Mihalopoulos C, Chiotelis O, Bucholc J, Chatterton ML, et al. Cost-effectiveness evidence of mental health prevention and promotion interventions: A systematic review of economic evaluationsAU. <i>PLoS Medicine</i> . 2021;18(5):e1003606.	Systematic review
Lee S, Kim C-J, Kim DH. A meta-analysis of the effect of school-based anti-bullying programs. <i>Journal of child health care : for professionals working with children in the hospital and community</i> . 2015;19(2):136-53.	No economic evaluation
Lee YY, Barendregt JJ, Stockings EA, Ferrari AJ, Whiteford HA, Patton GA, et al. The population cost-effectiveness of delivering universal and indicated school-based interventions to prevent the onset of major depression among youth in Australia. <i>Epidemiology and Psychiatric Sciences</i> . 2017;26(5):545-64.	NA
Long K, Brown JL, Jones SM, Aber JL, Yates BT. Cost Analysis of a School-Based Social and Emotional Learning and Literacy Intervention. <i>Journal of Benefit-Cost Analysis</i> . 2015;6(3):545-71.	No economic evaluation
Macdonald G, Livingstone N, Hanratty J, McCartan C, Cotmore R, Cary M, et al. The effectiveness, acceptability and cost-effectiveness of psychosocial interventions for maltreated children and adolescents: an evidence synthesis. programme NHTA; 17 Dec 2013 2016. Available from: http://www.crd.york.ac.uk/CRDWeb/ShowRecord.asp?ID=32013000983 .	Systematic review
Mackenzie K, Williams C. Universal, school-based interventions to promote mental and emotional well-being: what is being done in the UK and does it work? A systematic review. <i>BMJ open</i> . 2018;8(9):e022560.	Systematic review
May J, Osmond K, Billick S. Juvenile delinquency treatment and prevention: A literature review. <i>Psychiatric Quarterly</i> . 2014;85(3):295-301.	Systematic review
McCabe C. A systematic review of the cost effectiveness of universal mental health promotion interventions in primary schools. June 2007 2007.	Systematic review
McCabe C. Estimating the cost effectiveness of a universal mental health promotion intervention in primary schools: A preliminary analysis. Report to the NICE Public Health Interventions Programme. Leeds: Institute of Health Sciences, University of Leeds. 2007	NA

Reference	Reason for exclusion
McDaid D, Park AL. Investing in mental health and well-being: findings from the DataPrev project. <i>Health promotion international</i> . 2011;26 Suppl 1:i108-39.	Systematic review
Merry SN. Prevention and early intervention for depression in young people - A practical possibility? <i>Current Opinion in Psychiatry</i> . 2007;20(4):325-29.	Systematic review
Mihalopoulos C, Vos T, Pirkis J, Carter R. The population cost-effectiveness of interventions designed to prevent childhood depression. <i>Pediatrics</i> . 2012;129(3):e723-e30.	Wrong setting
Modi S, Joshi U, Narayanakurup D. To what extent is mindfulness training effective in enhancing self-esteem, self-regulation and psychological well-being of school going early adolescents? <i>Journal of Indian Association for Child and Adolescent Mental Health</i> . 2018;14(4):89-108.	No economic evaluation
Moodie ML, Fisher J. Are youth mentoring programs good value-for-money? An evaluation of the Big Brothers Big Sisters Melbourne Program. <i>BMC public health</i> . 2009;9:41.	Wrong setting
Muratori P, Bertacchi I, Giuli C, Nocentini A, Lochman JE. Implementing Coping Power Adapted as a Universal Prevention Program in Italian Primary Schools: a Randomized Control Trial. <i>Prevention science : the official journal of the Society for Prevention Research</i> . 2017;18(7):754-61.	No economic evaluation
Murray NG, Low BJ, Hollis C, Cross AW, Davis SM. Coordinated school health programs and academic achievement: a systematic review of the literature. <i>The Journal of school health</i> . 2007;77(9):589-600.	Systematic review
O'Connor K, Wozney L, Fitzpatrick E, Bagnell A, McGrath P, Radomski A, et al. An internet-based cognitive behavioral program for adolescents with anxiety: Pilot randomized controlled trial. <i>JMIR Mental Health</i> . 2020;7(7):e13356.	Wrong study design
Organisation for Economic C-o, Development. <i>PISA 2009 at a Glance</i> . 2011:97.	No economic evaluation
Philipsson A, Duberg A, Moller M, Hagberg L. Cost-utility analysis of a dance intervention for adolescent girls with internalizing problems. <i>Cost Effectiveness and Resource Allocation</i> . 2013;11(1):4.	Wrong setting
Poitras VJ, Gray CE, Borghese MM, Carson V, Chaput J-P, Janssen I, et al. Systematic review of the relationships between objectively measured physical activity and health indicators in school-aged children and youth. <i>Applied physiology, nutrition, and metabolism = Physiologie appliquee, nutrition et metabolisme</i> . 2016;41(6 Suppl 3):S197-239.	Systematic review

Reference	Reason for exclusion
Schmidt M, Werbrouck A, Verhaeghe N, Putman K, Simoens S, Annemans L. Universal Mental Health Interventions for Children and Adolescents: A Systematic Review of Health Economic Evaluations. <i>Applied health economics and health policy</i> . 2020;18(2):155-75.	Systematic review
Shackleton N, Jamal F, Viner RM, Dickson K, Patton G, Bonell C. School-Based Interventions Going beyond Health Education to Promote Adolescent Health: Systematic Review of Reviews. <i>Journal of Adolescent Health</i> . 2016;58(4):382-96.	Systematic review
Shoemaker EZ, Tully LM, Niendam TA, Peterson BS. The Next Big Thing in Child and Adolescent Psychiatry: Interventions to Prevent and Intervene Early in Psychiatric Illnesses. <i>The Psychiatric clinics of North America</i> . 2015;38(3):475-94.	Systematic review
Simon E, Dirksen C, Bogels S, Bodden D. Cost-effectiveness of child-focused and parent-focused interventions in a child anxiety prevention program. <i>Journal of Anxiety Disorders</i> . 2012;26(2):287-96.	Wrong setting
Simon E, Dirksen CD, Bogels SM. An explorative cost-effectiveness analysis of school-based screening for child anxiety using a decision analytic model. <i>European Child and Adolescent Psychiatry</i> . 2013;22(10):619-30.	Wrong setting
Skre I, Friberg O, Breivik C, Johnsen LI, Arnesen Y, Wang CEA. A school intervention for mental health literacy in adolescents: effects of a non-randomized cluster controlled trial. <i>BMC public health</i> . 2013;13:873.	No economic evaluation
Spence SH, Sawyer MG, Sheffield J, Patton G, Bond L, Graetz B, et al. Does the absence of a supportive family environment influence the outcome of a universal intervention for the prevention of depression? <i>International Journal of Environmental Research and Public Health</i> . 2014;11(5):5113-32.	No economic evaluation
Stallard P, Phillips R, Montgomery AA, Spears M, Anderson R, Taylor J, et al. A cluster randomised controlled trial to determine the clinical effectiveness and cost-effectiveness of classroom-based cognitive-behavioural therapy (CBT) in reducing symptoms of depression in high-risk adolescents. <i>Health Technology Assessment</i> . 2013;17(47)	NA
Stallard P, Skryabina E, Taylor G, Anderson R, Ukoumunne OC, Daniels H, et al. A cluster randomised controlled trial comparing the effectiveness and cost-effectiveness of a school-based cognitive behavioural therapy programme (FRIENDS) in the reduction of anxiety and improvement in mood in children aged 9/10 years. programme NPHR; 18 Nov 2015 2015. Available from:	NA

Reference	Reason for exclusion
<p>http://www.crd.york.ac.uk/CRDWeb/ShowRecord.asp?ID=32015001174.</p>	
<p>Turner AJ, Sutton M, Harrison M, Hennessey A, Humphrey N. Cost-Effectiveness of a School-Based Social and Emotional Learning Intervention: Evidence from a Cluster-Randomised Controlled Trial of the Promoting Alternative Thinking Strategies Curriculum. <i>Applied Health Economics and Health Policy</i>. 2019</p>	NA
<p>Waddell C, Hua JM, Garland OM, Peters RD, McEwan K. Preventing mental disorders in children: a systematic review to inform policy-making. <i>Canadian journal of public health = Revue canadienne de sante publique</i>. 2007;98(3):166-73.</p>	Systematic review
<p>Wei Y, Kutcher S. International school mental health: global approaches, global challenges, and global opportunities. <i>Child and adolescent psychiatric clinics of North America</i>. 2012;21(1):11-vii.</p>	Systematic review
<p>Wellander L, Wells MB, Feldman I. Does Prevention Pay? Costs and Potential Cost-Savings of School Interventions Targeting Children with Mental Health Problems. <i>Journal of Mental Health Policy and Economics</i>. 2016;19(2):91-101.</p>	NA
<p>Wright B, Marshall D, Adamson J, Ainsworth H, Ali S, Allgar V, et al. Social Stories to alleviate challenging behaviour and social difficulties exhibited by children with autism spectrum disorder in mainstream schools: design of a manualised training toolkit and feasibility study for a cluster randomised controlled trial with nested qualitative and cost-effectiveness components. programme NHTA; 11 May 2012 2016. Available from: http://www.crd.york.ac.uk/CRDWeb/ShowRecord.asp?ID=32011001660.</p>	Wrong study design