Surveillance report – conduct disorders in children and young people (2013) NICE guideline CG158

September 2015

Surveillance decision

We will not update the guideline at this time.

Reason for the decision

We found 15 new studies relevant to the guideline through the surveillance process.

We found new evidence on selective prevention, identifying effective treatment and care options, psychological and pharmacological interventions and the organisation and delivery of care. Topic expert feedback suggested that the new evidence was unlikely to impact on the guideline recommendations.

We did not find any new evidence on the general principles of care or identification and assessment of conduct disorders.

None of the new evidence considered in surveillance of this guideline was thought to have an effect on current recommendations.

See how we made the decision for further information.

Commentary on selected new evidence

With advice from topic experts we selected 2 studies for further commentary.

Psychological interventions – treatment and indicated prevention

In the guideline, indicated prevention refers to interventions targeted to high-risk individuals who are identified as having detectable signs or symptoms that

may lead to the development of conduct disorders but who do not meet diagnostic criteria for conduct disorders when offered an intervention.

We selected a randomised controlled trial by Perrin et al. (2014) for a full commentary because it showed parent training programmes to be beneficial and may provide new evidence to support existing recommendations.

What the guideline recommends

The guideline recommends offering group parent training programmes to parents of children and young people (aged between 3 and 11 years) who have been identified as being at high risk of developing oppositional defiant disorder (ODD) or conduct disorder, have ODD or conduct disorder or are in contact with the criminal justice system because of antisocial behaviour. For those not able to participate in group parent training programmes the guideline recommends offering individual parent training programmes.

The guideline suggests that group parent training programmes should typically:

- have between 10 and 12 parents in each group
- consist of 10 to 16 meetings of 90 to 120 minutes each
- be based on a social learning model which uses modelling, rehearsal and feedback to improve parenting skills
- adhere to the developer's manual and employ all of the materials needed to ensure consistent implementation.

For individual parent training programmes, the guideline suggests that they should also be based on social learning models, adhere to the developer's manual and employ all materials needed to ensure consistent implementation but that they should consist of 8 to 10 meetings of 60 to 90 minutes each.

Methods

Perrin et al. (2014) conducted a randomised controlled trial in the USA that compared a group undergoing a 10 week Incredible Years parent-training programme with a 'wait list' control group. The study included 273 parents of children (between 2 and 4 years) who had disruptive behaviours. Screening

for disruptive behaviours was done using the Infant–Toddler Social–Emotional Assessment scale. Parents of children scoring in the 80th percentile or greater were eligible for the study. Parents who could not speak English or Spanish to a level where they could be involved in a parenting group or who reported that their child had a diagnosis of pervasive developmental disorder or global developmental delay were excluded.

Parents were assigned to a parent training group or a wait list control group. Any parents who could not attend the parent training intervention stayed assigned to the intervention group and were asked to attend subsequent sessions. However, parents in the wait list control group were re-assigned to the intervention group in practices where fewer than 6 parents in the parent training intervention could attend a session.

Six of the 12 included practices did not recruit enough participants to form both intervention and control groups. These participants were assigned to the parent training intervention, which was kept as a non-randomised group.

The parent training intervention aimed to encourage proactive, nurturing parenting. To do this a variety of methods were used, including videotaped modelling, group discussion, role plays and home practice tasks. These were based on four models:

- play
- praise and reward
- effective limit setting
- handling misbehaviour.

Parent training groups met weekly over 10 weeks for 2 hours a week. Those in the wait list control group were invited to participate in an intervention after 1 year.

The primary outcomes were:

- the 30 item parenting scale, which assesses negative discipline styles

- the 36 item Early Childhood Behavior Inventory (ECBI), which assesses the presence and intensity of child disruptive behaviours.

The Coder Impression Inventory subscales were used to collect information about the observers overall impressions of the parent, the child and their interactions. Three components were examined:

- negative parenting
- child disruptive behaviours
- negative parent–child interaction.

Observers were blinded to treatment condition and observations were filmed at baseline, after treatment and at 12 month follow-up.

Results

For the parent training group (n=89), self-reports of negative parenting behaviour on the parenting scale were lower than baseline at 6 and 12 months follow-up:

- Baseline: adjusted mean 3, 95% confidence interval (CI) 2.7 to 3.2
- 6-month follow-up: mean 2.6, 95% CI 2.4 to 2.9
- 12-month follow-up: mean 2.6, 95% CI 2.3 to 2.8

No differences were found for the wait list control group (n=61) between baseline and follow-up:

- Baseline: mean 2.9, 95% CI 2.7 to 3.2
- 6-month follow-up: mean 2.8, 95% CI 2.6 to 3.1
- 12-month follow-up: mean 2.8, 95% CI 2.6 to 3.1

Results for the ECBI problem scale were similar. The parent training group had lower scores at follow-up compared with baseline.

- Baseline: mean 60.3, 95% CI 56.2 to 64.3
- 6-month follow-up: mean 56.2, 95% CI 52.1 to 60.3
- 12-month follow-up: mean 51.7, 95% CI 47.1 to 56.3

For the wait list control group little difference was found between baseline and follow-up for the ECBI problem scale score:

- Baseline: mean 60.7, 95% CI 56.6 to 64.7
- 6-month follow-up: mean 61.8, 95% CI 57.7 to 65.9
- 12-month follow-up: mean 59.7, 95% CI 55.5 to 63.8.

The ECBI intensity scale score was lower at both 6 and 12 months of follow-up compared with baseline for the parent training group:

- Baseline: mean 58.9, 95% CI 55.8 to 62
- 6-month follow-up: mean 57, 95% CI 53.9 to 60.1
- 12-month follow-up: mean 54.8, 95% CI 51.4 to 58.2

For the wait list control group, little difference was found between baseline and follow-up for the ECBI intensity scale score:

- Baseline: mean 59, 95% CI 55.9 to 62
- 6-month follow-up: mean 60.3, 95% CI 57.2 to 63.4
- 12-month follow-up: mean 58.8, 95% CI 55.7 to 61.9.

For the non-randomised parent training group, the findings for the parenting and ECBI scale scores were found to be similar to those for the randomised parent training group.

Results comparing parent training with control at follow-up showed the randomised parent training group to be superior to the wait list control group on the self-reported parenting scale at both 6 and 12 months follow-up:

- 6-month follow-up: standardised mean difference (SMD) − 0.38, 95% CI − 0.75 to − 0.02
- 12-month follow-up: SMD − 0.51, 95% CI − 0.88 to − 0.15

Similar results were found for both self-reported ECBI scales:

- ECBI problem scale 6-month follow-up: SMD − 0.43, 95% CI − 0.79 to − 0.07

- ECBI problem scale 12-month follow-up: SMD − 0.59, 95% CI − 0.95 to − 0.23

- ECBI intensity scale 6-month follow-up: SMD − 0.36, 95% CI − 0.72 to − 0.001

- ECBI intensity scale 12-month follow-up: SMD − 0.43, 95% CI − 0.79 to − 0.07

Parent training was also found to be superior to the wait list control on the negative parent–child interaction subscale of the Coder Impression Inventory (SMD − 0.38, 95% CI − 0.74 to − 0.02).

Strengths and limitations

Strengths

Strengths of this study are:

- It provides evidence for the effectiveness of a parent training intervention in an additional setting, paediatric practice. This adds to the generalisability of parent training interventions.
- According to the authors, the results show that the intervention is effective in settings with a wide range of risk. This is because of the differences in demographics across the paediatric centres included in the study. This adds to the generalisability of the findings.

Limitations

Limitations of this study are:

- It originally intended to randomise all participants. However, because not enough participants were recruited in 6 practices a non-randomised group was formed.
- Half of the included practices (6 out of 12) were unable to recruit enough participants to form both intervention and control groups.
- It was conducted in the USA and so the findings may not be applicable to the UK.

- The authors state that videotaped observations were a challenge technically because of space constraints. The audio quality differed depending on whether participants faced the camera when speaking and on room characteristics.

- The authors reported that there was an unexpected improvement in the control condition and maintenance of improvement in the intervention conditions at 12 month follow-up for observational variables. This may have been the result of learning effects from repeated observations of the protocol and the short length of the observations. This may have caused floor effects in the assessments of negative behaviours. Because of this, the results should be interpreted with caution.

- According to the authors, sample sizes were reduced by loss to follow-up and because of the third (non-randomised) group. For the randomised parent training group 17 participants dropped out compared with 11 in the control group. Reasons for drop-out are not provided. The non-randomised parent training group comprised 123 participants. Adding the third comparison group reduced statistical power. This also means that the results should be interpreted with caution.

- The authors suggest that there are issues about the generalisability of the findings, since many of the parents did not choose or were not able to participate in the parent training intervention as offered. Only 18 participants in the parent training group had more than 3 parent training group sessions and 71 participants had fewer than 3 group sessions. People's reasons for not being able to attend the sessions are not provided. The findings only apply to families who were able to complete the 10-week parent training programme when offered, and not to those who seek paediatric care for their children.

- Few details are provided about allocation concealment and blinding of participants and personnel, so we do not know the impact of selection bias or performance bias on the reported results.

- We do not know the impact of reporting bias on the findings, because few details of selective reporting were provided.

Impact on guideline

The study found that the parent training programme led to greater improvements in child disruptive behaviours and parenting practices. NICE CG158 recommends parent training interventions but is not specific on which parent training interventions to use.

Feedback from topic experts suggested that this study not only adds to the evidence for the approaches already recommended in the guideline but also provides evidence for an additional setting, paediatric practice. However, they also suggested that there are issues around the population recruited for this study. The participants were recruited from a relatively high income and well educated population, and it may be that these parents are more motivated to attend the intervention. As such, the findings of the study may not be completely applicable to the guideline population.

In addition, the study has a number of limitations and further evidence is needed on the effectiveness of this parenting intervention before specific recommendations can be made in the guideline.

Psychological interventions – treatment and indicated prevention

We selected a cluster randomised controlled trial by Baker-Henningham et al. (2012) for a full commentary because it adds to the limited evidence base and may, in the future, aid in the development of guideline recommendations.

What the guideline recommends

As well as parent training programmes, the guideline recommends offering group social and cognitive problem-solving programmes to children aged 9 to 14 years who are identified as being at high risk of ODD or conduct disorder , already have ODD or conduct disorder, or are in contact with the criminal justice system because of antisocial behaviour. It is recommended that these programmes should:

- be adapted to the child or young person's developmental level

- be based on a cognitive behavioural problem solving model that uses modelling, rehearsal and feedback to improve skills

- consist of 10 to 18 weekly meetings of 2 hours' duration

- adhere to the developer's manual.

Multimodal interventions are also recommended in NICE CG158, for children and young people between 11 to 17 years with conduct disorder. It is suggested that multimodal interventions should:

- involve the child or young person and their parents and carers

- have an explicit and supportive family focus

- be based on a social learning model

- be provided at the individual, family, school, criminal justice and community levels

- be provided by specially trained case managers

- typically consist of 3 to 4 meetings over a 3 to 5 month period.

Methods

[Baker-Henningham et al. (2012)](#) conducted a cluster randomised controlled trial to investigate the effectiveness of the Incredible Years Teacher Training Intervention compared with a control group. The study included 24 community pre-schools in an inner city area of Jamaica. In each school, 3 children from each class with the highest level of teacher-reported conduct problems were selected for evaluation. This resulted in the inclusion of 225 children aged 3 to 6 years in the study (113 from the intervention schools and 112 from the control schools).

All teachers and principals in the intervention schools were trained to use the Incredible Years Teacher Training Programme. The programme included the: "Use of collaborative and experiential learning, individual goal setting and self-monitoring, building teachers' self-efficacy, a focus on teachers' cognitions, behaviours and emotions and an emphasis on the teachers' ability to generalise the skills learned." Teachers and principals attended 8 full-day training workshops. Assistance in the classroom was provided that involved modelling, coaching, support and feedback in implementation of the

strategies. This was provided to each teacher in monthly 1-hour sessions over 4 months. Some educational material was also provided to help the teachers use the programme strategies.

The primary outcome was observed child behaviour at school. The 3 children from each class were observed for 15 minutes a day for 4 days (3 5-minute intervals). Observations were at different times of the school day. Event recording was used to count the number of aggressive/destructive behaviours and friendship skills in these observations. Instantaneous sampling was also used to code disruptive behaviours at 15 second intervals. Coding was based on the Dyadic Parent-Child Interaction Coding System (DPICS) and the Multi-Option Observation System for Experimental Studies (MOOSES). The frequency of conduct problems, activity levels, on-task behaviour and the following of rules and expectations in the classroom was assessed by the observers at the end of each 5- minute observation period. This was rated using a 7-point rating scale, in which higher levels of the behaviours were indicated by higher scores.

The observations were conducted by study researchers who were blinded to study design and group allocation.

The secondary outcomes were:

- Child attendance. This was taken from school records
- Teacher reports of child behaviour. This was measured using the Sutter-Eyberg Student Behavior Inventory (SESBI), Connor's Global Index, the Strengths and Difficulties Questionnaire (SDQ) and the Preschool and Kindergarten Behavior Scales (PKBSs) Social skills Scale
- Parents' reports of child behaviour. This was measured using the Eyberg Child Behavior Inventory (ECBI) and the SDQ
- Parents' attitude to school. This was measured using a 10-item questionnaire in which higher scores showed a positive attitude.

All questionnaires for secondary outcomes were administered by an interviewer who was blinded to study design and group allocation.

All outcomes were measured both at baseline and after the intervention, except for parents' attitude to school, which was measured after the intervention.

Results

Continuous variables were assessed using multilevel multiple regression models. The authors state that the entered fixed effects variables were child age, gender, baseline score and intervention status. The school and classroom were entered as random effects variables. The effect size was calculated as the regression coefficient divided by the pooled standard deviation at baseline.

For observed in-class behaviour, the teacher training intervention was found to reduce conduct problems (effect size [ES] 0.42, 95%, CI 0.12 to 0.71, p=0.006) and increase friendship skills (ES 0.74, 95% CI 0.41 to 1.40, p<0.0001).

Significant benefits of the intervention were also found for teacher-reported child behaviour difficulties (ES 0.47, 95% CI 0.18 to 0.76, p=0.001) and social skills (ES 0.59, 95% CI 0.35 to 0.84, p<0.0001), as well as parent-reported child behaviour difficulties (ES 0.22, 95% CI 0.03 to 0.42, p=0.03) and child attendance (ES 0.30, 95% CI 0.05 to 0.55, p=0.02). No significant benefits of the intervention were found for parents' attitude to school (ES 0.16, 95% CI −0.12 to 0.43, p=0.26).

Strengths and limitations

Strengths

Strengths of this study are:

- Methods of random sequence generation and allocation concealment were appropriate. This lowers the risk of selection bias and means that more confidence can be placed in the results
- Outcome assessors were blinded. This lowers the risk of detection bias and means that more confidence can be placed in the results

- A flow diagram of participant flow is provided, which allows the assessment of attrition bias. The number of participants lost to follow-up was 8 in the intervention group and 7 in the control group. All of the children lost to follow-up left school
- The authors note that the trial had a high response rate and follow-up rates. Of the 113 children included in the intervention group, 105 were available after the intervention. For the control group, 105 of the 112 children randomised were available at follow-up.

Limitations

Limitations of this study are:

- The authors state that teachers were aware of group allocation. They suggest that teachers in the intervention group may have given children more favourable ratings after the intervention. Therefore the findings of the teacher-rated outcomes should be interpreted with caution
- The authors state that control schools did not receive an alternative intervention. They suggest that the beneficial results found for the intervention may be due to the additional attention the intervention schools received
- According to the authors, some sharing of strategies between intervention and control teachers may have occurred, since 23% of teachers in the study were attending teacher training colleges
- It excluded schools with fewer than 20 children per class. This may limit the generalisability of the results
- Children with low school attendance were also excluded from the study. The authors suggest that if these children had been included the beneficial effect found for the intervention may have been reduced. Therefore, caution should be used in interpreting the findings
- The authors state that the benefits reported are only for post intervention. They state that it is not known if these benefits would continue if children transfer to new classes or to schools where there are untrained teachers

- The generalisability of the study may be limited by its setting. It was conducted in a school in the Caribbean where the school system may be different from the UK.

Impact on guideline

The study found the Incredible Years Teacher Training intervention to be beneficial for conduct problems. NICE CG158 does not make any recommendations on classroom-based interventions for treating conduct disorders. This is because the Guideline Committee thought that the current evidence did not support a recommendation on classroom-based interventions.

Feedback from topic experts suggested that the study's selection of participants was relevant to the guideline. Furthermore, because the participants were not self-selecting and already met a scale of disruptive behaviour, the intervention outcomes were important. It was also suggested that the intervention could translate to different populations and may be culturally relevant to the UK, since many children in the UK are of Caribbean heritage.

Topic expert feedback also highlighted the importance of research identifying effective interventions in a classroom. This is because parenting interventions do not, on the whole, improve child behaviour in schools. However, they also stated that more evidence is needed about interventions in the classroom.

The study has a number of limitations which may affect its applicability to the guideline and the interpretation of its findings. Further evidence is needed examining the effectiveness and cost-effectiveness of classroom-based interventions in the UK before recommendations can be made in the guideline.

How we made the decision

We check our guidelines regularly to ensure they remain up to date. We based the decision on surveillance 2 years after the publication of [Conduct disorders in children and young people](#). (2013) NICE guideline CG158.

For details of the process and update decisions that are available, see [ensuring that published guidelines are current and accurate](#) in 'Developing NICE guidelines: the manual'.

New evidence

We found 15 new studies in a search for randomised controlled trials published between 1 June 2012 and 1 May 2015.

We also checked for relevant ongoing research, which will be evaluated again at the next surveillance review of the guideline.

With advice from topic experts we selected 2 studies for further [commentary](#).

See appendix A: decision matrix for summaries and references for all new evidence considered in surveillance of this guideline.

Views of topic experts

We considered the views of topic experts, including those who helped to develop the guideline.

Views of stakeholders

Stakeholders are consulted only if we decide not to update the guideline following checks at 4 and 8 years after publication. Because this was a 2-year surveillance review, and the decision was not to update, we did not consult on the decision.

See [ensuring that published guidelines are current and accurate](#) in 'Developing NICE guidelines: the manual' for more details on our consultation processes.

Date of next surveillance

Our next surveillance to decide whether the guideline should be updated is scheduled for 2017.

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