

The effectiveness and cost-effectiveness of parent training/education programmes for the treatment of conduct disorder, including oppositional defiant disorder, in children

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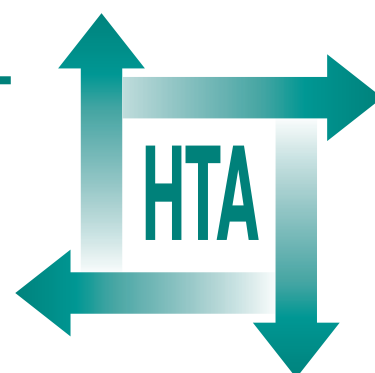
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Executive summary

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Executive summary

Aim

The aim of this review was to assess the clinical and cost-effectiveness of parent training programmes for the treatment of children up to the age of 18 years, with conduct disorder (CD).

Description of proposed service

Parent training/education programmes are short-term, structured interventions, which aim to help parents develop their parenting skills in order to manage children's problem behaviour more successfully. The programmes run on average for 10–12 weeks (with 1–2-hour weekly sessions) and their key components are documented and repeatable. Most programmes are behavioural and their primary focus is to address the causes of problem behaviour, although many programmes will also incorporate components that focus on relationship issues. The programmes can be group or individual based, with a therapist or counsellor facilitating the training, and can take place in a variety of settings (e.g. clinics or community centres). The programmes can also be self-administered using workbooks or videos. In a majority of programmes the focus of the intervention is on the parents only, although a few programmes exist that include children and/or teachers in the intervention.

Epidemiology and background

CD is a severe externalising disorder among children and adolescents (up to the age of 18) characterised by a constellation of persistent antisocial behaviours. Symptoms of CD overlap with those of oppositional defiant disorder (ODD) and attention deficit/hyperactivity disorder (ADHD), although these conditions also have characteristics that are distinct from either clinical condition independently. CD is the commonest psychiatric disorder of childhood (prevalence of around 5%) and the most common reason for referral for psychological and psychiatric treatment in children. Boys are more commonly affected than girls. CD is stable across time within both families and individuals and prognosis is

poor, with behaviour problems in childhood predicting a range of deleterious outcomes in adulthood, including delinquency and criminal behaviour. Although a diverse range of treatments has been used to treat CD, there has to date been an absence of clearly effective interventions.

Method

For the effectiveness review, relevant studies were identified and evaluated. A quantitative synthesis of behavioural outcomes across trials was also undertaken using two approaches: vote counting and meta-analysis. The economic analysis consisted of reviewing previous economic/cost evaluations of parent training/education programmes and the economic information within sponsor's submissions; carrying out a detailed exploration of costs of parent training/education programmes; and a *de novo* modelling assessment of the cost-effectiveness of parent training/education programmes. The potential budget impact to the NHS/Personal Social Services (PSS) in England and Wales was also considered if parent training/education programmes were to be implemented.

Number and quality of studies

Evidence was available from 37 randomised controlled trials (RCTs) that met the review inclusion and exclusion criteria. Overall, there was a lack of methodological detail, particularly concerning randomisation and allocation concealment, and as a result a majority of studies were assessed as being of poor methodological quality. Studies were clinically heterogeneous in terms of the population, type of parent training/education programme and content, setting, delivery, length and child behaviour outcomes used.

Direction of evidence

Both vote counting and meta-analysis revealed a consistent trend across all studies towards short-term effectiveness (up to 4 months) of parent training/education programmes (compared with

control) as measured by a change in child behaviour (based on parent reports and independent observations of child behaviour). Pooled estimates showed a statistically significant improvement on the Eyberg Child Behaviour Inventory frequency and intensity scales, the Dyadic Parent–Child Interaction Coding System and the Child Behaviour Checklist. No studies reported a statistically significant result favouring control over parent training/education programmes. There were few statistically significant differences between different parent training/education programmes, although there was a trend for more intensive interventions (e.g. longer contact hours, additional child involvement) to be more effective.

Costs of CD

The cost of treating CD is high, with costs incurred by many agencies. A recent study suggested that by age 28, costs for individuals with conduct disorder were around 10 times higher than for those with no problems, with a mean cost of £70,019. Criminality incurs the greatest cost, followed by educational provision, foster and residential care and state benefits. Only a small proportion of these costs fall on the NHS.

Costs of parent training/education programmes

Using a ‘bottom-up’ costing approach, the costs per family of providing parent training/education programmes range from £629 to £3839 depending on the type and style of delivery. These costs assume that a health visitor is employed to implement the parent training/education programmes on a salary of £25,015 per year, a high level of supervision is provided and, for group delivery, two health visitors will deliver the programme with an average attendance of eight families per group. It was not possible to translate results from RCTs into direct estimates of utility gain, and there were no long-term comparative data to permit the estimation of plausible lifetime gains. Utility gains from successful treatment are likely to affect utility for parents, siblings and others in addition to the affected child. Using the conservative assumption that there are no cost savings from treatment, a total lifetime quality of life gain of 0.1 would give a cost per quality-adjusted life-year of between £38,393 and £6288 depending on the type of programme delivery and setting.

Limitations of model

The modelling involves a number of strong assumptions, hence the results should be viewed with caution.

Notes on the generalisability of the findings

The majority of studies were undertaken in either North America or Australia, and the results may not therefore be generalisable to the UK. A number of studies that undertook longer term follow-up, albeit uncontrolled, suggest that the benefit in child behaviour following parent training/education programmes appears to be maintained over time.

Conclusion

On the balance of evidence, parent training/education programmes appear to be an effective and potentially cost-effective therapy for children with CD. However, the relative effectiveness and cost-effectiveness of different models of parent training/education programmes (such as therapy intensity and setting) require further investigation.

Need for further research

This review suggests that parent training/education programmes have not, to date, been widely evaluated in the UK. Further research is required on the impact of parent training/education programmes on the quality of life of children with conduct disorder and their parents/carers, the impact of parent training/education programmes on longer term child outcomes (such as educational achievement and criminality) and the effectiveness and cost-effectiveness of different models of parent training/education programmes.

Publication

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NHS R&D HTA Programme

The research findings from the NHS R&D Health Technology Assessment (HTA) Programme directly influence key decision-making bodies such as the National Institute for Health and Clinical Excellence (NICE) and the National Screening Committee (NSC) who rely on HTA outputs to help raise standards of care. HTA findings also help to improve the quality of the service in the NHS indirectly in that they form a key component of the 'National Knowledge Service' that is being developed to improve the evidence of clinical practice throughout the NHS.

The HTA Programme was set up in 1993. Its role is to ensure that high-quality research information on the costs, effectiveness and broader impact of health technologies is produced in the most efficient way for those who use, manage and provide care in the NHS. 'Health technologies' are broadly defined to include all interventions used to promote health, prevent and treat disease, and improve rehabilitation and long-term care, rather than settings of care.

The HTA Programme commissions research only on topics where it has identified key gaps in the evidence needed by the NHS. Suggestions for topics are actively sought from people working in the NHS, the public, service-users groups and professional bodies such as Royal Colleges and NHS Trusts.

Research suggestions are carefully considered by panels of independent experts (including service users) whose advice results in a ranked list of recommended research priorities. The HTA Programme then commissions the research team best suited to undertake the work, in the manner most appropriate to find the relevant answers. Some projects may take only months, others need several years to answer the research questions adequately. They may involve synthesising existing evidence or conducting a trial to produce new evidence where none currently exists.

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Reviews in *Health Technology Assessment* are termed 'systematic' when the account of the search, appraisal and synthesis methods (to minimise biases and random errors) would, in theory, permit the replication of the review by others.

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