

## **Cognitive Behaviour Therapy can be effective in managing behavioural problems and conduct disorder in pre-adolescence**

WHAT WORKS FOR CHILDREN?

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- In the UK, 6.9% of boys and 2.8% of girls from 5 to 10 years of age exhibit conduct disorder.
- 40% of 7 to 8 year olds diagnosed with conduct disorder become persistent offenders as teenagers; over 90% of persistent offenders had conduct disorder as children.
- Cognitive behavioural therapies (CBT) emphasise the process of learning in improving and maintaining behaviour. The client is encouraged to identify connections between thoughts and their responses to social situations.
- CBT often involves problem solving skills training. This type of training has been widely evaluated and there is evidence for its efficacy in the short term in treating aggression and conduct disorders in children.
- CBT may be appropriate for children whose families are unable to participate in parenting programmes, and is often delivered to groups at school or in other community settings.

*The searches for this Evidence Nugget were first done in 2002, with some updates in 2003, in response to reviewers' comments. A further update was conducted in 2006. The value of this document is time-limited as new research becomes available. For further details on the individual studies readers are recommended to go back to the original articles included.*

## **What is Cognitive Behaviour Therapy?**

CBT is used for a range of problems for children and adults. It places an emphasis on certain cognitive techniques that are designed to produce changes in thinking and therefore changes in behaviour or mood.<sup>1</sup> CBT also emphasises the learning process and the ways in which external environments can change both cognition and behaviour. CBT for children and adolescents usually includes a range of behaviour performance-based procedures, and often involve the family or school in therapy. It may include individual work, group sessions, or both. The length of treatment varies considerably and depends on the severity of difficulties experienced.

For children with conduct disorder and aggression CBT usually has a strong focus on social cognitions and interpersonal problem-solving. Programmes are often quite long and may take up to 25 or 30 weekly sessions. The therapist is active and involved and tries to develop a collaborative relationship that stimulates the child to think for him or herself. The approach aims to give the child the opportunity to try things out and develop new skills.<sup>1</sup>

### **Two Types of CBT**

#### *Social Skills and Anger Coping Skills Training*

A range of CBT approaches focus on how children with persistent behaviour problems often have a distorted understanding of social events. The programmes focus on modifying and expanding the child's understanding of beliefs and desires in others, as well as improving the child's own emotional response.<sup>2</sup>

#### *Problem Solving Skills Training*

A basic ingredient in CBT is to improve the problem-solving abilities of aggressive children and adolescents. The training helps them to deal with external problems that may provoke behaviours. The child is first encouraged to generate potential solutions to a problem. The child and the therapist then decide on the best solution and identify steps in implementing it. The child practices these steps, and finally the whole process is evaluated.<sup>1</sup>

## **What are behavioural problems and conduct disorders?**

Most children will occasionally exhibit difficult behaviour such as temper tantrums or occasional aggressive outbursts, but this behaviour becomes problematic when persistent. Children with frequent disruptive behaviour are usually classified as experiencing "emotional and behavioural difficulties" (EBD) and may be registered as having "special educational needs". Young children with similar behaviours may also be described as having "oppositional defiant disorder" (ODD).

Conduct disorder (CD) is a more extreme form of disruptive behaviour. The pattern is so severe it interferes with the child's ability to learn and develop. It is characterised by persistent aggressive or antisocial behaviour, deliberate damage to property, cruelty to other people or animals, theft, deceit, serious rule violation and bullying.<sup>3</sup> Isolated dissocial or criminal acts are not in themselves grounds for diagnosing CD, but would require an enduring pattern of behaviour of at least six months for such a diagnosis to be made.<sup>4</sup> Juvenile delinquency is a sociological, rather than a diagnostic category, and refers to children and adolescents who break the law. Delinquent behaviour may well lead to, or be part of, a conduct disorder, but not all children or adolescents who offend are conduct disordered.

Children with CD who are aggressive have been found to differ from their peers in that they respond to fewer, but hostile, social cues, making it more likely that they will interpret stimuli in a hostile way.<sup>5</sup> When confronted with social problems, conduct disordered children generate fewer solutions than children who do not have CD. Cognitive behaviour therapy (CBT) aims to target the attitudes and beliefs underlying such behaviours.

Research reports do not always adequately describe the severity and complexity of the difficulties these children experience, and a wide range of terms are used to describe behavioural and conduct problems. For the purpose of this Nugget the terms 'conduct disorder' and 'behavioural problem' is used interchangeably to encompass the range of behaviours described above.

## **Impact**

### *Size of the problem*

Conduct disorders frequently co-exist with a range of problems such as Attention Deficit Hyperactivity Disorder (ADHD), depression and anxiety. In the United Kingdom, rates of sub-clinical conduct disorder are difficult to verify, partly because of overlapping classification systems (e.g. ODD, EBD) and partly because EBD has no strict diagnostic criteria.<sup>6</sup> Rates of conduct disorder in the UK are reported to be 6.9% of boys and 2.8% of girls aged 5-10 years.<sup>7</sup>

### *Short and long term effects*

Costs for the child are high. Disruptive behaviours are associated with poor academic achievement, low self-esteem, low frustration tolerance, poor social skills and depressive symptoms.<sup>8</sup> They are more likely to truant from school and more likely to be in trouble with the police. As adults they are more likely to experience substance abuse, mental health disorders, relationship breakdown, and unemployment. These adults are also more likely to commit crime and abuse their children.<sup>9</sup>

Children who show behaviour indicative of EBD, ODD and CD may suffer damage to relationships with family, peers and teachers. The disruptive

behaviour can interfere with both classroom teaching and the behaviour of other children. The economic cost of such behaviour is high. In addition to educational needs, costs can include community health referrals, GP visits, involvement of social services, law enforcement agencies, and probation services, as well as the cost of property damage. Of 7 to 8 year olds with conduct disorder, 40% become persistent offenders as teenagers, and over 90% of persistent offenders had a conduct disorder as children.<sup>9,10</sup>

*Who will benefit the most?*

Children with conduct disorders are more likely to be living in lone parent families, with parents who have no educational qualifications, in families where neither parent is employed, in low-income households or in social sector housing.<sup>7</sup>

### **Research evidence**

A **systematic review** is a method of comprehensively identifying, critically appraising, summarising and attempting to reconcile the research evidence on a specific question.<sup>11,12</sup>

**Meta-analysis** is a statistical technique combining results from several studies into one overall estimate of the effect of an intervention.

There is a vast body of literature examining the effectiveness of psychological interventions on children with behavioural problems. This Nugget reports on findings from two systematic reviews of CBT interventions in general<sup>13,14</sup> and one systematic review of social skills training.<sup>15</sup> The reviews included programmes where the therapists worked directly with the children in groups or one-to-one settings.

Overall, child-based CBT interventions have been found to have a positive, but modest, effect in decreasing antisocial behaviour. The most promising effects were found by a recent meta-analysis of forty published and unpublished studies, measuring CBT's effect on anger and anger-related outcomes.<sup>13</sup> The children were aged between 7 and 18 (average age 12.5).

A smaller, but still positive, effect was found by an older meta-analysis of thirty studies.<sup>14</sup> The children in this review were slightly younger (average age 11.48) and the authors suggest that CBT may have a larger effect with older school-aged children and adolescents than with younger children. This review looked at the effect on antisocial behaviour, and therefore included a wider range of outcomes than the review focusing on anger-related outcomes only.

The third review focused on social skills training, and concluded that there is no evidence that this type of intervention improves behaviour disorders in children.<sup>15</sup> The mean age of the children was 10.34, and the social skills training was delivered either to groups or on an individual basis.

It is not clear from these reviews whether the children who received CBT had disabilities or other mental health issues in addition to their conduct disorder/behaviour problems. The CBT was mostly delivered to children in groups at school. Group sessions normally lasted around one hour.

A review of randomised and non-randomised studies of programmes targeting aggression in schools, including CBT, suggests that a programme's success depends on its strategy, implementation, format, and intensity.<sup>16</sup> The authors stress the importance of having well-implemented, relatively intense, one-to-one programmes conducted by trained staff. Some authors have argued that CBT interventions for adolescents administered in groups may make conduct problems worse<sup>6</sup> but the evidence is inconclusive.

#### *Limitations of the evidence?*

Although CBT is acknowledged to have a clear structure that has been well evaluated, critics argue that other widely used alternative interventions (e.g. consultation work, paediatric liaison) have been overlooked. The lack of systematic evaluation of these alternatives may result in bias towards evaluated approaches such as CBT.

CBT evaluations have been criticised for using mostly "demonstration programmes" (programmes introduced for the purpose of research and not part of routine practice). Evidence suggests that routine practice programmes may have a smaller effect than demonstration programmes, although the latter can show what is achievable under optimal circumstances.

Children may present with a range of disruptive behaviours not associated with anger control<sup>14</sup>, and often these complex cases are omitted from studies.<sup>6</sup>

It is likely that no single treatment approach will be sufficient for children with conduct disorder or persistent behaviour problems. The problems may be affected by both family and child factors, and may occur during interactions with parents, teachers or peers. Some children with conduct disorders do not respond to CBT; children with other diagnoses in addition to their conduct disorder, with poor peer relationships, or who come from dysfunctional families appear less likely to respond. It should also be noted that the clinical significance of the changes found in some studies is unclear; many children continue to have conduct problems after treatment.<sup>5</sup>

#### **What are the policy and practice implications?**

In the UK it is common policy that children with emotional or behavioural difficulties should be retained within mainstream schools with behaviour management plans in place wherever possible. This makes schools potential contact and treatment points for children.

Consider your target population when deciding on the most appropriate intervention. Children with conduct disorder often have lower than average verbal intelligence with a short attention span, and it may be appropriate to tailor the CBT to include less discussion and be more action-orientated.<sup>9</sup> The treatment should take into account the diagnosis and age of the child. In many cases, and for children with more than one diagnosis, multiple treatments are needed, requiring cross-agency collaboration across health, social services, education, juvenile justice, and voluntary sector agencies.<sup>6</sup>

Practitioners with knowledge of CBT theory and practice will certainly need to be included in the development of a programme, and possibly in the delivery. The UK Council for Psychotherapy offers information on seeking an accredited psychotherapist or on training relevant staff, specific to your chosen intervention. Contact details for this and other organisations can be found in the 'Contacts' section at the end of this nugget.

The application of CBT requires knowledge of social learning principles and a variety of different skills. These skills can be readily taught but this does take time. There is evidence that proper training in the psychological therapies enhances clinical efficacy.<sup>1</sup>

### **What are the resource implications?**

The costs of CBT will vary depending on the programme chosen, and whether it is integrated into existing services or targeted at a particular high-risk group. Initial assessment is important and may be costly when using a CBT approach because implementation will be tailored to the needs of each individual child.<sup>17</sup>

A recent (2004) estimate of the cost of employing a Clinical Psychologist, based on a mid-point salary and including on-costs and overheads, is £30 per hour overall and £69 per client contact hour.<sup>18</sup> Other professionals or non-professionals may be able to deliver this intervention, but appropriate training will be an important and significant budgeting consideration. The research quoted here mainly used graduate students.

Analysis of CBT in other contexts have shown it to be a cost effective intervention,<sup>19</sup> in particular in relation to youth offending.<sup>20</sup> Our literature searches did not find any cost-analyses of CBT for disruptive behaviour in children.

### **How will you audit an intervention using CBT?**

**Audit** provides a method for systematically reflecting on and reviewing practice. It aims to establish how close practice is to the agreed level of best practice. This is achieved by setting standards and targets and comparing practice against these.

Consider whether cognitive behavioural therapy for behavioural problems is appropriate for the needs of your community and your agency. Might

other interventions be more effective or appropriate? Should CBT be offered in conjunction with other approaches?

Then consider whether the conditions in your agency are in place for this approach to be implemented. Do you have the funds, people and training resources that you would need to implement behavioural training programmes? When introducing a targeted intervention such as this, it is worth considering how your scheme will be accessed, whether self-referral routes will be included? How will you ensure that you reach out to the young people at greatest risk? Further down the line, what proportions of young people referred or requesting CBT training, are offered therapy? Of these, what proportions attend and complete the therapy?

### **How will you evaluate an intervention using CBT?**

Service **evaluation** may be defined as a set of procedures to judge a service's merit by providing a systematic assessment of its aims, objectives, activities, outcomes and costs. Audit may be one activity which takes place during a service evaluation, alongside other activities such as routine data gathering, incident reporting and interviews with staff and service users.

You will need to identify and collect baseline data for relevant outcomes (e.g. school or home behaviour, school attendance and disciplinary records, contact with police). Specify clearly what the participant characteristics are. Behaviour can be assessed using standardised assessments, for example Goodman's Strength and Difficulties Questionnaire.<sup>21</sup> For young children, it may be more feasible to look at behaviours reported by teachers or parents than self-reported anger. You may wish to include other problems associated with conduct disorder and EBD (e.g. Attention Deficit/Hyperactivity Disorder).

Comparing baseline data to post-therapy data will enable you to determine any changes in behaviour. Try to be specific in what you choose to look at. The best evidence of effects will be gained if you can compare a group of young people who received the intervention (the intervention group) to a group of young people who did not receive any treatment (the control group). Ideally, those involved in the study (e.g. teachers) should not have an influence as to which group a child is allocated. Programmes may vary in selection of target groups, the delivery (and quality) of services, types of treatment, and the intervention goals.<sup>22</sup>

As well as looking at the overall effects on behaviour, remember to monitor the experiences of the participants, including negative consequences (e.g. risk of stigmatisation), for children, parents, teachers, and service providers. Drop out rates should also be included and recorded.

Implementing evaluation in a systematic manner not only allows you to make conclusions about what works best, but adds to the current evidence base for other practitioners.

## **Contacts**

The United Kingdom Council for Psychotherapy has a website detailing training information for psychotherapy, and finding a suitably qualified psychotherapist at [www.ukcp.org.uk](http://www.ukcp.org.uk)

The British Association of Behavioural and Cognitive Psychotherapies (BABCP) is a multi-disciplinary interest group for people involved in the practice and theory of behavioural and cognitive psychotherapy. Their website provides information on CBT courses held across the UK. [www.babcp.org.uk](http://www.babcp.org.uk)

The Royal College of Psychiatrists produces a leaflet for parents on conduct disorder, what the consequences may be, and how it can be managed at home. [www.rcpsych.ac.uk](http://www.rcpsych.ac.uk)

The social, emotional, and behaviour difficulties association (SEBDA) offers information for professionals within the field on [www.sebda.co.uk](http://www.sebda.co.uk)

**Search Strategy:**

A search strategy documents how studies were found; which databases/libraries/other contacts were used to find studies and when, what key words were used to locate them and what limitations were put on the search.

Age limits: For a review to be included the average age of study participants had to be higher than 5 and less than 13.

Search terms: (cognitive behavio\* therapy), (systematic reviews), meta-analysis, cost-effective\*

Databases searched: Cochrane database of systematic reviews, Database of Abstracts and Reviews of Effectiveness (DARE), PsycINFO, ERIC, British Educational Index (BEI)

Experts in the field were contacted for guidance on other sources of information.

Bibliographies of sources were examined for additional references.

The conclusions made should be viewed in the light of this restricted search strategy.

**The Research Team**

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## Reference List

1. Harrington R. Cognitive-behavioural therapies for children and adolescents. In: Gelder, M. G., Lopez-Ibor J.J., and Andreasen, N. C. (Eds). New Oxford Textbook of Psychiatry. New York: Oxford University Press; 2000
2. Fonagy P, Target M, Cottrell D, Phillips J, Kurtz Z. What works for whom? A critical review of treatments for children and adolescents. Guildford Press:2002.
3. Scott A, Shaw M, Joughin C. Finding the evidence. A gateway to the literature in child and adolescent mental health. London: Gaskell; 2001
4. World Health Organisation. The ICD-10 classification of mental and behavioural disorders: Clinical descriptions and diagnostic guidelines. Geneva.: World Health Organisation.; 1992
5. Van de Wiel N, Matthys W, Cohen-Kettenis PC, Van Engeland H. Effective treatments of school-aged conduct disordered children: recommendations for changing clinical and research practices. European Child & Adolescent Psychiatry 2002; **11**:79-84
6. Rutter M, Tizard J, Whitmore K. Education, Health and Behaviour. London: Longman; 2002
7. Green H, McGinnity A, Meltzer H, Ford T, Goodman R. Mental health of children and young people in Great Britain, 2004. Office for National Statistics on behalf of the Department of Health and the Scottish Executive. Palgrave Macmillan: 2005.
8. Sanders MR, Gooley S, Nicholson J. Early interventions in conduct problems in children. The Australian Early Intervention Network for Mental Health in Young People.: 2000.
9. Scott S. Fortnightly review: aggressive behaviour in childhood. British Medical Journal 17-1-1998; **316** (7126):202-206
10. Scott S, Knapp M, Henderson J, Maughan B. Financial cost of social exclusion: follow up study of antisocial children into adulthood. British Medical Journal 2001; **323**:191-194
11. NHS Centre for Reviews and Dissemination YU. The Database of Abstracts of Reviews of Effects (DARE). Effectiveness Matters 2002; **6** (2):1-2
12. Petticrew M. Systematic reviews from astronomy to zoology: myths and misconceptions. British Medical Journal 2001; **322**:98-101

13. Sukhodolsky DG, Kassinove H, Gorman BS. Cognitive-behavioral therapy for anger in children and adolescents: A meta-analysis. [References]. *Aggression and Violent Behavior* 2004; **9** (3): 247-269
14. Bennett DS, Gibbons TA. Efficacy of Child Cognitive-Behavioral Interventions for Antisocial Behavior: A Meta-Analysis. *Child & Family Behavior Therapy* 2000; **22** (1): 1-15
15. Kavale KA, Mathur SR, Forness SR, Rutherford MM. Effectiveness of social skills training for students with behavior disorders: a meta-analysis. *Advances in Learning and Behavioral Disabilities* 1997; **11**: 1-26
16. Wilson SJ, Lipsey MW, Derzon JH. The effects of school-based intervention programs on aggressive and disruptive behaviour: A meta-analysis: in press. *Journal of Consulting and Clinical Psychology* 2002; **71** (1): 136-149
17. Ronen T. Linking developmental and emotional elements into child and family cognitive-behaviour therapy. In: Graham, P. (Eds). *Cognitive-behaviour therapy for children and families*. Cambridge: Cambridge University Press; 1998
18. Curtis L, Netten A. Unit costs of health and social care 2004. University of Kent, Canterbury, Personal Social Services Research Unit: 2004.
19. Farrington D, Petrosino A, Welsh BC. Systematic reviews and cost-benefit analyses of correctional interventions. *The Prison Journal* 2001; **81** (3): 339-359
20. Robertson AA, Grimes PW, Rogers KE. A short-run cost-benefit analysis of community-based interventions for juvenile offenders. *Crime & Delinquency* 2001; **47** (2): 265-284
21. Goodman R. The Strength and Difficulties Questionnaire: A research note. *Journal of Child Psychology and Psychiatry* 1997; **38** (581): 586-
22. Durlak JA, Wells AM, Reddy LA, Pfeiffer SI. Evaluation of indicated preventive intervention (secondary prevention) mental health programs for children and adolescents. *American Journal of Community Psychology* 1998; **26** (5): 775-802