Authors' objectives
To review evidence for the efficacy of child-based cognitive-behavioural therapy (CBT) for anti-social behaviour.

Searching
PsycINFO was searched from 1974 to October 1998 for studies reported in the English language, using the search terms 'anger control', 'behavior therapy' 'cognitive therapy', 'social skills' cross-referenced by 'child', 'children' and 'adolescent(s)'. The reference sections of seven earlier meta-analyses were also searched.

Study selection
Study designs of evaluations included in the review
All controlled trials were eligible for inclusion.

Specific interventions included in the review
Child-based CBT. Studies were accepted as cognitive-behavioural if they used primarily CBT modalities (e.g. behavioural rehearsal, coaching, modelling) and used anger-management, assertiveness training, cognitive restructuring, relaxation, social problem-solving or social skills training for anti-social behaviour. Studies with different components of CBT were accepted. CBT was tested against no-treatment, attention or waiting-list control groups.

Participants included in the review
Children aged 18 years and younger (mean age: 11.48), with anti-social behavioural problems.

Outcomes assessed in the review
Studies had to report a measure of anti-social behaviour. Studies using an assessment of aggressive responses to hypothetical vignettes, or aggression scores based on projective measures, were excluded.

How were decisions on the relevance of primary studies made?
The authors do not state how the papers were selected for the review, or how many of the reviewers performed the selection.

Assessment of study quality
The studies were assessed for validity using the criteria of Durlak et al. (see Other Publications of Related Interest no.1). These rate trials based on sample size, randomisation, attrition, normed or blinded behavioural outcome measure, use of an attention placebo control group, and reported post-test data for all pre-test measures. The authors do not state how the papers were assessed for validity, or how many of the reviewers performed the validity assessment.

Data extraction
The authors do not state how the data were extracted for the review, or how many of the reviewers performed the data extraction.

The data were extracted into the following categories: age; number of participants; gender; number of sessions; session length; treatment length; number per group; follow-up period; type of referral; and source of outcome ratings. The effect sizes for each study were obtained by dividing the difference between the post-treatment intervention and control scores by the standard deviation (SD) of the control group.
Methods of synthesis
How were the studies combined?
Unweighted effect sizes were pooled. The effect sizes for weighted linear combinations of estimates were computed using the method of Hedges and Olkin (see Other Publications of Related Interest no.2), and pooled separately.

How were differences between studies investigated?
Sensitivity analyses were conducted for study quality, age, sample size, number of sessions, session length, number per group, year of publication, type of referral, and the source of outcome ratings.

Results of the review
Thirty trials (n=2,034) were included. Design data (e.g. randomisation, blinding) were not provided.

The mean effect size of CBT interventions at post-treatment was 0.48 (median 0.26, range: -1.60 to 4.29, SD=1.14) unweighted, and 0.23 weighted, indicating a small to moderate effect in decreasing anti-social behaviour. The sensitivity analyses showed only study quality was significantly correlated with effect size (p<0.05).

Authors' conclusions
Child-based CBT interventions may form an effective part of a multimodal treatment for children. The authors also note limitations of the review: none of the eligible studies included girls; only four eligible studies compared group versus individual interventions; research-based clinic studies such as those reviewed may not generalise to typical clinical settings; only twelve studies reported the results at follow-up.

CRD commentary
The review question was clear and the study selection criteria were clearly stated. The search strategy was limited to English language papers only, from a single database and the reference sections of previous meta-analyses. The study details tabulated were limited, e.g. CBT components were listed but details of the control treatments and study conduct were not. Surprisingly, quality scores were absent even though tests of heterogeneity showed that higher study quality correlated significantly with smaller effect size. The pooling of the data was appropriate given the homogeneity of the sample in other respects. However, the authors do not report whether tests for different components of CBT were conducted.

The authors' conclusions are reasonably cautious given the limitations that they acknowledge.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors state that future research into CBT for children's anti-social behaviour should investigate how age, gender, setting, and individual or group treatment relate to effect size.

Bibliographic details

Other publications of related interest

Indexing Status
Subject indexing assigned by CRD

**MeSH**
Adolescent; Antisocial Personality Disorder; Child; Child Behavior Disorders; Child, Preschool; Cognitive Therapy; Conduct Disorder /therapy; Social Behavior Disorders

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**Record Status**
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.