Systematic review of the efficacy of cognitive behaviour therapies for childhood and adolescent anxiety disorders


CRD summary
This review assessed the effectiveness of cognitive-behaviour therapy (CBT) for childhood and adolescence anxiety disorders. The authors concluded that CBT is useful for anxiety in children over 6 years old in the short term, but that the quality of reporting of the included studies was poor and further high-quality research is required. These conclusions are likely to be reliable.

Authors' objectives
To investigate the effectiveness of cognitive-behaviour therapy (CBT) as a treatment for childhood and adolescence anxiety disorders.

Searching
The Cochrane Controlled Trials Register, Current Controlled Trials, MEDLINE, EMBASE, PsycINFO, CINAHL, NHS EED, NTIS and the Index to Scientific and Technical Proceedings were searched (dates not specified); full search criteria are available from the authors. Thirteen relevant journals were handsearched from January 1990 to August 2003, and the reference lists of recent reviews and trials were checked. Experts in the field were also contacted.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs) were eligible for inclusion.

Specific interventions included in the review
Studies comparing CBT with an inactive control were eligible for inclusion. The included studies used individual CBT and group CBT with and without a significant family component. The number of sessions ranged from 10 to 18. The controls received no treatment.

Participants included in the review
Studies of participants aged 18 years or younger with a diagnosis of anxiety disorder were eligible for inclusion. Where the study included both diagnosed and undiagnosed cases of anxiety, the study was included only if the outcomes for the diagnosed group were reported separately. The anxiety disorder had to be the specific target of the intervention. Studies of participants with obsessive-compulsive disorder, post-traumatic stress disorder or simple phobia were excluded. The participants in the included studies were aged from 6 to 16 years and were diagnosed with social phobia, over-anxious disorder, social anxiety disorder, generalised anxiety disorder and avoidant disorder. In most of the studies the sample had mixed disorders. Apart from one school-based study, treatment took place in a clinical setting.

Outcomes assessed in the review
Studies using formal diagnosis as an outcome variable were eligible for inclusion. Studies relying on self-report measures for diagnosis were excluded. The primary outcome of interest was the number of cases that were diagnosis-free at the post-treatment assessment. Four different interview schedules were used to establish diagnosis. The follow-up in the included studies was only until the end of treatment (10 to 18 weeks).

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

Assessment of study quality
The studies were assessed using the following criteria: randomisation, recruitment method, comparability at baseline, blinding, therapeutic integrity of the intervention, intention-to-treat (ITT) analysis, outcome measures, study power and attrition rate. The possible total score ranged from 0 to 27. Two reviewers independently rated each trial and any disagreements were resolved by consensus. The inter-rater reliability was high (r=0.81).

**Data extraction**

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

The odds ratio (OR) and 95% confidence interval (CI) for remission after treatment were estimated for each study. ITT data were used for participants who were not followed up; the analysis assumed a favourable outcome in waiting-list controls and an adverse outcome in treated participants. Where a study used more than one form of CBT, the data were pooled to give an overall effect for CBT. The number-needed-to-treat (NNT) to prevent one case of unremitted anxiety was calculated.

**Methods of synthesis**

How were the studies combined?

A pooled OR and 95% CI were calculated using a random-effects meta-analysis.

How were differences between studies investigated?

Statistical heterogeneity was investigated using the method of DerSimonian and Laird. The relationship between recovery and treatment size was examined graphically.

**Results of the review**

Ten RCTs (n=636) were included.

The mean quality score was 16.2 (range: 13 to 17.5). Deficiencies included a lack of reporting of the randomisation method, whether the analysis was ITT or not, the power of the study and the attrition rate.

There was a higher remission rate in the group receiving CBT (56.5%) than in the control group (34.8%); the pooled OR was 3.27 (95% CI: 1.92, 5.55, P<0.001) and this was statistically significant. The estimated NNT for one positive outcome was 4. There was evidence of statistical heterogeneity (P=0.059). All studies reported a positive OR. Larger studies showed smaller treatment effect sizes.

**Authors' conclusions**

CBT is useful for the treatment of anxiety in children over 6 years old in the short term, although conclusions cannot be drawn about its efficacy in younger children or how it compares with alternative treatment options. The quality of reporting was poor in many of the trials and they had limited generalisability.

**CRD commentary**

The review addressed a clear research question using defined inclusion criteria. Several relevant databases were searched and this was supplemented by handsearches and attempts to locate unpublished studies. Some aspects of the review methodology were not described, so it was unclear whether appropriate attempts had been made to reduce error and bias during the study selection and data extraction processes. The methodological quality of the studies was assessed and their limitations were discussed. Relevant details about the included studies were provided. Possible sources of clinical and statistical heterogeneity in the meta-analysis were discussed. The authors' conclusions were appropriately cautious given the limitations they outlined.

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

Research: The authors stated that further high-quality research is required to compare the effectiveness of CBT with other available treatments for child and adolescent anxiety disorders. In particular, research is required to assess the long-term effectiveness of CBT in these groups and its effectiveness for under 6-year-olds and children with very severe or co-morbid disorders.

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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.