

Cognitive behavioural therapy improved symptoms in children with anxiety disorders

Kendall PC, Flannery-Schroeder E, Panichelli-Mindel SM, et al. *Therapy for youths with anxiety disorders: a second randomized clinical trial.* *J Consult Clin Psychol* 1997 Jun;65:366-80.

Objective

To evaluate the effectiveness of cognitive behavioural therapy (CBT) in treating children with anxiety disorders.

Design

Randomised controlled trial with 1 year of follow up.

Setting

Child and Adolescent Anxiety Disorders Clinic, Temple University, Pennsylvania, USA.

Patients

94 children (age range 9 to 13 y, 62% boys) with a primary anxiety disorder who had been referred from multiple community sources including clinics and general practitioners, or were self referrals from advertisements.

Intervention

60 children were allocated to 16 weeks of CBT and 34 were allocated to an 8 week waiting list control group. Children assigned to the control group were offered treatment after 8 weeks. The individual CBT sessions were aimed at the recognition and analysis of anxious cognition and the development of management strategies to cope with anxiety provoking situations. The Coping Cat workbook was used by the children to present goals and to promote interest and involvement in treatment.

Main outcome measures

Diagnostic status; child self reports of anxiety, fears, depression, coping ability, and negative cognitions; parent and teacher reports of child's behavioural problems and social competencies; parent reports of trait anxiety and coping ability; and behavioural observation.

Main results

Children improved over the study period with the majority of outcome measures showing greater improvement for children treated with CBT. At the end of treatment, 32 children (53%) receiving CBT no longer met diagnostic criteria for their primary anxiety disorder compared with 2 children (6%) in the control group [$p < 0.001$]* (table). For children who still met, and for those who no longer met, the diagnosis for their primary anxiety disorder at the end of treatment, children in the CBT group compared with those in the control group were better prepared to face and handle their most dreaded situations, showed greater gains over time on several anxiety scales and the depression inventory, and more children returned to within the normal range of scores on several psychopathological indices. Maintenance of gains due to CBT was evident at 1 year follow up.

Conclusions

Cognitive behavioural therapy was effective in improving symptoms in children with anxiety disorders. Between 2 and 4 children with an anxiety disorder needed to be treated with cognitive behavioural therapy to ensure that 1 child was successfully treated.

**p* value calculated from data in article.

Cognitive behavioural therapy (CBT) v waiting list control†

Outcome at post treatment	CBT EER	Control CER	RBI (95% CI)	ABI EER-CER	NNT (CI)
Free of primary anxiety disorder	53%	6%	807% (127 to 3229)	47%	3 (2 to 4)

†Abbreviations defined in glossary; RBI, ABI, NNT, and CI calculated from data in article.

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For article reprint: Dr P C Kendall, Department of Psychology, Temple University, 1701 North 13th Street, Weiss Hall, Philadelphia, PA 19122, USA. Fax +1 215 204 5539.

Commentary

This important study by Kendall *et al* provides support for the efficacy of CBT in children with anxiety disorders, and adds much needed information to previous publications on treatment of anxiety disorders. The methodology is strong; the study has a good sample size, employs manualised treatment, uses outcome measures from multiple informants, as well as behavioural observations, has a reasonable length for the intervention, and a 1 year follow up.

Interestingly, the results show that after 4 months of weekly treatment, 53% of the patients no longer met criteria for their baseline primary anxiety diagnosis. However, the other side of this finding is that almost half of the patients still had their primary anxiety diagnosis, although they were significantly improved from pre-treatment. In an era when managed care is paying for shorter duration and less frequent treatment, this study indicates

that more than 16 treatment sessions may be needed for some children with anxiety disorders.

As the authors highlight, future studies should identify which components of the treatment accounted for the success of the intervention. Other important areas of investigation should include comparison of different treatments or of combinations of treatments.

Predictors of outcome, such as comorbidity, family variables, therapist characteristics, and length of treatment also need further exploration. Replication of the study in a more diverse socioeconomic and ethnic sample or in a pure adolescent sample may be indicated. Over 60% of the patients had a family income of \geq US\$60 000 and 85% were white. Thus, the results may be less generalisable to families with different characteristics.

A current dilemma in the study of psychotherapies is how to facilitate transfer

of manualised treatments to community practice. After treatments are shown to be effective they need to be made available to practitioners. A process should be designed to pilot this manualised treatment for use by clinicians in the community and to evaluate treatment effectiveness.

This is an important study and we hope that more treatment work related to children with anxiety disorders will be forthcoming from this group of investigators.

Gail A Bernstein, MD
*University of Minnesota Medical School
Minneapolis, MN, USA*

Amy R Perwien, BA
*University of Florida
Gainesville, FL, USA*

Carrie M Borchardt, MD
*University of Minnesota Medical School
Minneapolis, MN, USA*