

Cognitive behavioural therapy for children and adolescents with anxiety disorders: clinical research advances

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Summary

Cognitive behavioural therapy for children and adolescents with anxiety is based upon both sound theoretical and empirical underpinnings. This article reviews the empirical support for the efficacy of this treatment as well as its adaptability and transportability to diverse population of children, to treatment type (e.g. group, individual or family) and treatment setting (academia, office practice, schools and communities). A description of the Coping Cat programme provides an example of how manualized cognitive behavioural therapy programmes can meet the needs of anxious youth.

Introduction

In the past 30 years treatment development research has focused on treatments that target specific disorders, and has moved away from applying non-specific intervention techniques (i.e. treatment-as-usual model) to the range of clinical problems in youth (Hibbs & Jensen, 1996; Kazdin, 1997). Changes in mental health care policy and the focus on evidenced based treatments contributed in part to this trend. Consequently, whether considering psychosocial or pharmacological treatments, a move towards a disorder-specific, evidenced based treatment management model appears to be the modal approach to clinical care preferred by clinicians (March & Ollendick, in press). In this article we describe the current status of evidence-based psychosocial treatments for anxiety disorders in youth. First, criteria for determining efficacy are explained. We then describe the cognitive behavioural model of psychotherapy for the three most common and co-existing childhood anxiety disorders, separation anxiety disorder, social phobia, and generalized anxiety disorder. Next, we briefly review the foundations for empirical support of a manualized, short-term cognitive behavioural therapy (CBT) for childhood anxiety. Finally, we provide a critique of the child CBT literature with directions for future research.

The American psychological association criteria for empirically supported treatments

During his term as president of the Division of Clinical Psychology of the American Psychological Association, David H. Barlow, Ph.D., convened a

task force to develop criteria by which to judge the empirical support of psychosocial treatments. The term 'Empirically-Supported Treatment' (EST) was coined to refer to treatments proven effective through rigorous controlled scientific research. The Task Force on Promotion and Dissemination of Psychological Procedures (Chambless *et al.*, 1998a, 1998b), now the Committee on Science and Practice, set forth the following standards to assign a designation of EST:

- (1) The EST must be compared to a no-treatment control group, alternative treatment group, or placebo condition (a) in a randomized controlled trial, controlled single case experiment or equivalent time series design, and (b) in which the treatment under study is statistically significantly superior to the comparison condition or equivalent to an already established EST.
- (2) The EST must be conducted with (a) a treatment manual or equivalent, (b) a population treated for specified problems, with reliable and valid inclusion criteria, (c) reliable and valid outcome measures, and (d) appropriate data analysis.
- (3) To be deemed efficacious, the superiority of the EST must have been demonstrated in at least two independent research settings. If there is conflicting evidence, the preponderance of well-controlled data must support the efficacy of the treatment in question.
- (4) For a designation of *probably efficacious*, one study (or research from one center) will suffice in the absence of conflicting evidence.
- (5) For a designation of *efficacious and specific*, the treatment must be shown superior to placebo (pill or psychosocial) or to an alternative treatment in

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at least two independent settings. If there is conflicting evidence, the preponderance of well-controlled data must support the treatment's efficacy and specificity.

The publication of these criteria combined with a list of treatments for adult disorders meeting the EST criteria introduced to the US standards for scientific rigor in psychotherapy studies (Chambless, 2002). With regards to the anxiety disorders, data from over 60 randomized controlled trials of CBT in adults with anxiety disorders support the efficacy (see Gould *et al.*, 1997a, 1997b) and effectiveness (Wade *et al.*, 1998) of this modality. Although far fewer controlled trials have focused on the treatment of anxious youth, the preponderance of evidence supports CBT for children with anxiety disorders. Before reviewing the extant literature, we describe the cognitive behavioural model and approach to treatment of anxious youth.

Overview of the cognitive behavioural approach to treatment

The cognitive behavioural model

Treatment from the cognitive behavioural perspective assumes that anxiety is a normal and expected emotion comprised of biological, behavioural, and psychological components. Individual risk for anxiety disorders vary given an individual's genetic predisposition, temperament, family history, learning and environmental experiences, parenting styles, and other endogenous and exogenous factors. In its adaptive or 'normal' form, anxiety serves a protective function for the individual to alert him or her to danger and/or to motivate certain adaptive behaviours to avoid stress or negative experiences (e.g. to study prior to an exam, look both ways before crossing a street). Anxiety is assumed to be a tripartite construct involving physiological, cognitive, and behavioural components (see Barlow, 2002). Physiological arousal occurs in the form of autonomic nervous system activity. These responses prepare an individual to respond with appropriate motor behaviour in stressful situations, such as when the 'fight or flight' response is activated. Consider the child, for example, who while riding his or her bicycle, suddenly turns a street corner and into the path of an approaching car. Gasping for breath, tightening of muscles (e.g. in gripping the handlebars, moving the legs to peddle faster or stop) are all physiological responses activated through this system. The cognitive component involves a narrowing of attention (shift in focus) towards the threat cues in a situation (or goal, to escape safely) and is accompanied by certain thoughts and images. Finally, slamming on the bicycle brakes, turning the handlebars to avoid the car, and screaming are behavioural reactions that occur to avoid a catastrophe.

Fears and anxiety in children and adolescents

Certain fear and anxiety reactions have been well documented as a normal and expected process during development, with the focus of anxiety changing at different ages and cognitive developmental levels (see Albano *et al.*, 2001, for a review). Thus, young children are expected to fear the dark, separation situations, and small animals. Fears of the dentist and thunderstorms occur in early elementary school, while a shift to evaluation fears (tests, oral reports) and social situations occur mostly in adolescence. Girls often endorse more fears than boys, and the number and types of fears reported by youth are fairly consistent across cultures (see Ollendick *et al.*, 1994). Fear or anxiety become problematic (at the disorder level) when expected developmental levels are exceeded, resulting in significant distress and impairment at home, school, and in social contexts (Albano *et al.*, 1996; Kazdin & Weisz, 1998; Kendall, 2000). The age of onset of the anxiety disorders roughly correspond to the ages at which expected developmental fears occur. Thus, separation anxiety disorder (SAD) has a fairly early age of onset (young school-age children, ages 6–9), generalized anxiety disorder (GAD) most often onsets by the middle school years (ages 10–12) and social phobia (SoP) more so in adolescents (12 and older) (see Albano *et al.*, 1996). As noted in prior reviews, these three anxiety disorders commonly co-occur, as the presence of one of the disorders increases the risk for developing additional anxiety disorders (e.g. Brady & Kendall, 1992; Kendall & Brady, 1995; Kendall *et al.*, 2001).

CBT for child and adolescent anxiety disorders

CBT for childhood anxiety disorders has five components: psychoeducation, somatic management skills training, cognitive restructuring, exposure methods, and relapse prevention plans. Psychoeducation provides corrective information about anxiety and feared stimuli. Somatic management techniques target autonomic arousal and related physiological responses. Developmentally appropriate, cognitive restructuring skills are focused on identifying maladaptive thoughts and teaching realistic, coping-focused thinking. Exposure techniques involve graduated, systematic, and controlled exposure to feared situations and stimuli. Relapse prevention methods focus on consolidating and generalizing treatment gains over time.

A manualized CBT protocol for anxiety in youth

Kendall and colleagues were the first to develop and test the efficacy of a protocol-driven CBT programme for anxiety disorders in children and adolescents (Kendall, 1990). We review the

empirical support for this protocol below, but first present an overview of its structure and elements.

Based on experience and extensive evaluation of manualized treatments, Kendall and colleagues recommend a flexible, clinically sensitive, and developmentally appropriate application of CBT for youth with anxiety disorders (Kendall & Chu, 2000; Kendall *et al.*, 1998). This flexibility must be driven by the therapist's training and expertise in working with youth of various ages and demographic backgrounds, and knowledge of child development and the specific challenges of various developmental stages. Moreover, a comprehensive understanding of child psychopathology is essential in the treatment of youth, as different diagnoses share certain symptoms (e.g. inability to concentrate in GAD may be confused with inattention in attention deficit hyperactivity disorder), and certain symptoms can manifest differently at various ages. Comorbidity among the anxiety disorders and other internalizing and externalizing disorders is also an issue, and the various comorbid combinations can dictate adaptations to a treatment plan. Finally, a firm foundation in cognitive behavioural theory and empiricism, and the principles of applied CBT is essential. CBT is not simply a 'toolbox' of techniques, but involves a theoretical and empirical approach to understanding, assessing, and treating emotional disorders. A comprehensive educational and training history, appropriate continuing education, and adherence to the CBT model distinguishes the CBT therapist from those who, through widespread dissemination of CBT protocols, may haphazardly apply techniques without fully appreciating their bases and utility (Albano, *in press*). Thus, the manualization of CBT allows for adherence to the theoretical model and effective components of treatment, although flexibility in the use of manuals has been encouraged (Dobson & Shaw, 1988) to adapt to the varying presentation of the patient. Research indicate competent therapists are able to maintain efficacy with flexible implementation (Kendall & Chu, 2000).

The Coping Cat Programme (Kendall, 1990) involves roughly 14–18, 60-minute sessions over a 12–16 week period. The first six to eight sessions focus on teaching new skills to the child, whereas the second eight sessions provide the child the opportunity to practice newly learned skills (exposure) both within session and *in vivo*. The overall goal of CBT is to teach youth to recognize the signs of unwanted anxious arousal and to let these signs serve as cues for the use of anxiety management strategies they are taught. The main principles of the Coping Cat protocol are: (1) recognizing anxious feelings and somatic reactions to anxiety, (2) identifying cognition in anxiety-provoking situations (i.e. unrealistic or negative expectations), (3) developing a plan to cope with the situation (i.e. modifying anxious self-talk into coping self-talk as well as determining what coping actions might be effective), (4) behavioural

exposure, and (5) evaluating performance and self-reinforcement. The treatment uses behavioural training strategies such as modeling, imaginal and *in vivo* exposure, role-play, relaxation training, and contingent reinforcement. To help reinforce and generalize the skills, specific homework tasks are assigned along with specific techniques to enhance relapse prevention.

Consistent with initial evidence that parent involvement may improve treatment outcome in anxious children (Barrett *et al.*, 1996), parent involvement in the child's treatment occurs on several levels. Parents' interactions with the therapist occur regularly (weekly update, scheduling, etc.), and parents are included in exposure exercises as appropriate. Parents are engaged as collaborators and consultants to the child's treatment, and given a model for assisting with the treatment in the role of the child's 'cognitive behavioural coach'. In addition to a regular 10-minute check-in at the start of each session, parents are scheduled for meetings with the therapist after the third and eighth sessions, and prior to the end of treatment. This active involvement of parents in the child or adolescent's treatment plan will vary depending upon a number of factors including degree of impairment, comorbidity, age and developmental level of the child (i.e. degree of independent functioning). Thus, parents of young separation anxious youth may be asked to arrange play dates or a sleep-over at another child's home. The parents of a child with GAD could be instructed to desist in providing reassurance, if the child consistently asks 'What if' questions and requires much reassurance about worries and fears. And, for the social phobic youth, parents may find themselves arranging small group gatherings in their home for their child and friends. However, active involvement of the parents may be impeded by marital discord, parental psychopathology, or other psychosocial stresses such as economic or environmental problems. Thus, the clinician will assess each individual situation and 'dose' the parental involvement accordingly.

The foundations of empirical support for CBT for youth with anxiety disorders

In the first study of the Coping Cat programme (Kendall, 1994), 47 children ages 8–13 years with SAD, GAD, and SoP (including the DSM-III diagnosis of avoidant disorder of childhood) were randomized to either CBT or a wait-list condition (Kendall, 1994). Children in the CBT condition demonstrated significant improvement from pre- to post-treatment on self- and parent-reported distress and coping abilities, observation of child behaviour, and diagnostic status. In total, 66% of treated children no longer met criteria for their primary anxiety diagnosis at post-treatment, based on diagnostic severity ratings from the Anxiety Disorders Interview

Schedule for Children (Silverman & Nelles, 1988). These results were maintained at 1-year follow-up. In a further follow-up of treated youth, (2–5 year follow-up, $X = 3.5$ years; $N=36$), gains were maintained on self-report, parent-report, and diagnostic interview measures (Kendall & Southam-Gerow, 1996). In a second controlled trial, 94 children ages 9–13 years were randomized to the CBT protocol or a wait-list condition. Over 50% of treated youth were free of their primary diagnosis at post-treatment, with significant reductions in clinical severity for youth who continued to report anxiety symptoms. Gains were maintained at 1-year follow-up, with the majority of youth evidencing greater improvement over time (Kendall *et al.*, 1997).

Kendall's programme has earned the distinction of an empirically supported treatment (EST) through independent testing in other settings. For example, the protocol has proven to be both transportable and adaptable to other cultures such as in Australia (e.g. Barrett *et al.*, 1996) and Canada (Mendlowitz *et al.*, 1999). To date, CBT protocols including the Coping Cat have also been adapted to the group format and have demonstrated efficacy for a range of ages and conditions: anxious youth ages 7–14 (Barrett, 1998; Cobham *et al.*, 1998; Flannery-Schroeder & Kendall, 2000; Silverman *et al.*, 1999a), school refusal (King *et al.*, 1998), social phobia in children (Beidel *et al.*, 2000), and adolescents (Albano *et al.*, 1995; Hayward *et al.*, 2000), and single-session treatment for specific phobias (Öst *et al.*, 2001). For complete reviews on the efficacy of CBT for child anxiety, see Kazdin & Weisz, 1998, or Ollendick & King, 1998.

Critique of the child CBT literature

The CBT studies described earlier are considered exemplary in several ways: the inclusion of rigorous and standardized assessment procedures, comparison of the active treatment with a control condition; clinically meaningful outcome criteria and long-term follow-up demonstrating maintenance of gains (Kazdin & Weisz, 1998). However, the results must be interpreted carefully due to the presence of one or more methodological issues. Outcomes for CBT are sometimes cited for study completers, not the intent-to-treat sample. In the most methodologically rigorous CBT studies, results reported for the intent-to-treat sample are more modest. For example, Flannery-Schroeder & Kendall (2000) reported response rates of 50 and 73% for completers of group and individual CBT, respectively. Using intent-to-treat analyses the response rates dropped to 46 and 50%, respectively, indicating that some children continue to have anxiety symptomatology. Choosing a control condition for CBT studies is also an issue. Both wait-list control and educational support have been criticized as inadequate (Klein,

1997). Wait-list control has been argued to not be a true comparative treatment or psychotherapy control. Educational support has been criticized because it may contain components of active elements of CBT such as psychoeducation. For example, two recent studies demonstrated relatively equivocal effects for CBT as compared to control conditions, not because of the lack of efficacy of the active treatment but because of a high response rate for the educational support control (e.g. Last *et al.*, 1998; Silverman *et al.*, 1999b). Some CBT studies include youth with specific phobias as the primary diagnosis, and this may elevate response rates. In addition, some CBT studies defined a responder as one who no longer meets criteria for the primary anxiety disorder, without taking into account the continued presence of comorbid anxiety diagnoses, presence of subsyndromal symptoms of anxiety, other psychiatric conditions, and global impairment.

Summary and future directions

As noted in articles presented in this special series, anxiety disorders in children and adolescents are serious, relatively stable conditions which onset early in life and run a fluctuating course throughout the lifespan. Failure to intervene early with effective treatments may render the child vulnerable to impairments in a wide range of functioning and result in deleterious effects on his or her long-term emotional development. Concurrent with the zeitgeist of developing focused, empirically supported treatments for the range of emotional disorders in children and adults, CBT for childhood anxiety disorders has emerged as an efficacious psychosocial treatment approach. The protocol described in this article, The Coping Cat, incorporates all the essential elements of CBT along with allowing for appropriate flexibility to account for specific child and family factors that need to be addressed in treatment. Empirical studies support the efficacy and transportability of this programme, along with its adaptation to group or family format and diverse cultures. Investigators are actively adapting and utilizing the firm foundation of CBT, and the procedures found to be effective within the Coping Cat programme, to address a wide range of anxiety and related disorders in youth. In addition to the development of clinic-based treatment protocols for these disorders, studies of the transportability of CBT to non-traditional settings such as schools and primary care are underway (Masia, personal communication). Among the most exciting and clinically relevant of current research programmes in progress is a large study sponsored by the National Institutes of Mental Health examining the efficacy of CBT, medication, and their combination as compared to placebo after acute treatment, along with examining the long-term benefits of the active treatment conditions. Overall, these research

programmes are geared towards finding the best solutions for youth who suffer with anxiety disorders by arming clinicians in both traditional and non-traditional settings with empirically supported methods for stopping the progress of anxiety.

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