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Effectiveness of group cognitive-behavioral treatment for childhood anxiety in community clinics

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ABSTRACT

This study evaluated the effectiveness of cognitive-behavioral treatment for childhood anxiety in a community clinic setting in Hong Kong, China. Forty-five clinically-referred children (age 6–11 years) were randomly assigned to either a cognitive-behavioral treatment program or a waitlist-control condition. Children in the treatment condition showed significant reduction in anxiety symptoms—both statistically and clinically—whereas children in the waitlist condition did not. After the waitlist period was over, the control group also received the treatment program and showed a similar reduction in symptoms. For the full sample of 45 children, the effectiveness of the intervention was significant immediately after treatment and in 3- and 6-month follow-ups. In addition, children's anxiety cognition and their ability to cope with anxiety-provoking situations fully mediated the treatment gains. These results offer empirical support for cognitive-behavioral treatment programs in a non-Western cultural context and plausible mediators for how cognitive-behavioral therapy works.

From infancy onward, fear and anxiety can be adaptive because they heighten vigilance in threatening situations, but excessive fear and anxiety can cause distress. Anxiety disorders constitute the most commonly diagnosed psychological disorders for children and, if untreated, tend to persist over time (Anderson, 1994; Saavedra & Silverman, 2002). Even when children recover from early anxiety disorders, they often develop others. Childhood anxiety disorders also predict problems in adulthood, including suicidal thoughts and attempts (Boden, Fergusson, & Horwood, 2007) and an overall reduced quality of life (Olatunji, Cisler, & Tolin, 2007). Even mild cases increase the risk for later anxiety, internalized symptoms, social incompetence, isolation, and shyness (Hirshfeld-Becker & Biederman, 2002).

The Coping Cat program (Kendall, 1992), typically 15 to 20 sessions long, is arguably the best recognized and evaluated cognitive-behavioral therapy (CBT) protocol for childhood anxiety problems. Benefits have been found, both immediately and at 1-year follow-up, for American children with separation anxiety disorder, overanxious disorder, social phobia, and avoidant disorder (Kendall, 1994; Kendall et al., 1997). Adaptations of the program can be found in Canada (e.g., Coping Bear; Manassis, Avery, Butalia, & Mendlowitz, 2004) and Australia (e.g., Coping Koala, Friends Program; Barrett, Dadds, & Rapee, 1996).

The program's benefits have primarily been found in "efficacy" research—typically administered under optimal conditions in randomized controlled clinical trials with relatively homogeneous samples and minimal co-morbidities—leading to its classification as a "probably efficacious" treatment for both individuals and groups (APA Task Force, 1995; Flannery-Schroeder & Kendall, 2000; Kendall, Hudson, Gosch, Flannery-Schroeder, & Suveg, 2008; Manassis et al., 2002; Silverman et al., 1999). By contrast, "effectiveness" research assessing how well the program works under real-world conditions—with more heterogeneous clients, varying theoretical approaches and a range of clinical skills among therapists—has been quite rare (Southam-Gerow & Kendall, 2000), so it remains unclear how *effective* CBT is for treating childhood anxiety. Both efficacy and effectiveness are crucial in treatment evaluation (Barkham & Mellor-Clark, 2003). Importantly, there are widely accepted evaluation standards for both (Flay et al., 2005).

The present study has three main goals: (1) to evaluate the effectiveness of this "probably efficacious" treatment of childhood anxiety; (2) to examine its use in a non-Western culture; and (3) to explore possible mediators of change.

This study is a response to an urgent need for more effectiveness evaluations. In a meta-analysis on childhood anxiety psychotherapy outcomes, none of the studies met the trio of criteria for

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effectiveness evaluation: clinically-referred and treatment-seeking participants, therapists with an active clinical practice, and a community clinical setting. Indeed, any one criterion was met in less than 5% of the studies (Weisz, Doss, & Hawley, 2005). As a result, little is known about the effectiveness of child psychotherapy (Cartwright-Hatton, Roberts, Chitsabesan, Fothergill, & Harrington, 2004; Kendall & Beidas, 2007). A randomized trial in outpatient settings found traditional non-CBT child psychotherapies to be no more *effective* than an individual-tutoring placebo (overall effect size = −.08; Weiss, Catron, Harris, & Phung, 1999), despite their well-documented *efficacy* for anxiety-depression, aggression, and attention problems/hyperactivity. These findings may reflect the difficulty of adhering to treatment protocol in community clinics, given the many competing demands in real-world settings.

More promising results emerged from two randomized trials comparing CBT and Treatment-as-Usual (TAU: child psychotherapy, family therapy, and eclectic treatments) in community mental-health service. In perhaps the first published study of its kind, Barrington, Prior, Richardson, and Allen (2005) found that 7- to 14-year-olds with anxiety disorders treated with either CBT or TAU improved on a variety of measures (child, parent, teacher reports; clinical interviews by clinical psychologists blind to treatment conditions). From pre-treatment baseline to follow-ups at 3, 6, and 12 months after treatment onset, the improvement was significant for both types of treatment, with no significant differences between the two. In another study conducted on a diverse sample of Caucasian, African American, and Latino/Latina 8- to 15-year-olds diagnosed with depressive disorders and multiple co-morbidities (Weisz et al., 2009), CBT and usual clinical care again did not differ significantly, but both effectively reduced depressive symptoms to sub-clinical levels post-treatment for 75% of the youths.

These two studies stand out among the many efficacy evaluations of CBT for childhood anxiety problems and reveal its promise as an effective treatment for childhood psychopathology. Yet because neither study directly compared CBT to a waitlist control, it remains unclear to what extent the observed improvement reflects treatment effectiveness vs. spontaneous remission. The present study addresses this problem.

A second goal of this study is to evaluate the use of CBT with Chinese children. What we know about CBT efficacy thus far is based primarily on Caucasian middle-class samples, but evidence-based therapy originally developed with such a population may not transfer directly to other populations (e.g., Sue, Ivey, & Pedersen, 1996). In particular, traditional, individual-oriented psychotherapy may not work quite as well for more collectivistic cultures (e.g., Hwang, Wood, Lin, & Cheung, 2006; Wood, Chiu, Hwang, Jacobs, & Ifekwunigwe, 2008).

On the promising side of the ledger, there is evidence that adapting programs developed in one culture for use in another can be successful. A culturally-adapted group CBT program has been found to benefit Chinese adults with chronic depression (Wong, 2008). Moreover, in two case studies, with certain cultural modifications, CBT led to positive outcomes for children from more collectivistic cultural backgrounds (a Mexican-American child with separation anxiety, Wood et al., 2008; a Chinese-American child with school phobia, Hwang et al., 2006). Indeed, in general, interventions targeted at specific cultural groups seem much more beneficial than culturally generic ones (Griner & Smith, 2006).

CBT stands a decent chance to be compatible with Chinese cultural norms. The structured counseling sessions have concrete goals and well-defined social roles (Lin & Cheung, 1999). The education model of CBT relates well to the traditional Chinese belief that diligent learning brings about desirable changes (Chen & Davenport, 2005; Hwang, 2006; Lin, 2002). Yet, Chinese children generally are not encouraged to discuss their emotions and feelings openly. For instance, American mothers and young children often talk about the causes of emotions that the children experience, such as happiness, sadness, fear, and anger ("emotion-explaining style"). By contrast, Chinese mothers tend to be more didactic—often criticizing the "perpetrators" who hurt other people's feelings and using such conversations to teach proper behavior ("emotion-criticizing style"; Wang, 2001). So, Chinese children may find it difficult to discuss their anxiety in a CBT session, especially in a group setting. Such reticence can make group CBT difficult. Moreover, the relative novelty of CBT group therapy for children in Hong Kong may also render parents more skeptical and hesitant about starting, and less committed to completing, their children's treatment program. It remains to be seen how well CBT works for Chinese children.

A third goal—if CBT proves beneficial to Chinese children with anxiety problems—is to understand better the mechanism of change. We know reasonably well how cognition can lead to anxiety. Anxious individuals tend to overestimate danger (Beck, Emery, & Greenberg, 1985) and underestimate their ability to control outcomes, thereby leading to negative physiological reactions and anxiety (Alloy, Kelly, Mineka, & Clements, 1990; Barlow, 2002). Children's perceived control over threats predicts their self-reported anxiety (Weems, Silverman, Rapee, & Pina, 2003). Anxious children underestimate their abilities to deal with danger (Bogels & Zigterman, 2000) and overestimate physical and social threats (Schniering & Rapee, 2004). Moreover, anxious children facing ambiguous situations tend to make more threat interpretations and avoidant-action plans (Barrett, Rapee, Dadds, & Ryan, 1996; Chorpita, Albano, & Barlow, 1996). But what is it about CBT treatment that changes these anxious perceptions and reactions? This study explores two candidate mediators of CBT treatment effects for childhood anxiety, namely, reducing anxious—as distinct from positive or depressed—self-statements (Kendall & Treadwell, 2007), and improving coping behavior (Chu & Harrison, 2007).

There are two main hypotheses in this study:

1. Culturally-adapted CBT will be an effective as well as efficacious treatment for Chinese children with anxiety problems.
2. Reduction in anxiety cognition and improvement in coping behavior will significantly mediate the treatment effects.

Method

Participants

Forty-five Chinese children of Hong Kong origin (aged 6–11; mean = 8 yrs 7 mos, SD = 14 mos) diagnosed with anxiety problems/disorders participated with parental consent. The children included 24 boys and 21 girls from primarily working and middle-class two-parent households (median household income around US$2,500/month). They were referred by physicians or psychologists to the Child Assessment Service (a government agency in Hong Kong) for one or more of these concerns: learning (40%), behavior (22%), mood-related (24%), anxiety (13%), other developmental (13%) problems. In the Child Assessment Service intake interview, 28 parents (62%) expressed concerns about learning or behavior, 22 (49%) mentioned mood-related problems (e.g., social communication problem, temper tantrum, crying behavior, irritability), and only 4 (9%) mentioned anxiety problems.

Among these 45 children, 38% were diagnosed with generalized anxiety disorder, 24% with separation anxiety disorder, and 51% with social phobia. Eight children (18%) did not meet DSM-IV-TR criteria but had sub-clinical symptoms of anxiety disorders that