

Cognitive-Behavioral Treatments for Anxiety and Phobic Disorders in Children and Adolescents: A Review

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ABSTRACT: This article provides an overview of cognitive-behavioural strategies used in the treatment of child-anxiety problems, emphasizing the need for exposure and caregiver involvement. Most of the paper focuses on developments in empirically supported cognitive-behavioral intervention protocols for generalized anxiety disorder, separation anxiety disorder, social phobia, specific phobia, and school refusal. The research status of interventions for phobias and anxiety disorders of children with disabilities, a much neglected area, is also considered. Particular attention is given to randomized controlled trials. Analogue studies are not included in this particular review, thus strengthening conclusions regarding treatment efficacy. In general, cognitive and behavioral strategies appear to be useful for these distressing child-anxiety problems; however, there is a limited understanding of the active components in treatment, treatment mechanisms of change, and prediction of treatment outcome.

■ Attempts both to understand and modify the fears and anxieties of children have a long and fascinating history (Freud, 1909/1963; Hall, 1897; Watson & Rayner, 1920). Fear is often thought of as an adaptive response and “makes for caution in the face of existing or reasonably anticipated danger” (Kanner, 1972, p. 580). Children display fears and anxiety responses over the course of normal development (see reviews by King, Hamilton, & Ollendick, 1988; Gullone, 2000; and Ollendick, King, & Muris, 2002). Although fear and anxiety are adaptive and necessary for survival, such responses become problematic when they are excessive, persist over time, and produce considerable discomfort for the child (King, Muris, & Ollendick, 2004; Morris & Kratochwill, 1983).

In educational settings, the anxiety-related problems of students may act as barriers to optimal academic and/or social development (King & Ollendick, 1989a; King, Ollendick, & Gullone, 1990). For example, students with performance anxiety experience difficulty

being on-task during social evaluative situations as a result of their cognitive intrusions and somatic arousal compared to less anxious students (Beidel & Turner, 1988; King, Mietz, Tinney, & Ollendick, 1995). In the social domain, students with internalizing problems frequently have problems forming or maintaining friendships, and may be socially isolated or bullied (Morris, 2004). Not surprisingly, such problems may result in school avoidance or avoidance of specific classes that the student finds anxiety-provoking (Heyne & King, 2004). Building on the tripartite model originally developed by Lang (1968, 1977), childhood phobias and anxiety disorders are seen as being multidimensional with cognitive, physiological, and overt-behavioral referents (Barrios & Hartmann, 1997; Beidel, 1989; King, Ollendick, & Murphy, 1997; Silverman & Ginsburg, 1995).

In the past two decades, epidemiological studies (e.g., Essau, Conradt, & Petermann, 2000; McGee et al., 1990; Milne et al.,

1995) have estimated that the prevalence of anxiety disorders (including phobias) in the general community population of children and adolescents ranges from 5.7% to 17.7% (see Costello & Angold, 1995, for a review). In general, anxiety disorders tend to be more prevalent in girls than boys and more prevalent in older than younger children (e.g., Essau et al., 2000). Some children may have one anxiety or phobic disorder only, such as separation anxiety disorder, overanxious/generalized anxiety disorder, social phobia, or specific phobia as per DSM-IV (American Psychiatric Association [APA], 1994). However, most children have comorbid anxiety and phobic disorders. Comorbid disorders can also include other internalizing problems such as depression and externalizing problems such as oppositional behavior disorder (Last, Strauss, & Francis, 1987). In their study of 104 children between 6 and 16 years of age and referred to a phobia outpatient treatment program, Silverman and colleagues found that a majority (72%) of the children had at least one comorbid diagnosis: 19% had an additional specific phobia, 16% had separation anxiety disorder, 14% had overanxious disorder, and 6% were diagnosed with attention deficit hyperactivity disorder. The remaining 17% of the 72% who had a comorbid diagnosis were distributed over eight additional diagnostic categories (Silverman, Kurtines, Ginsburg, Weems, Rabian, et al., 1999).

Thus, the clinical picture can be quite complex due to comorbidity. Studies show that children in clinic samples exhibit greater levels of comorbidity compared to general community samples (see review by Ollendick et al., 2002). Moreover, anxiety disorders and phobias have a complex aetiology with genetic factors, temperament characteristics (especially behavioral inhibition), parent-child interactions (parenting styles), parental psychopathology such as anxiety problems and depression, specific social learning histories including traumatic experience, and attentional bias information-processing, all being implicated (see Hudson & Manassis, 2004; Vasey & Dadds, 2001). Fortunately, successful interventions have been developed for anxious and phobic children and adolescents. The authors now critically review the treatment research, being careful to include all major studies and their findings.

Given the huge volume of literature on the treatment of childhood anxiety disorders

and phobias, we will clarify several important assumptions in our review of evidence. First, many different schools of thought appear in the literature, including psychodynamic-oriented treatment and many alternate therapies, such as hypnosis. Consistent with the overall theme of the special issue, and also reflective of the clinical-research orientation of the authors, this paper is confined to treatment research from a behavioral or cognitive-behavioral perspective. Second, an overview is provided of cognitive and behavioral procedures used in the treatment of childhood anxiety disorders and phobias, including the more family-wide interventions models, thus making further comment on treatment studies more enlightening. Third, what disorders or problems should the review paper include? Sufficient treatment research has been conducted to focus on DSM-IV anxiety disorders: generalized anxiety disorder, separation anxiety disorder, social phobia, and specific phobia. However, given the diverse readership interests of *Behavioral Disorders (BD)*, this scope was widened to include school refusal as well as the phobias and anxiety disorders of children with disabilities. Fourth, comment is necessary on the sources of evidence used to evaluate the efficacy of an intervention. The authors specify the kind of investigation under discussion: case report, within-subject controlled investigation, multiple baseline evaluation, open clinical trial, and between-group outcome comparison design such as the randomized control trial. Finally, studies include children with severe phobias or anxiety disorders, with a majority of studies being conducted in clinical settings; so-called analogue laboratory treatment studies, involving mild fears and conducted in university settings, were excluded. A literature search was undertaken of relevant peer-review journals (e.g., *Journal of Consulting and Clinical Psychology, Behaviour Research and Therapy*) from 1980. Excluded from consideration were articles concerning obsessive-compulsive disorder and posttraumatic stress disorder.

Overview of CBT for Phobic and Anxiety Disorders in Children and Adolescents

This section briefly describes cognitive and behavioral strategies frequently used in the treatment of children with anxiety disorders and phobias. However, the authors caution

against simplistic assumptions of a cognitive-behavioral treatment (CBT) recipe approach ignoring sound assessment and treatment design principles (Barlow, 2001). Conceptually, these strategies are derived from expanding concepts in social learning theory, cognitive theory, and information processing theory (King & Ollendick, 1997; Ollendick, Davis, & Muris, 2004). In recognition of the complex interaction of cognitive and environmental factors in the cause and maintenance of children's phobias and anxiety disorders, both cognitive and behavioral procedures are routinely used in treatment (Ollendick, 1979; Silverman & Carmichael, 1999).

Common strategies include relaxation training aimed at lowering physiological arousal and somatic symptoms; cognitive restructuring aimed at controlling negative self-statements, correcting faulty assumptions, and building self-efficacy; systematic and graded hierarchical exposure to anxiety-provoking situations to address the avoidance of the child; social skills training to build peer friendships and to deal with specific assertion problems at school or home; contingency management training (reward system) to increase motivation and compliance; and training in relapse prevention to help deal with possible future setbacks and stressors at home and school (see Kendall et al., 1992; Rapee, Wignall, Hudson, & Schniering, 2000). Anxiety management procedures have high acceptability or social validation on the part of children and their caregivers, thus increasing the likelihood of compliance with the intervention program (e.g., Heyne, 1999; King & Gullone, 1990; King et al., 1998).

Best practice interventions are typically multicomponent with an emphasis on flexibility and selection of individual treatment program components as required by unique child, school, and family characteristics (Heyne, King, & Ollendick, in press; Kendall et al., 1992; Ollendick, King, & Yule, 1994). In particular, for maximum effectiveness, intervention programs should be developmentally sensitive with attention to the youth's verbal and cognitive skills (Ollendick, Grills, & King, 2001). According to Marks (1975), exposure is the critical underlying mechanism in the use of behavioral procedures: "an important mechanism shared by all of these methods is exposure of the frightened subject to a frightening situation until he acclimatizes" (p. 67). Exposure remains the critical and necessary

ingredient of intervention programs for phobic and anxious children and the advice given to parents and teachers (Ollendick & King, 1998, 2000). Intervention is usually offered on an individual basis, but group formats have also been successfully reported, thus improving the overall cost-efficiency of CBT (Flannery-Schroeder & Kendall, 2000). A group format is particularly useful for the treatment of social phobia in children because of the opportunity for multiple peer modeling and social exposure tasks (Beidel, Turner, & Morris, 2000).

Although not all parents of anxious or phobic children exhibit psychopathology themselves, twin and family studies show that many have a history of an anxiety or depressive disorder at some point in their lives (see reviews by Hirshfeld-Becker, Biederman, & Rosenbaum, 2004; Silverman, Cerny, & Nelles, 1988). Recognizing the role of parents in the development and/or maintenance of anxious and phobic behavior, parental involvement has been advocated for many years in traditional behavioral programs, such as in the use of *in vivo* systematic desensitization and contingency management programs (King et al., 1988). Parents serve as co-therapists responsible for the implementation of procedures developed by the therapist, and responsible for giving the children ample praise and positive reinforcement for their bravery in engaging in exposure tasks. Recent years have witnessed the development of several prominent models regarding parental involvement in intervention programs for phobic or anxious children (Mattis & Pincus, 2004). The "transfer of control" model (Ginsburg, Silverman, & Kurtines, 1995) emphasizes the gradual fading of control from therapist to parent, and then to the child. The Family Anxiety Management model (FAM; Dadds, Heard, & Rapee, 1992), similar to the transfer of control model, involves training parents in contingency management strategies to deal with their child's fears and anxieties and to facilitate the child's exposure to the phobic situations. Moreover, FAM explicitly recognizes and targets parental anxiety, problematic family relationships, parent-child communication problems, and parental problem-solving skills.

Studies on Generalized and Separation Anxiety Disorders

Kendall and his colleagues are major pioneers in the systematic development and

evaluation of cognitive-behavioral intervention programs for childhood anxiety disorders such as separation anxiety disorder and overanxious/generalized disorder (see chapters by Hudson, Hughes, & Kendall, 2004; Mattis & Pincus, 2004). However, prior to these studies, several multiple baseline design evaluations provided preliminary evidence for the benefits of behavioral and cognitive procedures with such children and adolescents. For example, Ollendick, Hagopian, and Huntzinger (1991) developed an intervention program for separation anxious children, as did Kane and Kendall (1989) for children with overanxious disorder. By and large, the programs involved four major components: (a) recognizing anxious feelings and physical reactions to anxiety; (b) identifying and modifying negative self-statements; (c) generating positive self-statements and other strategies to cope effectively in the anxiety-provoking situations; and (d) rating and rewarding efforts at coping and exposure in the feared situation. Multiple assessment measures were taken pre-, mid-, and post-treatment, as well as at 3-month, 6-month, and 1-year follow-up intervals. Both interventions were effective in as much as improvements occurred on the outcome measures.

In the first randomized control trial, Kendall (1994) evaluated the outcome of a CBT intervention known as the Coping Cat program. Forty-seven 9- to 13-year-olds who primarily met diagnoses for overanxious disorder/generalized anxiety disorder and separation anxiety disorder were assigned randomly to treatment or wait-list control conditions. The treatment was of 16 weeks' duration. Nearly all children had a comorbid disorder such as depression, oppositional defiant disorder, or specific phobia. The manual-based but flexibly implemented intervention incorporated initial training in cognitive and coping skills (cognitive therapy and relaxation training) followed by systematic exposure to anxiety-provoking situations involving the application of coping strategies. Treated children fared better than wait-list children on a majority of the outcome measures. Perhaps the most dramatic difference observed was the percentage of children not meeting diagnostic criteria for an anxiety disorder at the end of treatment: 5% of the wait-list group versus 64% of the CBT treated cases (Kendall). Systematic follow-up evaluations at 3 years (Kendall & Southam-Gerow, 1996) and at 7 and 1/2 years (Kendall, Safford,

Flannery-Schroeder, & Webb, 2004) revealed maintenance and enhancement of treatment gains. Kendall and colleagues reaffirmed the efficacy of this procedure with 94 children (age 9–13) randomly assigned to CBT and wait-list control conditions (Kendall et al., 1997). In this systematic replication study, 71% of the treated children did not meet diagnostic criteria at the end of treatment compared to 5.8% of those in the wait-list condition.

Subsequent to Kendall's randomized clinical trials, the CBT Coping Cat program (see details presented previously) was evaluated independently in Australia and compared to a CBT + FAM condition, which is a higher strength intervention with greater parental involvement (Barrett, Dadds, & Rapee, 1996). Seventy-nine children with principal diagnoses primarily of overanxious disorder/generalized anxiety disorder and separation anxiety disorder were treated. The children who were between 7 and 14 years of age were assigned randomly to CBT, CBT + FAM, and wait-list control conditions. The treatments were of 12 weeks' duration. At immediate post-treatment, 74% of the wait-list control children still met diagnostic criteria for an anxiety disorder versus 43% of the children in the CBT condition. However, only 16% of the CBT + FAM met diagnostic criteria at post-treatment. CBT + FAM was significantly better than CBT alone. At follow-up 6 months later, 71.4% of the CBT children were diagnosis-free versus 84% of the CBT + FAM children and at 1-year follow-up, the CBT + FAM condition remained superior to the CBT alone condition (95.6% compared to 71.4%). However, at 6-year follow-up, the two conditions were similar to one another with approximately 86% of the youth in both conditions diagnosis-free (Barrett, Duffy, Dadds, & Rapee, 2001). These results for CBT are remarkably similar to those obtained by Kendall and colleagues (Kendall et al., 2004), affirming the efficacy of individual CBT as well as the family-enhanced protocol.

As previously noted, treatment provided in a group format may increase cost-efficiency and provide opportunities for peer modeling and social exposure tasks. When such group treatments also include a parent or family component, additional benefits might be observed. At least one randomized controlled trial has compared group CBT, individual CBT, and waiting list controls for children with separation anxiety disorder and overanxious/generalized anxiety disorder (Flannery-Schroeder & Kendall, 2000). Group CBT and

individual CBT were equally effective and superior to wait-list conditions. A series of other studies have demonstrated the efficacy of family CBT conducted in a group format (Cobham, Dadds, & Spence, 1998; Manassis et al., 2002; Mendlowitz et al., 1999; Rapee, 2000; Silverman, Kurtines, Ginsburg, Weems, Lumpkin et al., 1999; Shortt, Barrett, & Fox, 2001; Toren et al., 2000).

For example, a ten-session family-based group cognitive-behavioral intervention (FRIENDS) for anxious children was developed and evaluated in Australia (Barrett & Turner, 2004). The program integrates core elements from a cognitive-behavioral perspective (exposure, relaxation, cognitive restructuring, problem solving, self-reward, relapse prevention) with useful strategies from family therapy and interpersonal approaches (e.g., establishment of social support network, conflict management). The theme running through the program is the enhancement of skills and competencies to handle anxiety provoking situations. FRIENDS is an acronym for each of the skills taught: F—Feeling worried?; R—Relax and feel good; I—Inner thoughts; E—Explore plans, N—Nice work so reward yourself; D—Don't forget to practice; and S—Stay calm, you know how to cope now. The efficacy of FRIENDS was evaluated in a randomized controlled trial with clinically anxious children 6–10 years of age ($n = 71$) that compared FRIENDS to a waiting list control group (Shortt et al., 2001). All children fulfilled diagnostic criteria for a separation anxiety disorder, generalized anxiety disorder, or social phobia. Results indicated that 69% of children who completed FRIENDS were diagnosis-free, compared to 6% for controls, with results being maintained at a 12-month follow-up.

In addition to these clinic based studies, a series of school-based studies have been conducted by Dadds, Barrett, Spence, and their colleagues (Dadds, Spence, Holland, Barrett, & Laurens, 1997; Shortt et al., 2001). These studies have been designed as both preventive and early intervention efforts and have also shown considerable success for CBT based procedures. For example, Dadds et al. (1997) screened 1,786 children in the third through sixth grades, identified 128 who were anxious, and assigned them to 10-week school-based child and parent-focused CBT interventions or to a monitoring only group. Intervention was based on the *The Coping Koala: Prevention Manual* (Barrett, Dadds, & Holland, 1994), an

Australian modification of Kendall's Coping Cat anxiety program for children, except that it was delivered in group format and, as noted, was 10 weeks in duration. Group sizes ranged from 5–12 children. Parental sessions were conducted at the participating schools following sessions 3, 6, and 9. Basically, parents were introduced to child management skills (reinforcement skills, planned ignoring, giving and backing up clear instructions) and how to use these skills to manage their child's anxiety. In addition, they were provided information about what their children were learning in the groups and how they could model and encourage the use of the strategies learned in the groups. Finally, they were encouraged to use some of these same skills in addressing their own anxiety. Both groups showed improvements immediately post-intervention on the outcome measures. Results six months later favoured the child and parent-focused group over the monitoring only group, particularly in relation to those progressed to a diagnosable disorder (16% vs. 54%).

In addition, the FRIENDS program was used in a selective prevention trial in Australia with young non-English speaking migrants experiencing anxiety and adjustment problems. Selective prevention requires identification of risk factors and it is widely documented that cultural change and migration serves as a significant risk for the development of anxiety in children and adolescents (Barrett & Turner, 2004). The school-based study ($n = 320$) involved a comparison of FRIENDS intervention with a waiting list control condition (Barrett, Sonderegger, & Xenos, 2003). The FRIENDS intervention resulted in significantly greater self-esteem, fewer internalizing symptoms, and a less pessimistic future outlook than controls at post-treatment, with improvements being maintained at a 6-month follow-up. Clearly, efficacious CBT interventions have been demonstrated for separation anxiety disorder and generalized anxiety disorder in children and adolescents.

Studies on Social Phobia

We now consider research developments in the treatment of children with social phobia (also referred to as social anxiety disorder). (For a more detailed discussion see Beidel, Morris, & Turner, 2004; and Morris, 2004.) Albano and colleagues developed one of the first group

treatment programs designed specifically for adolescents with social phobia, called Group Cognitive-Behavioral Treatment for Adolescents (GCBT-A; Albano, Marten, Holt, Heimberg, & Barlow, 1995). Their intervention is an adaptation of an effective intervention developed for adults with social phobia, as reported by Heimberg et al. (1990). The initial publication was a series of case studies with five adolescents. GCBT-A consisted of psychoeducation, skill building (such as social skills, problem solving, and assertiveness training), cognitive restructuring, and behavioral exposure to socially distressing or fearful situations. At post-treatment, four of the five adolescents were assessed to have only subclinical levels of social phobia, and 1 year later, four did not meet diagnostic criteria for social phobia. Recently, Haywood et al. (2000) undertook a controlled clinical trial and randomly assigned adolescent girls ($N = 35$) with social phobia to CBGT-A treatment or control group. Treatment was conducted in a clinic setting. In contrast to previous findings, however, considerable residual social phobia symptoms remained at post-treatment, and 1 year later there was no significance between group differences in the frequency of social phobia diagnosis or in mean scores on a self-report social phobia inventory.

Beidel et al. (2000) also published a between-group randomized control investigation on the efficacy of a multi-component behavioral treatment program for children with social phobia. Sixty-seven children were randomly assigned to either an active treatment labeled Social Effectiveness Therapy for Children (SET-C) or to an active nonspecific control, called Testbusters. SET-C included group social skills training, peer-generalization experiences, and individual *in vivo* exposure. At post-treatment, 67% of those treated with SET-C no longer met criteria for social phobia, compared with only 5% for the Testbusters intervention. Furthermore, in terms of clinical significance, children in the SET-C group were less anxious, less avoidant of social situations, more skilful in their social interactions, and engaged in more social discourse, as reported by children, parents, and independent evaluators. At 3-year follow-up, children treated with SET-C maintained their treatment gains.

Spence, Donovan, and Brechman-Toussant (2000) have evaluated the efficacy of cognitive-behavioral treatment (CBT) with or without parental involvement for children

and adolescents with social phobia. In this trial, 50 children were randomly assigned to CBT, CBT plus parental involvement (CBT-PI), or a waiting list control condition. The CBT components included SST, relaxation training, positive self-instruction, cognitive challenge, and graded exposure. The purpose of the parent involvement component was to help parents learn how to model and reinforce the social skills taught in CBT, to ignore avoidance and socially anxious behavior, to encourage child participation in social activities, and to reinforce homework completion. Both interventions included 12 weekly group sessions and 2 booster sessions (occurring 3 and 6 months post-treatment). Although there was a trend for greater improvement in the CBT-PI group, differences were not statistically significant. Both treatment groups showed improvement in social skills from pre-treatment to 12-month follow-up based on parent report. However, neither treatment (in comparison to one another or to a control group) yielded significant differences for children's total number of peer interactions, parental report of competence with peers, or independent observer ratings of assertiveness during behavioral observation from pre- to post-treatment. This shows the value of multimethod assessment of multiple domains of functioning.

Masia, Klein, Storch, and Corda (2001) recently reported an uncontrolled investigation of a 14-session group treatment program for six adolescents with social anxiety disorder. Conducted in the school setting, the intervention program comprised social skills training and *in vivo* exposure sessions. The findings showed significant improvement on clinician severity ratings of social anxiety disorder but no significant change in the adolescent's self-reports of social fears. However, the pilot and uncontrolled nature of this study means that the results must be considered preliminary. Overall, the treatment of social phobia in children and adolescents from a CBT perspective appears promising, although it is not yet clear that parental involvement is indicated.

Studies on Specific Phobia

Specific phobia refers to a broad group of phobias in the DSM-IV (APA, 1994). Five subtypes are identified: Animal Type, Natural Environment Type, Blood-Injection Type, Situational Type, and Other Type. Many

multiple baseline investigations strongly endorse the usefulness of behavioral and cognitive-behavioral strategies in overcoming phobic disorders in children (see Ollendick & King, 1998). For example, Heard, Dadds, and Conrad (1992) conducted a study with three adolescent girls presenting with a principal DSM-III-R diagnosis of simple phobia (fears of medical procedures, darkness, and school). Therapy with the adolescents involved relaxation training, graduated exposure, and cognitive restructuring. Home contingency management of phobic behavior by parents was also undertaken. This procedure consisted of the family minimizing attention to fear reactions and positively reinforcing appropriate behavior relative to phobic stimuli. All three adolescents, including a girl with comorbid separation anxiety disorder, showed marked improvements on behavioral and self-report measures of anxiety. The treatment gains were maintained at a 3-month follow-up.

Children with specific phobia have been included in three between-group randomized control clinical outcome trials (Graziano & Mooney, 1980; Ost, Svensson, Hellstrom, & Lindwall, 2001; Silverman, Kurtines, Ginsburg, Weems, Rabian, et al., 1999). In the Graziano and Mooney investigation, severely night-time fearful children between 6 and 13 years of age were randomly assigned to either a treatment group or waiting-list control group. Treatment involved teaching relaxation and verbal coping skills to the children to counter feelings of being afraid through the night. Over the 3-week program, the parents played an important role in monitoring home practice and rewarding children for their progress with "bravery tokens" (exchanged for a McDonald's party). Results attested to the efficacy of the intervention on multiple outcome measures of night-time fear behavior and self-reported willingness to go to sleep. Maintenance of improvement was reported for nearly all children at 2- and 3-year follow-ups (Graziano & Mooney, 1982). Silverman, Kurtines, Ginsburg, Weems, Rabian, et al., (1999) compared the efficacy of an exposure-based self-control treatment and exposure-based contingency management treatment condition relative to an education and support control group in the treatment of phobic children age 6–17. Multi-informant outcome measures included diagnostic status, child-completed measures of emotional distress and negative cognitive errors, and parent-completed measures of

emotional and behavioral impairment. Perhaps surprisingly, results indicated that all three conditions produced effective therapeutic change on the self-report and parent outcome measures. However, for the more clinically significant measures, changes were noted. For example, results indicated that 88% of the participants in the exposure-based self-control condition were diagnosis-free at post-treatment, compared to 55% in the exposure-based contingency management condition and 56% in the education/support control condition. Furthermore, on a measure of distress, 80% of the youth in both the contingency management and the self-control conditions reported either no fear or very little fear at post-treatment, compared to 25% in the education/support condition. Thus, on measures of clinical improvement, results favoured the two exposure-based treatments in comparison to the control condition. These gains were maintained at 3-, 6-, and 12-month follow-ups. Recently, Ost et al. (2001) have shown very similar results for an intensive one-session treatment based largely on modeling, exposure, and reinforcement. They showed that about 80% of the youth in this intensive treatment were diagnosis-free compared to about 15% of those in a wait-list condition. For a more detailed discussion of research on the treatment of specific phobia in children, the reader is referred to other sources (King et al., 2004; King, Muris, & Ollendick, in press; Ollendick et al., 2004). Unfortunately, none of these studies have been conducted in school settings, so we do not know how these treatments would fare in that context; still, it is evident that effective psychosocial interventions do exist for children and adolescents with specific phobia.

Studies on School Refusal

The research developments previously presented in this article are relevant to how clinicians and researchers have approached school refusal from a cognitive-behavioral viewpoint (see Heyne & King, 2004; Heyne, King, & Tonge, 2004; Heyne & Rollings, 2002; King & Ollendick, 1989b; King, Tonge, Heyne, & Ollendick, 2000). Diagnostic studies affirm that school refusal is a heterogeneous problem in which there are three primary diagnostic groups: phobic school refusers, separation-anxious school refusers, and anxious-

depressed school refusers (see review by King & Bernstein, 2001).

In an influential report, Mansdorf and Lukens (1987) successfully combined cognitive restructuring with behavioral procedures in the treatment of two school-refusing children. Initially, the children were taught how to use coping self-statements to guide positive behavior at school. Following this cognitive preparation, a behavioral program was implemented with the children. This involved graduated exposure to the school setting and required parents to be firm about school attendance and ensure that social and activity reinforcers were administered contingently. By the fourth week, regular school attendance had been achieved for both children. A 3-month follow-up showed that school attendance had been maintained for both children.

An important early comparative study (Blagg & Yule, 1984) compared three broad interventions in the treatment of school refusal: (a) a flexible behavioral treatment approach with an emphasis on rapid school return; (b) hospitalization; and (c) home instruction plus psychotherapy ($N = 66$). The findings endorsed the superior efficacy of the behavioral approach in relation to school attendance. However, randomization did not occur, thus allowing the possibility that less complex cases were seen in the behavioral condition.

King et al. (1998) randomly assigned 34 school refusers, age 5–15, to either a 4-week manualized cognitive-behavioral intervention or a waiting list control condition. Treatment was provided in a clinical setting but with active collaboration in the school setting. Intervention with the young people drew from a range of CBT procedures, including relaxation training, social skills training, cognitive therapy, and exposure. Intervention with the parents and school staff focused on behavior management strategies such as instruction-giving, planned ignoring, and positive reinforcement. Relative to waiting list controls, children who received therapy exhibited a clinically significant improvement in school attendance—nearly all attained 90% or more school attendance. Treated children also underwent improvements on self-reports of fear, anxiety, and depression. At the same time, the children developed confidence in their ability to cope with anxiety-provoking situations, such as parental separation or being teased by peers. Parent report data provided further confirmation of the beneficial effects of treatment with reports of

improvements for internalizing problems. For 13 of the 16 young people who received the treatment and who were able to be located at 3- and 5-year follow-ups, treatment gains were maintained and there were no reports of new psychological problems (King et al., 2001).

Heyne and colleagues evaluated the relative efficacy of the two major components of the previously mentioned CBT intervention for school refusal, (i.e., child therapy and caregiver training) (Heyne et al., 2002). The families of 61 school-refusing children and adolescents (age 7–14) were randomly allocated to (a) child therapy alone; (b) parent and teacher training alone; or (c) the combination of child therapy and parent/teacher training. Post-treatment results indicated higher rates of school attendance when parents and teachers were involved in the intervention (either on their own, or in conjunction with the child), but by 4.5-month follow-up all three approaches were found to be equally effective in increasing school attendance and self-efficacy and in reducing the school refusers' fear, anxiety, and depression. Although the design of this component analysis study did not include a control group, the results are supportive of the use of CBT in the treatment of school refusal.

Last, Hansen, and Franco (1998) randomly allocated 56 school-refusing children and adolescents aged between 6 and 17 years of age to either CBT or educational support therapy (EST). CBT consisted of graduated in vivo exposure and coping self-statement training. The EST condition controlled for the nonspecific effects of treatment, and incorporated educational presentations, encouragement for children to talk about their fears, and a daily diary for recording feared situations and associated thoughts and feelings. Unlike CBT, EST did not include any skills training (i.e., no training in the use of coping self-statements) or exposure tasks. Both the CBT and EST groups displayed improvements in attendance and self-reports of fear, anxiety, and depression. At post-treatment, trends favored the CBT condition with 65% of the CBT group and 50% of the EST group no longer meeting criteria for their primary anxiety disorder, although this difference was not significant. Last and colleagues (1998) concluded that the structured CBT approach was not significantly superior to the less-structured treatment method encompassed in EST.

Finally, an investigation of Kearney and Silverman (1990) suggests the usefulness of a

functional analytic approach in the assessment and treatment of school-refusing children ($N = 7$). Most of the children met the criteria for an anxiety disorder diagnosis, and several children received multiple diagnoses. On the basis of how the child scored on the School Refusal Assessment Scale (Kearney & Silverman, 1990, 1993), he/she was assigned to one of four functional categories. These categories describe the motivating conditions (i.e., the functions) for school refusal and determine the kind of prescriptive treatment provided to the child. The first category consisted of a child who was fearful of a specific stimulus or experienced symptoms of negative affectivity in the school setting itself (referred to as the *specific fearfulness/general overanxiousness category*). Treatment included relaxation training and systematic desensitization. The second category included children ($n = 4$) with unsatisfying peer relationships or high social anxiety in an evaluative setting (*escape from aversive social situations category*). Cognitive intervention and/or modeling procedures were applied for these children to increase social-skills proficiency. The third category included a child who engaged in tantrums and other behaviors in order to stay at home with his mother or another caregiver (*attention getting/separation-anxious category*). Shaping and differential reinforcement of other behavior formed the treatment. The fourth category included a child who wished to remain at home for tangible reasons such as watching television or visiting friends (*tangible reinforcement category*). This child was treated via contingency contracting procedures. Treatment sessions were conducted over 3–9 weeks for all seven children. Full-time school attendance was achieved by six of the seven children and was maintained at 6-month follow-up. All reported moderate improvements in daily levels of anxiety, depression, and/or global distress. One of the subjects in the second category (escape from aversive social situations) did not return to school and began work instead. This study is suggestive of the value of a thorough functional analysis and the need for individualized treatment when dealing with a problem as heterogeneous as school refusal (see also Kearney, 2001). Overall, school refusal has responded to CBT programs as demonstrated in a number of controlled studies, with general maintenance of gains. The question of relative efficacy of the specific versus nonspecific effects of CBT remains.

Studies on Children With Disabilities

Children with disabilities often develop a phobia or anxiety disorder that can interfere with integration or inclusion in the school or community. Unfortunately, however, research developments have not kept pace with special needs children. Traditional behavioral strategies such as real-life (in vivo) desensitization, participant modeling, and contingency management have been successfully applied to children with intellectual disability or autism as shown by case reports and multiple baseline evaluations (see review by King, Ollendick, Gullone, Cummins, & Josephs, 1990). The cooperation of caregivers is crucial in program implementation. For example, Jackson and King (1982) successfully employed laughter as the anxiety inhibitor in the in vivo desensitization of a phobia of noises associated with toilet flushing developed by a child with autism. As the child loved being tickled to the point of laughter, this activity was introduced during the toileting and flushing procedure. Matson (1981) effectively used participant modeling in overcoming the long-standing social fears of three girls with moderate intellectual disability. As the training was conducted in a mental health clinic, generalization to the home and school settings was assessed at various stages of the investigation. Delivered in a multiple baseline format, the intervention proved effective and gains in reduction of fears were maintained at 6-month follow-up.

The investigation of Obler and Terwilliger (1970) occurred prior to the literature search period, but it is included because of the dearth of controlled treatment studies. The researchers randomly assigned 30 “emotionally disturbed,” neurologically impaired children (age 7–14) to a contingency management (reinforced practice) or to a no-treatment control condition. The children all presented clinically with severe monophobic disorders of either riding on a public bus or the sight of a live dog. In the reinforced practice condition, children obtained graduated and repeated practice in approaching the feared stimulus and reinforcement for cooperation on the exposure tasks. Results indicated that the treated children were less fearful and they were able to complete performance approach tasks (i.e., pat a dog,

ride the bus) that they were unable to do prior to treatment. Control children did not evince such change.

A recent controlled investigation, carried out in Australia, evaluated a group-based multicomponent, early intervention program for parents of children age 4–7 with an intellectual disability plus an anxiety disorder or phobia (Ciechomski, Jackson, Tonge, King, & Heyne, 2001). Called the Creating Confident Children Program (CCCP), the program aimed to help parents manage the anxiety or phobic problems of their child, and deal with their own emotional distress and psychopathology. CCCP incorporated skills training in child behavior management, partner support and relationship building, and stress management. The outcome of CCCP was compared to the outcome of a support and educational intervention (ESI), and wait-list control condition. CCCP and ESI were manual based and provided in group format (typically six to eight parents per group) over 11 weeks. Multiple outcome measures were employed and included—for example, a parent-completed child behavior checklist (with an anxiety subscale), developed particularly for special populations of children with intellectual disability (Developmental Behaviour Checklist, Einfeld & Tonge, 1992), as well as parental self-reports on their own health and emotional distress (e.g., GHQ-28, Goldberg & Hillier, 1978). These tools were administered pre- and post-treatment, and at 12-month follow-up. The DSM-IV diagnostic status of the child was also determined at pre-treatment and follow-up assessments through a parent structured diagnostic interview (Child Version of the Anxiety Disorders Interview Schedule for DSM-IV; Silverman & Albano, 1996). Analysis of video-recorded intervention sessions revealed overall adherence to the CCCP and ESI manuals. Preliminary analyses suggest that both CCCP and ESI are associated with significant improvements in child functioning and parent functioning (Jackson, Ciechomski, King, Tonge, & Heyne, 2002). Thus, the few controlled investigations that have been reported suggest that behavioral and cognitive procedures are useful in the management of anxiety disorders and phobias with special needs children. Targeting caregiver stress and marital relationship difficulties in intervention forms a more recent research theme.

Conclusions and Future Research Directions

Exciting research advances have occurred in relation to the treatment of child anxiety. The review of evidence confirms that behavioral and cognitive procedures are efficacious in the treatment of childhood anxiety disorders, phobic disorders, and school refusal. Between-group controlled trials have involved the waiting list controls versus treatment design, and the methodologically stronger designs of treatment versus education and support (placebo control) and waiting list controls versus treatment versus enhanced or strengthened treatment. Given the limited number of investigations on the treatment of anxiety or phobic disorders in children with disabilities, greater caution is necessary on treatment efficacy claims for this special needs population. The usefulness of functional analysis was suggested through the design of effective individualized intervention programs attuned to the key motivational factors of school refusal behavior, a problem that has proven difficult to untangle in terms of the complexity of maintenance factors. Yet, many issues remain to be addressed including: (a) the question of underlying mechanisms or processes of treatment; (b) the multicomponent nature of intervention programs; and (c) the prediction of treatment outcome (see also Special Issue, Hudson & Manassis, 2004).

Underlying Treatment Mechanisms and Processes

Although the review of studies suggests that efficacious psychosocial interventions have been developed for the management of childhood anxiety disorders and phobias, the question of underlying processes or mechanism has not been sufficiently investigated. Can the findings be explained in terms of an attention-placebo effect (consider the counseling and support from the adult therapist and build-up of positive expectations), rather than the specific components of the CBT intervention (such as the exposure tasks, cognitive therapy, relaxation training)? Of the four studies that investigated this question, three studies found little or no differences between CBT and placebo controls (Jackson et al., 2002; Last et al., 1998; Silverman, Kurtines, Ginsburg, Weems, Rabian, et al., 1999), whereas the other study found significant differences in

outcome between the index treatment and the placebo control (Beidel et al., 2000). Further research is needed to examine what differences in procedures, participants, or other variables might explain these divergent outcomes.

There are many questions about exposure during intervention that are in need of clarification and hard data. What are the frequency and duration of exposures during the therapy sessions? How accurately do the exposures encapsulate what is intended? Are exposures always presented in hierarchical order? How is progression through the hierarchy determined? What is the mix of imaginal, symbolic, and real-life exposure? Are ratings taken by the child or therapist to gauge anxiety reduction within a session? Is there ample post-exposure debriefing? What are the common difficulties of children, and how are they handled? Out-of-session exposure is considered crucial and usually part of homework set by the therapist, but there are little hard data on such issues as compliance rates, the frequency and duration of exposures, the child's reaction following exposure, whether graduated exposure is being followed, the role of caregivers, and follow-up by therapists. A challenge for researchers is to develop a measure or index of exposure. Therapy records and daily diaries should be useful in determining more detailed information about exactly what happens in exposure and the presumed relationship between strength of exposure and therapy outcomes.

We agree with pleas to also consider psychological processes in greater depth. Finer grained analyses of cognitive changes, coping styles, and efficacy expectations would directly test underlying assumptions and theory about key processes and CBT (see Prins & Ollendick, 2003). For example, the Self-Efficacy Questionnaire for School Situations (SEQ-SS; Heyne et al., 1998), a psychometrically sound self-report measure, was usefully employed to measure changes in efficacy expectations in school-refusing children as a result of intervention (Heyne et al., 2002; King et al., 1998). Also consistent with the comments on exposure, previously presented in this review, another useful research direction of theoretical and practical importance would be to examine the relationship between strength/type of exposure and development of self-efficacy during treatment. Of course, exposure/self-efficacy relationships are likely

to be influenced by gender, developmental, and racial/cultural factors. Such important matters await further research investigation.

Comparing Intervention Components

Interventions are typically multicomponent and incorporate an array of cognitive and behavioral strategies. However, which particular component is responsible for most of the treatment gains? Many interesting studies are possible. Comparing cognitive strategies, relaxation strategies, and the combination of strategies is of theoretical interest because the strategies are reflective of different models of child anxiety (cognitive mediation vs. physiological arousal/conditioning). In addition to being of theoretical importance, from a practical perspective unnecessary interventions are not time or cost efficient. A limited number of multiple baseline evaluations have addressed this crucial question (e.g., Eisen & Silverman, 1993; Friedman & Ollendick, 1989). For example, Eisen and Silverman compared the outcome of cognitive-restructuring skills (plus exposure), relaxation skills (plus exposure), and a combination of cognitive-restructuring and relaxation (plus exposure) with four children with overanxious disorder. The four interventions produced the same degree of improvement, but all included an exposure component suggesting that it might be the effective ingredient. Given the small sample size, the findings must be considered as preliminary, however. Randomized controlled trials have yet to be undertaken to explore this issue in greater depth. Thus, as recently expressed by Hudson et al. (2004), "Theoretical and applied questions about the active ingredients within CBT persist and require research attention" (p. 136).

Prediction of Treatment Outcome

Prediction of treatment outcome is an important issue not yet fully understood. The few studies that have addressed this issue with phobic and anxious youth have not found many variables or sets of variables that are associated with treatment outcome. For example, child characteristics such as gender, age, and ethnicity were not related to treatment outcome in Kendall's randomized controlled trials of cognitive-behavior therapy (Treadwell, Flannery-Schoeder, & Kendall, 1995). Likewise, levels of comorbidity were not related to outcome (Kendall et al., 1997).

Moreover, Kendall (1994) reported that neither the children's perceptions of the therapeutic relationships nor the therapist's perceptions of parental involvement were related to treatment outcome.

Recently, however, Berman and colleagues suggested some important additional factors to consider when examining treatment outcome in phobic and anxiety disorders in children and adolescents (Berman, Weems, Silverman, & Kurtines, 2000). Their study examined predictors of treatment outcome for 106 phobic and anxious youth (age 6–17) and their parents. Initial analyses examining treatment success and failure revealed no significant predictors of treatment outcome related to socio-demographic variables (e.g., gender, ethnicity, family income). Further analyses, however, revealed that children with comorbid diagnoses of depression were more likely to experience treatment failure. Additionally, higher levels of child self-reported depression and trait anxiety predicted treatment failure. Furthermore, parental indices of psychopathology (e.g., elevated levels of depression) also differentiated treatment success or failure. Thus, in this more recent analysis, both diagnostic comorbidity and parental psychopathology were associated with adverse outcomes. Such findings suggest the need to address diagnostic comorbidity (especially that of depression) and parental psychopathology both in the assessment process and the design of treatment interventions.

Implications for Teachers and Teacher Training

Teachers can expect to see a diversity of anxious and phobic behavior in school settings such as separation anxiety, evaluation anxiety, and phobic reactions to specific situations (e.g., riding on a school bus, animals or buildings). Although anxiety-related problems sometimes improve over time without treatment, usually such difficulties require specialist help. Hence the importance of early identification and referral of students with anxiety difficulties by schools. Of course, the early recognition of such problems can be a challenge for teachers, given the internal nature of anxiety. Anxiety symptoms, such as worry and distress, are not always obvious to the observer.

An assessment of the anxiety-phobic problem is required before an intervention plan can be formulated. Assessment is multi-informant involving the child, parents, and

teachers. Typically, the child and parents undertake a clinical/diagnostic interview, and then complete daily forms on emotional distress and coping strategies and instruments such as the Child Behavior Checklist (CBCL) to identify the frequency and intensity of emotional and behavioral problems. The teacher's perception of the problem at school, views on key factors that maintain the problem in the school environment, knowledge of peer- or teacher-relationship difficulties, and academic strengths and weaknesses are typically included in the assessment process. Direct behavioral observations on the part of teachers is also essential, this feature being consistent with the principles of sound behavioral assessment espoused for many years. Teachers are also often requested to complete behavior checklists such as the Teacher Report Form (similar to CBCL).

Following confirmation of the specific anxiety/phobic problem and formulation of working hypotheses or postulations about key maintenance factors, an individualized intervention program can be developed. Consistent with the findings of the review, schools should expect psychosocial treatment action plans that are time limited and flexible, have clear and specific goals, incorporate developmentally appropriate behavioral and cognitive strategies aimed at graduated exposure, and are subject to evaluation for their immediate- and long-term efficacy. To ensure their practical use, such plans should specify in sufficient detail that the teacher's role is to encourage or remind the student of the graduated exposure plan, to reward positive self-statements/coping and bravery for any exposure, to monitor peer interactions and involve supportive buddies if necessary, and to modify the school curriculum or timetable should there be specific school timetable obstacles. The gradual phasing out of teacher involvement and support should occur as the student learns effective self-management skills in dealing with situations that elicit anxiety. The consistency of teacher behavior in day-to-day management is vital to a successful outcome that will be durable and generalize across various settings that elicit anxiety.

As noted in this review, preventive programs have emerged as an exciting new prospect for schools interested in the prevention of anxiety symptoms and anxiety disorders. Such interventions are appealing because of their presumed cost-efficiency and school-based nature. However, at this stage,

research on prevention is still in its preliminary stages. Early efficacy findings are promising, with many large scale school-based prevention studies currently in progress. The results of these investigations will give schools a more confident picture of the short- and long-term benefits of such investment.

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REFERENCES

- Albano, A. M., Marten, P. A., Holt, C. S., Heimberg, R. G., & Barlow, D. H. (1995). Cognitive-behavioral group treatment for social phobia in adolescents: A preliminary study. *Journal of Nervous and Mental Disease, 183*, 649–656.
- American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.). Washington, DC: Author.
- Barlow, D. (Ed.) (2001). *Clinical handbook of psychological disorders*. New York: Guilford .
- Barrett, P. M., Dadds, M. R., & Holland, D. E. (1994). *The coping koala: Prevention manual*. Unpublished manuscript, University of Queensland, Brisbane, Australia.
- Barrett, P. M., Dadds, M. R., & Rapee, R. M. (1996). Family treatment of childhood anxiety: A controlled trial. *Journal of Consulting and Clinical Psychology, 64*, 333–342.
- Barrett, P. M., Duffy, A. L., Dadds, M. R., & Rapee, R. M. (2001). Cognitive-behavioral treatment of anxiety disorders in children: Long-term (6-year) follow-up. *Journal of Consulting and Clinical Psychology, 69*, 135–141.
- Barrett, P. M., Sonderegger, R., & Xenos, S. (2003). Using FRIENDS to combat anxiety and adjustment problems among young migrants to Australia: A national trial. *Clinical Child Psychology and Psychiatry, 8*, 241–260.
- Barrett, P. M., & Turner, C. M. (2004). Prevention of childhood anxiety and depression. In P. M. Barrett & T. H. Ollendick (Eds.), *Handbook of interventions that work with children and adolescents: Prevention and treatment* (pp. 429–474). London: Wiley.
- Barrios, B. A., & Hartmann, D. P. (1997). Fears and anxieties. In E. J. Mash & L. G. Terdal (Eds.), *Assessment of childhood disorders* (3rd ed., pp. 230–327). New York: Guilford.
- Beidel, D. C. (1989). Assessing anxious emotion: A review of psychophysiological assessment in children. *Clinical Psychology Review, 9*, 717–736.
- Beidel, D. C., Morris, T. L., & Turner, M. W. (2004). Social phobia. In T. L. Morris & J. S. March (Eds.), *Anxiety disorders in children and adolescents*. (2nd ed., pp. 141–163), New York: Guilford.
- Beidel, D. C., & Turner, S. M. (1988). Comorbidity of test anxiety and other anxiety disorders in children. *Journal of Abnormal Child Psychology, 16*, 275–287.
- Beidel, D. C., Turner, S., & Morris, T. I. (2000). Behavioral treatment of childhood social phobia. *Journal of Consulting and Clinical Psychology, 68*, 1072–1080.
- Berman, S. L., Weems, C. F., Silverman, W. K., & Kurtines, W. M. (2000). Predictors of outcome in exposure-based cognitive and behavioural treatments for phobic and anxiety disorders in children. *Behaviour Therapy, 31*, 713–731.
- Blagg, N., & Yule, W. (1984). The behavioural management of school refusal: A comparative study. *Behaviour Research and Therapy, 22*, 119–127.
- Ciechowski, L., Jackson, K., Tonge, B., King, N. J., & Heyne, D. (2001). Intellectual disability and anxiety in children: A group-based parent skills-training intervention. *Behaviour Change, 18*, 204–212.
- Cobham, V. E., Dadds, M. R., & Spence, S. H. (1998). The role of parental anxiety in the treatment of childhood anxiety. *Journal of Consulting and Clinical Psychology, 66*, 893–905.
- Costello, E. G., & Angold, A. (1995). Epidemiology. In J. S. March (Ed.), *Anxiety disorders in children and adolescents*. (pp. 109–122). New York: Guilford.
- Dadds, M. R., Heard, P. M., & Rapee, R. M. (1992). The role of family intervention in the treatment of child anxiety disorders: Some preliminary findings. *Behaviour Change, 9*, 171–177.
- Dadds, M. R., Spence, S. H., Holland, D. E., Barrett, P. M., & Laurens, K. R. (1997). Prevention and early intervention for anxiety disorders: A controlled trial. *Journal of Consulting and Clinical Psychology, 65*, 627–635.
- Einfeld, S. L., & Tonge, B. J. (1992). *Manual for the Developmental Behaviour Checklist*. Sydney and Melbourne, Australia: University of N.S.W. and Monash University Centre for Developmental Psychology.
- Eisen, A. R., & Silverman, W. (1993). Should I relax and change my thoughts? A preliminary examination of cognitive therapy, relaxation training, and their combination with overanxious children. *Journal of Cognitive Psychotherapy: An International Quarterly, 7*, 265–279.
- Essau, C. A., Conradt, J., & Petermann, F. (2000). Frequency, comorbidity, and psychosocial impairment of specific phobia in adolescents. *Journal of Clinical Child Psychology, 29*, 221–231.
- Flannery-Schroeder, E., & Kendall, P. C. (2000). Group and individual cognitive-behavioral treatments for youth with anxiety disorders: A

- randomized clinical trial. *Cognitive Therapy and Research*, 24, 251–278.
- Friedman, A. G., & Ollendick, T. H. (1989). Treatment programs for severe night-time fears: A methodological note. *Journal of Behavior Therapy and Experimental Psychiatry*, 20, 171–178.
- Freud, S. (1963). The analysis of a phobia in a five-year-old boy. *Standard Edition of the Complete Psychological Works of Sigmund Freud, Vol. 10*. London: Hogarth Press. (Original work published 1909).
- Ginsburg, G. S., Silverman, W. K., & Kurtines, W. K. (1995). Family involvement in treating children with phobic and anxiety disorders: A look ahead. *Clinical Psychology Review*, 15, 457–473.
- Goldberg, D. P., & Hillier, V. F. (1978). A scaled version of the General Health Questionnaire. *Psychological Medicine*, 9, 139–145.
- Graziano, A. M., & Mooney, K. C. (1980). Family self-control instruction for children's nighttime fear reduction. *Journal of Consulting and Clinical Psychology*, 48, 206–213.
- Graziano, A. M., & Mooney, K. C. (1982). Behavioral treatment of "nightfears" in children: Maintenance of improvement at 21/2 to 3-year follow-up. *Journal of Consulting Clinical Psychology*, 50, 598–599.
- Gullone, E. (2000). The development of normal fear: A century of research. *Clinical Psychology Review*, 20, 429–451.
- Hall, G. S. (1897). A study of fears. *American Journal of Psychology*, 8, 147–249.
- Haywood, C., Varady, S., Albano, A. M., Thienemann, M., Henderson, L., & Schatzberg, A. F. (2000). Cognitive-behavioral group therapy for social phobia in female adolescents: Results of a pilot study. *Journal of the American Academy of Child and Adolescent Psychiatry*, 39, 721–726.
- Heard, P. M., Dadds, M., & Conrad, P. (1992). Assessment and treatment of simple phobias in children: Effects on family and marital relationships. *Behaviour Change*, 9, 73–82.
- Heimberg, R. G., Dodge, C. S., Hope, D. A., Kennedy, C. R., Zollo, L. J., & Becker, R. E. (1990). Cognitive-behavioral group treatment for social phobia: Comparison with a credible placebo control. *Cognitive Therapy and Research*, 14, 1–23.
- Heyne, D. (1999). *Evaluation of child therapy and caregiver training in the treatment of school refusal*. Ph.D. Thesis. Monash University, Melbourne, Australia.
- Heyne, D., & King, N. J. (2004). Treatment of school refusal. In P. M. Barrett & T. H. Ollendick (Eds.), *Handbook of interventions that work with children and adolescents: Prevention and treatment* (pp. 243–272). London: Wiley.
- Heyne, D., King, N. J., & Ollendick, T. (in press). Family factors in school refusal and other problems of school non-attendance: A review with implications for assessment and intervention. *Clinical Child and Family Psychology Review*.
- Heyne, D., King, N. J., & Tonge, B. (2004). School refusal. In T. H. Ollendick & J. S. March (Eds.), *Phobic and anxiety disorders in children and adolescents: A clinician's guide to effective psychosocial and pharmacological interventions* (pp. 236–271). Oxford: Oxford University.
- Heyne, D., King, N. J., Tonge, B., Rollings, S., Pritchard, M., Young, D., et al. (1998). The Self-Efficacy Questionnaire for School Situations: Development and psychometric evaluation. *Behaviour Change*, 15, 31–40.
- Heyne, D., King, N., Tonge, B., Rollings, S., Young, D., Pritchard, M., et al. (2002). Evaluation of child therapy and caregiver training in the treatment of school refusal. *Journal of the American Academy of Child and Adolescent Psychiatry*, 41, 687–695.
- Heyne, D., & Rollings, S. (2002). *School refusal. Parent, Adolescent and Child Training Series 2 (PACTS 2)*. Oxford: British Psychological Society and Blackwell.
- Hirshfeld-Becker, D. R., Biederman, J., & Rosenbaum, J. F. (2004). Behavioral inhibition. In T. L. Morris & J. S. March (Eds.), *Anxiety disorders in children and adolescents* (2nd ed., pp. 27–58). New York: Guilford.
- Hudson, J. L., Hughes, A. A., & Kendall, P. C. (2004). Treatment of generalized anxiety disorder in children and adolescents. In P. M. Barrett & T. H. Ollendick (Eds.), *Handbook of interventions that work with children and adolescents: Prevention and treatment* (pp. 115–143). London: Wiley.
- Hudson, J. L., & Manassis, K. (2004). (Guest Eds.). Special Issue: Current issues and ideas in children and adolescents. *Cognitive and Behavioral Practice*, 11(1), 1–2.
- Jackson, H. J., & King, N. J. (1982). The therapeutic management of an autistic child's phobia using laughter as the anxiety inhibitor. *Behavioural Psychotherapy*, 10, 364–369.
- Jackson, K., Ciecchowski, L., King, N. J., Tonge, B., & Heyne, D. (2002). *Creating confident children: A group-based parent-skills training program*. Paper presented at the 25th National Conference of the Australian Association for Cognitive and Behaviour Therapy, Brisbane.
- Kane, M. T., & Kendall, P. C. (1989). Anxiety disorders in children: A multiple baseline evaluation of a cognitive-behavioral treatment. *Behavior Therapy*, 20, 499–508.
- Kanner, L. (1972). *Child psychiatry* (4th ed.). Springfield, Ill: Charles C. Thomas.
- Kearney, C. A. (2001). *School refusal behavior in youth: A functional approach to assessment and treatment*. Washington, DC: American Psychological Association.
- Kearney, C. A., & Silverman, W. K. (1990). A preliminary analysis of a functional model of assessment and treatment for school refusal behavior. *Behavior Modification*, 14, 340–366.

- Kearney, C. A., & Silverman, W. K. (1993). Measuring the function of school refusal behavior: The School Refusal Assessment Scale. *Journal of Clinical Child Psychology, 22*, 85–96.
- Kendall, P. C. (1994). Treating anxiety disorders in children: Results of a randomized clinical trial. *Journal of Consulting and Clinical Psychology, 62*, 100–110.
- Kendall, P. C., Ellsas, T. E., Kane, M. T., Kim, R. S., Kortlander, E., Ronan, K. R., et al. (1992). *Anxiety disorders in youth: Cognitive-behavioral interventions*. Boston: Allyn & Bacon.
- Kendall, P. C., Flannery-Schroeder, E., Panichelli-Mindel, S., Southam-Gerow, M., Henis, A., & Warman, M. (1997). Therapy for youths with anxiety disorders: A second randomized clinical trial. *Journal of Consulting and Clinical Psychology, 65*, 366–380.
- Kendall, P. C., Safford, S., Flannery-Schroeder, E., & Webb, A. (2004). Child anxiety treatment: Outcomes in adolescence and impact on substance use and depression at 7.4-year follow-up. *Journal of Consulting and Clinical Psychology, 72*, 276–287.
- Kendall, P. C., & Southam-Gerow, M. A. (1996). Long-term follow-up of a cognitive-behavioral therapy for anxiety disordered youth. *Journal of Consulting and Clinical Psychology, 64*, 724–730.
- King, N. J., & Bernstein, G. (2001). School refusal in children and adolescents: A review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 197–205.
- King, N. J., & Gullone, E. (1990). Acceptability of fear reduction procedures with children. *Journal of Behavior Therapy & Experimental Psychiatry, 21*, 1–8.
- King, N. J., Hamilton, D. I., & Ollendick, T. H. (1988). *Children's phobias: A behavioural perspective*. Chichester, England: Wiley.
- King, N. J., Mietz, A., Tinney, L., & Ollendick, T. H. (1995). Psychopathology and cognition in adolescents experiencing severe test anxiety. *Journal of Clinical Child Psychology, 24*, 49–54.
- King, N. J., Muris, P., & Ollendick, T. H. (2004). Specific phobia. In J. March & T. L. Morris (Eds.), *Anxiety disorders in children and adolescents* (2nd ed., pp. 263–279). New York: Guilford.
- King, N. J., Muris, P., & Ollendick, T. H. (in press). Fears and phobias in children: Assessment and treatment. *Child and Adolescent Mental Health*.
- King, N. J., & Ollendick, T. H. (1989a). Children's anxiety and phobic disorders in school settings: Classification, assessment and intervention issues. *Review of Educational Research, 59*, 431–470.
- King, N. J., & Ollendick, T. H. (1989b). School refusal: Graduated and rapid behavioural treatment strategies. *Australian & New Zealand Journal of Psychiatry, 23*, 213–223.
- King, N. J., & Ollendick, T. H. (1997). Annotation. Treatment of childhood phobias. *Journal of Child Psychology and Psychiatry, 38*, 389–400.
- King, N. J., Ollendick, T. H., & Gullone, E. (1990). School-related fears of children and adolescents. *Australian Journal of Education, 34*, 99–112.
- King, N. J., Ollendick, T. H., Gullone, E., Cummins, R., & Josephs, A. (1990). Fears and phobias in children and adolescents with intellectual disabilities. Assessment and intervention strategies. *Australia & New Zealand Journal of Developmental Disabilities, 16*, 97–108.
- King, N. J., Ollendick, T. H., & Murphy, G. (1997). Assessment of childhood phobias. *Clinical Psychology Review, 17*, 667–687.
- King, N. J., Tonge, B. J., Heyne, D., Pritchard, M., Rollings, S., Young, D., et al. (1998). Cognitive-behavioral treatment of school-refusing children: A controlled evaluation. *Journal of the American Academy of Child and Adolescent Psychiatry, 37*, 395–403.
- King, N., Tonge, B., Heyne, D., Turner, S., Pritchard, M., Young, D., et al. (2001). Cognitive-behavioural treatment of school-refusing children: Maintenance of improvement at 3- to 5-year follow-up. *Scandinavian Journal of Behaviour Therapy, 30*, 85–89.
- King, N. J., Tonge, B. J., Heyne, D., & Ollendick, T. H. (2000). Research on the cognitive-behavioral treatment of school refusal: A review and recommendations. *Clinical Psychology Review, 20*, 495–507.
- Lang, P. J. (1968). Fear reduction and fear behaviour. Problems in treating a construct. In J. M. Shliem (Ed.), *Research in psychotherapy*. Washington, DC: American Psychological Association.
- Lang, P. J. (1977). Fear imagery: An information processing analysis. *Behavior Therapy, 8*, 862–886.
- Last, C. G., Hansen, C., & Franco, N. (1998). Cognitive-behavioral treatment of school phobia. *Journal of the American Academy of Child and Adolescent Psychiatry, 37*, 404–411.
- Last, C. G., Strauss, C. C., & Francis, G. (1987). Comorbidity among childhood anxiety disorders. *Journal of Nervous and Mental Disease, 175*, 726–730.
- Manassis, K., Mendlowitz, S. L., Scapillato, D., Avery, D., Fiksenbaum, L., Freire, M., et al. (2002). Group and individual cognitive-behavioral therapy for childhood anxiety disorders: A randomized trial. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*, 1423–1430.
- Mansdorf, I. J., & Lukens, E. (1987). Cognitive-behavioral psychotherapy for separation anxious children exhibiting school phobia. *Journal of the American Academy of Child and Adolescent Psychiatry, 26*, 222–225.
- Marks, I. M. (1975). Behavioral treatments of phobic and obsessive-compulsive disorders: A critical appraisal. In M. Hersen, R. M. Eisler, & P. M. Miller (Eds.), *Progress in behavior modification* (Vol. 1, pp. 65–158). New York: Academic.

- Masia, C. L., Klein, R. G., Storch, E. A., & Corda, B. (2001). School-based behavioral treatment for social anxiety disorder in adolescents: Results of a pilot study. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 780–786.
- Mattis, S., & Pincus, D. B. (2004). Treatment of SAD and panic disorder in children and adolescents. In P. M. Barrett & T. H. Ollendick (Eds.), *Handbook of interventions that work with children and adolescents: Prevention and treatment* (pp. 145–169). London: Wiley.
- Matson, J. L. (1981). Assessment and treatment of clinical fears in mentally retarded children. *Journal of Applied Behavior Analysis, 14*, 287–294.
- McGee, R., Feehan, M., Williams, S., Partridge, F., Silva, P. A., & Kelly, J. (1990). DSM-III disorders in a large sample of adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 29*, 611–619.
- Mendlowitz, S. L., Manassis, K., Bradley, S., Scapillato, D., Miezitis, S., & Shaw, B. F. (1999). Cognitive-behavioral group treatments in childhood anxiety disorders: The role of parental involvement. *Journal of Child and Adolescent Psychiatry, 38*, 1223–1229.
- Milne, J. M., Garrison, C. Z., Addy, C. L., McKeown, R., Jackson, K. L., Cuffe, S. P., et al. (1995). Frequency of phobic disorder in a community sample of young adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 34*, 1202–1211.
- Morris, R. J., & Kratochwill, T. R. (1983). *Treating children's fears and phobias: A behavioral approach*. New York: Pergamon.
- Morris, T. L. (2004). Treatment of social phobia in children and adolescents. In P. M. Barrett & T. H. Ollendick (Eds.), *Handbook of interventions that work with children and adolescents: Prevention and treatment* (pp. 171–186). London: Wiley.
- Obler, M., & Terwilliger, R. F. (1970). Pilot study on the effectiveness of systematic desensitization with neurologically impaired children with phobic disorders. *Journal of Consulting & Clinical Psychology, 34*, 314–318.
- Ollendick, T. H. (1979). Fear reduction techniques with children. In M. Hersen, R. M. Eisler, & P. M. Miller (Eds.), *Progress in behavior modification* (Vol. 8, pp. 127–168). New York: Academic.
- Ollendick, T. H., Davis, T. E., & Muris, P. (2004). Treatment of specific phobia in children and adolescents. In P. M. Barrett & T. H. Ollendick (Eds.), *Handbook of interventions that work with children and adolescents: Prevention and treatment* (pp. 273–299). London: John Wiley & Sons, Ltd.
- Ollendick, T. H., Grills, A. E., & King, N. J. (2001). Applying developmental theory to the assessment and treatment of childhood disorders: Does it make a difference? *Clinical Psychology and Psychotherapy, 8*, 304–315.
- Ollendick, T. H., Hagopian, L. P., & Huntzinger, R. M. (1991). Cognitive-behavior therapy with nighttime fearful children. *Journal of Behavior Therapy and Experimental Psychiatry, 22*, 113–121.
- Ollendick, T. H., & King, N. J. (1998). Empirically supported treatments for children with phobic and anxiety disorders. *Journal of Clinical Child Psychology, 27*, 156–167.
- Ollendick, T. H., & King, N. J. (2000). Empirically supported treatments for children and adolescents. In P. C. Kendall (Ed.), *Child and adolescent therapy: Cognitive-behavioral procedures* (2nd ed., pp. 386–425). New York: Guilford Press.
- Ollendick, T. H., King, N. J., & Muris, P. (2002). Fears and phobias in children: Phenomenology, epidemiology and Aetiology. *Child and Adolescent Mental Health, 7*, 98–106.
- Ollendick, T. H., King, N. J., & Yule, W. (Eds.) (1994). *International handbook of phobic and anxiety disorders in children and adolescents*. New York: Plenum.
- Ost, L. G., Svensson, L., Hellstrom, K., & Lindwall, R. (2001). One-session treatment of specific phobias in youths: A randomized clinical trial. *Journal of Consulting and Clinical Psychology, 69*, 814–824.
- Prins, P. M. J., & Ollendick, T. H. (2003). Cognitive change and enhanced coping: Missing mediational links in cognitive behavior therapy with anxiety-disordered children. *Clinical Child and Family Psychology Review, 6*, 87–105.
- Rapee, R.M. (2000). Group treatment of children with anxiety disorders: Outcomes and predictors of treatment response. *Australian Journal of Psychology, 52*, 125–130.
- Rapee, R. M., Wignall, A., Hudson, J. L., & Schniering, C. A. (2000). *Treating anxious children and adolescents*. Oakland, CA: New Harbinger.
- Shortt, A. L., Barrett, P. M., & Fox, T. L. (2001). Evaluating the FRIENDS Program: A cognitive-behavioral group treatment for anxious children and their parents. *Journal of Community Psychology, 30*, 525–535.
- Silverman, W. K., & Albano, A. M. (1996). *Anxiety Disorders Interview Schedule for DSM-IV, Child and Parent Versions*. San Antonio, TX: Psychological Corporation.
- Silverman, W. K., & Carmichael, W. K. (1999). Phobic disorders. In R. T. Ammerman, M. Hersen, & Last, C. L. (Eds.), *Handbook of prescriptive treatments for children and adolescents* (2nd ed., pp. 172–192). Boston: Allyn and Bacon.
- Silverman, W. K., Cerny, J. A., & Nelles, W. B. (1988). The familial influence in anxiety disorders: Studies on the offspring of patients with anxiety disorders. In B. B. Lahey & A. E. Kazdin (Eds.), *Advances in clinical child psychology* (Vol. 11, pp. 223–248). New York: Plenum.

- Silverman, W. K., & Ginsburg, G. S. (1995). Specific phobias and generalized anxiety disorder. In J. S. March (Ed.), *Anxiety disorders in children and adolescents* (pp. 151–180). New York: Guilford.
- Silverman, W. K., Kurtines, W. M., Ginsburg, G. S., Weems, C. F., Lumpkin, P. W., & Carmichael, D. H. (1999). Treating anxiety disorders in children with group cognitive-behavioral therapy: A randomized clinical trial. *Journal of Consulting and Clinical Psychology, 67*, 995–1003.
- Silverman, W. K., Kurtines, W. M., Ginsburg, G. S., Weems, C. F., Rabian, B., & Serafini, L. T. (1999). Contingency management, self-control, and education support in the treatment of childhood phobic disorders: A randomized clinical trial. *Journal of Consulting and Clinical Psychology, 67*, 675–687.
- Spence, S., Donovan, C., & Brechman-Toussant, M. (2000). The treatment of childhood social phobia: The effectiveness of a social skills-based training, cognitive-behavioral intervention, with and without parental involvement. *Journal of Child Psychology and Psychiatry, 41*, 713–726.
- Toren, P., Wolmer, L., Rosental, B., Eldar, S., Koren, S., Lask, M., et al. (2000). Case series: Brief parent-child group therapy for childhood anxiety disorders using a manual-based cognitive-behavioral technique. *Journal of the American Academy of Child and Adolescent Psychiatry, 39*, 809–822.
- Treadwell, K. R., Flannery-Schroeder, E. C., & Kendall, P. C. (1995). Ethnicity and gender relation to adaptive functioning, diagnostic status, and treatment outcome. *Journal of Anxiety Disorders, 9*, 373–384.
- Vasey, M. W., & Dadds, M. (Eds.) (2001). *The developmental psychopathology of anxiety*. New York: Oxford University.
- Watson, J. B., & Rayner, R. (1920). Conditioned emotional reactions. *Journal of Experimental Psychology, 3*, 1–14.

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