PRELIMINARY EXAMINATION OF A GROUP CBT TREATMENT FOR THE
PARENTS OF YOUNG ANXIOUS CHILDREN

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A Dissertation

Presented to

The Faculty of the Department

of Psychology

University of Houston

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In Partial Fulfillment

Of the Requirements for the Degree of

Doctor of Philosophy

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By

Julia M. Mundy, M.A.

August, 2013

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PRELIMINARY EXAMINATION OF A GROUP CBT TREATMENT FOR THE
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Abstract

Anxiety disorders are the most commonly diagnosed disorder in youth (Grills-Taquechel & Ollendick, 2007; Rapee, Schniering, & Hudson, 2009; Costello, Egger, & Angold, 2004). In fact, research has demonstrated that symptoms of anxiety disorders can often be observed as early as preschool (Goodyear-Brown, 2010; Link-Egger & Angold, 2006), and traits identified as early as infancy (Lyons-Ruth, Zeanah, & Benoit, 2003). Unfortunately, research on treatments for early childhood anxiety has lagged behind that of treatments for older youth. Given potential developmental constraints, adaptations may be necessary for best treating young anxious children. For instance, treatments of younger aged children tend to have greater parental involvement.

The present study presents preliminary findings from a cognitive-behavioral early childhood intervention for anxiety that focused on parent training. This project was adapted from a treatment developed and shown to be effective by Cartwright-Hatton and colleagues (2005). The treatment consisted of a parents-only group therapy format with the typical components of behavioral parent training (e.g., praise, play, ignoring, etc.) based within a cognitive framework (Cartwright-Hatton et al., 2005). In the current study, participants were the parents of 15 young children (ages 4-9) with symptoms of anxiety who attended a 10-week group therapy (*M* age =6.53 years; *SD* = 1.7). The child participants were 53% male and 47% female. The parent participants consisted of 12 mothers and 5 fathers. Fifty-three percent of the parent participants self-identified as Caucasian, 23% as Hispanic/Other, 12% Asian American, 6% African American, and 6% Biracial. Preliminary analyses support the efficacy of this treatment program as indicated by reduced child anxiety symptoms. More specifically, parent reports of child anxiety on

the SCARED-R (Muris, Merckelbach, Schmidt, & Mayer, 1999) decreased significantly

from pre- to post-treatment for overall anxiety symptoms, as well as specific areas of

anxiety such as Panic, Generalized Anxiety, Separation Anxiety, and Post-Traumatic

Stress symptoms. Further analyses examined pre- to post-treatment change on the Anxiety

Disorders Interview Schedule for Children-Parent Report. Differences among treatment

completers and non-completers were also explored. Findings were discussed in terms of

associations between parental psychopathology and dropout by conducting multiple

independent sample t-tests with completion status serving as the dependent variable and

parental psychopathology as a predictor. It was expected that parents with

psychopathology may have higher attrition rates than parents without psychopathology.

Attrition was also examined in association with other commonly suggested contributing

factors (i.e., ethnicity, child psychopathology, and improvement).

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Preliminary Examination of a Group CBT Treatment for the Parents of

Young Anxious Children

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Anxiety disorders have consistently been identified as the most prevalent category of mental health disorders, currently affecting approximately 40 million adults in the United States (National Institute of Mental Health, 2006). The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 2000) lists 11 diagnosable adult anxiety disorders including: Generalized Anxiety Disorder, Panic Disorder (with or without Agoraphobia), Agoraphobia without Panic Disorder, Social Phobia, Specific Phobias, Obsessive Compulsive Disorder, Acute Stress Disorder, Posttraumatic Stress Disorder, Anxiety Disorder due to a General Medical Condition, and Anxiety Disorder, Not Otherwise Specified (NOS). In addition to these 11 anxiety disorders, children can also be diagnosed with Selective Mutism or most commonly in childhood: Separation Anxiety Disorder (Mendez et al., 2008; DSM-IV; American Psychiatric Association, 2000).

Research has demonstrated that these disorders often begin in early childhood (Poulton, Pine, & Harrington, 2009). In fact, anxiety disorders are the most commonly diagnosed disorders in youth as well, affecting from 2 to 17% of children and adolescents, with 2.5 to 5% meeting criteria at any given age (Grills-Taquechel & Ollendick, 2007; Rapee, Schniering, & Hudson, 2009; Costello, Egger, & Angold, 2004). According to the National Comorbidity Survey Replication (Kessler et al., 2005), the median age of onset for anxiety disorders is 11 years, with an interquartile range (IQR) of 6-21 years. However, research has demonstrated that symptoms of anxiety disorders can often be observed as early as preschool (Goodyear-Brown, 2010; Link-Egger & Angold, 2006), and traits identified as early as infancy (Lyons-Ruth, Zeanah, & Benoit, 2003). Thus, the identification of developmentally appropriate and efficacious treatments for early

childhood anxiety is paramount. The primary purpose of this study was to examine a cognitive-behavioral early childhood intervention for anxiety that focused on parent training. This study also inspected potential contributing factors to attrition in this parent behavior training. The following includes a discussion of current literature on the development and maintenance of anxiety in childhood as well as available treatments for childhood anxiety and attrition in these treatments.

Development of Anxiety

In addition to an early age of onset, research has indicated that if untreated, anxiety symptoms do not subside but often worsen over time (Rapee et al., 2010; Podell et al., 2009). In fact, past research has indicated that, with the exception of certain developmentally normative fears (e.g., stranger anxiety in infancy), children often do not "outgrow" anxiety (Sanchez et al., 2001). Thus, anxiety beginning in childhood often progresses into adulthood and can also have a long-lasting negative impact on other domains of functioning, including academic (i.e., school avoidance), social (i.e., social incompetence, peer rejection), and emotional (i.e., depression) development (Hughes, Lourea-Waddell, & Kendall, 2008; Van Ameringen, Mancini, & Farvolden, 2003; Grills & Ollendick, 2002; Kovacs, Gatsonis, Paulauskas & Richards, 1989; McGee, Freehan, Williams, & Anderson, 1992; Rapee et al., 2009). Academic concerns associated with anxiety include a decrease in grades (Van Ameringen, Mancini, & Farvolden, 2003; Simmons & Blyth, 1987), self-perceived academic incompetence (Harter et al., 1992), a decrease in academic interests (Dotterer, McHale, & Crouter, 2009), and overall school avoidance (Masi, Mucci, & Millepiedi, 2001). In addition to academic concerns, anxiety has also been linked to impairments in social development. For example, research has

demonstrated that anxious individuals are more likely to be rejected by peers (Festa, Ginsburg, & Golda, 2011; Inderbitzen et al., 1997; LaGreca & Lopez, 1998; Papsodrf & Alden, 1998), are often identified as less socially competent (Bosquet & Egeland, 2006; Chansky & Kendall, 1997; LeSure-Lester, 2001), and report having fewer overall close friendships than their non-anxious peers (Festa, Ginsburg, & Golda, 2011; LaGreca, 2001; Montgomery et al., 1991). Further, research studies have indicated that children and adolescents with anxiety disorders are at a higher risk for the development of depression and other internalizing problems beginning in adolescence and into early adulthood (Horn & Wuyek, 2010; Costello et al., 2003; Pine et al., 1998). In addition to these debilitating pathways associated with anxiety in youth, past research has demonstrated that earlier age of onset may be associated with greater severity and worse progression (Ramsawh, et al., 2011). In fact, earlier age of onset has also been linked with more comorbidity, mostly with depression or other internalizing disorders (Campbell et al., 2003). Further, a longitudinal study by Ramsawh and colleagues demonstrated that for some anxiety disorders, earlier age of onset seemed to be associated with greater severity of symptoms and pervasive course. Participants in this study were not only demonstrating more comorbidity over 15 years than a control group, but those with an early onset of anxiety were less likely to be married in adulthood, and were more likely to have recurrence of anxiety disorders. Therefore, the identification and treatment of anxiety symptoms in early childhood may be viewed as paramount before symptoms worsen and perhaps while the child is more amenable to change.

Parental Influence on Anxiety

In order to treat anxiety, it is essential to identify and understand what factors can influence or possibly perpetuate these symptoms. Past research has examined a variety of potential contributors to the development and maintenance of anxiety. Understandably, researchers have examined family prevalence rates in hopes of providing insight into the etiology of child anxiety disorders. As a result, there has been a myriad of evidence that demonstrates a familial connection. For example, "top-down" studies, which observe symptoms of anxiety in children with anxious parents, as well as "bottom-up" studies, which examine symptoms of anxiety in the parents of anxious children, have both demonstrated a link within the family (Beidel & Turner, 1997; Biederman et al., 1991; Ginsburg & Schlossberg, 2002; Last, Hersen, Kazdin, Francis, & Grubb, 1987; Turner, Beidel, & Costello, 1987). An example of a "bottom-up" study, Ginsburg & Schlossberg (2002) found that 60% of anxious parents have been found to have a child with an anxiety disorder. In addition, "top-down" studies have demonstrated that more than 80% of children with an anxiety disorder have parents who also exhibit significant anxiety symptoms (Ginsburg & Schlossberg, 2002; Last et al., 1987). In addition to these studies, behavioral genetic research has shown via twin, sibling, and adoption studies that a genetic component explains approximately one-third of the etiological variance associated with anxiety disorders in childhood (Eley, 2001; Jang, 2005).

While we do not know the exact extent to which heritability plays a role in the development of childhood anxiety, we do know that parents are typically a consistent and significant influence on their children. Thus, previous studies have also examined possible environmental factors within the parent-child relationship. Past research has investigated

specific elements of the parent-child relationship that may contribute to the development and maintenance of anxiety (Dadds et al., 1996; Ginsberg et al., 2004; Ginsburg & Schlossberg, 2002; King, Gullone, & Ollendick, 1998). For example, past research has suggested that some possible parental contributions to childhood anxiety may include the transmission of information or verbal instruction, parental reinforcement (i.e., FEAR effect) or vicarious learning (i.e., modeling) of anxious behavior (Fisak & Grills-Taquechel, 2007; Rapee, 2002; Barrett et al., 1996).

The transmission of information or verbal instruction occurs when parents communicate messages to their children regarding safety and potentially harmful situations to avoid (Fisak & Grills-Taquechel, 2007; Muris & Field, 2010). These well-intentioned messages, often meant to protect the child, may actually convey a level of danger that exceeds the actual threat. An example of research on the transmission of information was recently conducted by Muris and colleagues (2010). In this study, children aged 8–13, were presented with the picture of an unknown animal and then asked to rate their fear. Next, the child's mother was given several open-ended vignettes describing what could be expected of the animal (i.e., positive, negative, or ambiguous) and then instructed to tell their children what could happen in these situations. Children were then asked to rate their anxiety again. Results demonstrated that the child's fear could be influenced via information provided by his/her mother. More specifically, mothers who had received negative or threatening information about the animal would subsequently provide threatening narratives about the animal to their children, and the child subsequently reported experiencing higher levels of fear. Surprisingly, families in the neutral or ambiguous condition exhibited varying levels of anxiety which was significantly correlated

to the mother's trait anxiety levels. In other words, more anxious mothers conveyed more threatening stories about the unknown animal even when given neutral information about it, which resulted in higher fear levels in the children.

In addition to verbal instruction, reinforcement is another potential pathway of parental influence on the development of childhood anxiety. Parental reinforcement suggests that a parent may support, facilitate, or even reward their child's anxious/avoidant behaviors (Rapee, 2002). An example of parental reinforcement of anxiety is the Family Enhancement of Avoidant Responses (FEAR) effect (Barrett et al., 1996; Shortt et al., 2001). According to Barrett and colleagues (1996), the FEAR effect is the tendency for parents of an anxious child to alter their behavior in relation to their child's responses to an anxiety-provoking stimulus. In other words, parents may communicate doubt in the child's abilities to successfully respond to an anxiety-provoking situation or even encourage avoidance of the situation (Dadds, Heard, & Rapee, 1992; Shortt, Barrett, Dadds, and Fox, 2001). The FEAR effect has been examined by investigating the influence of family discussion on an anxious child's interpretations of ambiguous situations. Research by Barrett and colleagues (1996) suggested that anxious children perceived more threat and chose avoidant solutions when family discussions supported their avoidant solutions. In addition, their findings indicated that child avoidance was positively correlated with the probability that parents reciprocated avoidance.

Finally, vicarious learning or modeling has been identified as a likely contributing factor to the development and maintenance of anxiety. Modeling may occur if a parent exhibits symptoms of anxiety that a child observes and imitates (Fisak & Grills, 2007; Warren, 2004). In the case of modeling, the parent may also positively reinforce their

child's symptoms of anxiety or avoidant behavior as the parent may not perceive these behaviors as excessive. Past research on modeling of anxious behavior has indicated that children who report greater levels of anxiety also perceive their parents' rearing behaviors (ie., disciplinary or parenting style) as more anxious (Settipani et al., 2013; Muris, Meesters, Merckelbach, & Hulsenbeck, 2000).

Given the many pathways that may lead to anxiety in youth and the substantial impact that anxiety can have on several domains of functioning, it is not surprising that recent research focus has been not only on the development and trajectory of anxiety disorders (Muris et al., 2011; Beesdo, Knappe, & Pine, 2009; Rapee, Schniering, &Hudson, 2009), but also on early treatment and prevention of such disorders (Monga, Young, & Owens, 2009; Cartwright-Hatton, McNally, & White, 2005; Barrett et al., 2001; Barret, Dadds, & Rapee, 1996). However, despite an abundant amount of evidence suggesting parental influence on the development of anxiety in early childhood (Dadds et al., 1996; Ginsberg et al., 2004; Ginsburg & Schlossberg, 2002; King, Gullone, & Ollendick, 1998; Fisak & Grills-Taquechel, 2007), as well as evidence to support a typically early age of onset of these disorders (Kessler et al., 2005; Goodyear-Brown, 2010; Link-Egger & Angold, 2006; Lyons-Ruth, Zeanah, & Benoit, 2003), many of the treatments available for childhood anxiety neglect to add a parental component. In addition, these treatments rarely target younger aged children. Instead, the majority of treatments for childhood anxiety target children in middle childhood and parents often act as collaborators in a couple sessions, as opposed to being consistent and active participants in treatment. The following is a review of current treatments available for children with anxiety.

Child Focused Cognitive-Behavioral Treatment

Kendall (1994) created a cognitive-behavioral treatment, Coping Cat, with the goal of teaching children to recognize their own symptoms of anxiety and arousal and to then implement strategies to cope with those anxiety-provoking situations. Children are taught three basic skills: 1) how to identify anxiety, 2) how to regulate anxious symptoms, and 3) how to cope with anxiety-provoking situations. Coping Cat utilizes relaxation, cognitive restructuring, problem-solving, and exposure tasks to facilitate the successful completion of each goal. This manualized program consists of 16 sessions where the first eight sessions focus primarily on psychoeducation and anxiety-management strategies (i.e., identifying arousal, relaxation, recognizing anxious thoughts, and problem solving), and the second eight sessions focus on exposure to anxiety-provoking situations and the practice of newly learned coping skills. Parental participation in Coping Cat ranges from minimal (e.g., they have one scheduled meeting after Session 3) to moderate (e.g., some parents call in for updates or make contact after sessions with the therapists). Parents are also involved in the assessment and evaluation process, as they complete several diagnostic measures prior to treatment.

Randomized clinical trials (RCT) of the Coping Cat program have been conducted and yielded promising results (Kendall, 1994; Kendall et al., 1997). The first of these showed that at post-treatment and at one year follow-up, 64% of children in the treatment group were free of an anxiety disorder diagnosis, while only one participant in the waitlist condition was free of diagnosis at the end of the study (*N*= 47; Kendall, 1994). These results were replicated in a second RCT with a larger sample size (*N* = 94; Kendall et al., 1997), where results suggested a significant interaction of treatment and trial (*F*(7, 46) =

4.87, $p < .001$). The Coping Cat program was later adapted for several different

populations including Australians (Coping Koala; Barrett, Dadds, & Holland, 1994) and

Canadians (Coping Bear; Mendlowitz, 1999). RCTs with both adaptations have also been

promising. For instance, research examining the Coping Koala found significant treatment

effects ($F(7, 118) = 3.38$, $p < .005$), with significant differences for all examined

subcategories of outcome (i.e., overall functioning, anxiety, avoidance, family disruption,

and clinician's rating of global impression). In addition, the results were consistently and

significantly positive at the 6-month follow up (Dadds et al., 1997). Coping Bear also

demonstrated improvements in anxiety and functioning as reported by children, mothers,

and clinicians who were blind to treatment condition (Manassis et al., 2002). While these

results are promising, this specific form of treatment is intended only for individuals

during middle childhood (aged 9-13), despite evidence suggesting a much earlier age of

onset for some anxiety disorders and initial symptoms often beginning in early childhood

(Kessler et al., 2005; Goodyear-Brown, 2010; Link-Egger & Angold, 2006; Lyons-Ruth,

Zeanah, & Benoit, 2003). Thus, it is important to examine adaptations of this treatment for

younger children, as well as other treatments available for children in early childhood.

The lack of research in CBT for children under the age of 8 years old may be a

reflection of the belief that the cognitive and linguistic abilities of young children are

underdeveloped for the demands of such treatment. While The Coping Cat was originally

intended for children ages 7 to 13, Kendall and colleagues (2008) suggested that they could

demonstrate flexibility within fidelity by adapting The Coping Cat program for a younger

population. In a discussion of this program, Kendall and colleagues (2008) provided

several suggestions for potential adaptations that could be made for younger participants.

For example, the psychoeducation that occurs in the first half of the program intends for the child to have a certain level of language development and cognitive ability to understand and learn about symptoms of anxiety. Kendall suggested the utilization of play, as opposed to a didactic "talk-therapy," to provide a more interactive and engaging setting to keep the children interested. The use of pictures was recommended to replace words for the identification of anxious symptoms. It was further suggested that relaxation be presented in a shorter, simpler and more visual manner so that it is easier for a younger child to understand and maintain focus. In addition, limiting cognitive restructuring to one or two all-encompassing thoughts such as, "I can do it" or "Be brave" was recommended so that the child does not have to generate new thoughts for each anxiety-provoking situation (Kendall et al., 2008; Beidas et al., 2009). While exposure tasks are similar for younger children, it was recommended that therapists reward exposure with small prizes (i.e., stickers, collectible cards, etc.) and that photographs be taken of the child directly after the exposure as a reminder of their accomplishment. It was suggested that a collage of their achievements would help the child continue to practice the skills they have learned outside of therapy.

Hirschfeld-Becker and colleagues (2010) conducted a randomized clinical trial in which they adapted The Coping Cat program for preschool-aged children (aged 4-7; $N =$ 64). Participants in this study were required to meet criteria for an anxiety disorder diagnosis, as assessed by the Kiddie-Schedule for Affective Disorders and Schizophrenia (K-SADS). While this is still considered a child-focused treatment, Hirschfeld-Becker and colleagues did utilize parental involvement to best understand the child's anxiety and how to treat it. Parents acted as consultants (e.g., provide information), collaborators (e.g., assist

with the child's acquisition of coping skills), and/or co-clients (e.g., learn skills to manage their own anxiety) (Hirschfeld-Becker et al., 2010). During their intervention they included seven parent-only sessions and 8-13 child-only sessions, as opposed to the one parent session in the original treatment protocol. Children who completed the cognitive-behavioral treatment showed a significantly greater decrease in anxiety disorders (effect size [ES] = .55) and increase in parent-rated coping ($ES = .69$) than controls. The study could not, however, demonstrate normalization of functioning in the treated children as the results on the Child Behavior Checklist Internalizing scale were not significant. Thus, although this form of parent-child CBT yielded some promising results for preschool aged anxious children, further examination is required.

The Fun FRIENDS program is another adaptation of Coping Cat for younger populations (aged 4-6; Farrell & Barrett, 2007). This 10-week program involves parents with three information sessions that keep parents informed of skills their children are learning, how to reinforce these skills, and implement behavior management at home. Each session consists of 4 to 5 different learning activities relating to the cognitive-behavioral skills and social-emotional learning strategies, and utilizes play-based activities and experiential learning (i.e. use of puppets, story-telling, puppets, creative art, games). A randomized clinical trial of Fun FRIENDS focused primarily on anxiety reduction from pre to post intervention ($N = 70$). Their results demonstrated that children who participated in this program had decreased levels of anxiety from pre ($M = 22.09$, $SD = 12.29$) to post intervention ($M = 18.67$, $SD = 10.81$, $t(69) = 3.45$, $p < .001$). Unfortunately, these results were only significant for female participants ($n = 31$). In addition, more recent studies have duplicated these results. For example, Liber and colleagues (2008) demonstrated that

regardless of whether this program was implemented with groups or individually, children experienced reductions in the symptoms of anxiety. Further, Pahl & Barrett (2010) found that parents did not report a significant difference in anxiety between children in the intervention group versus the waitlist condition at post-treatment, however, there were significant differences at the 12-month follow-up where children in the intervention condition were reported to have significantly reduced symptoms of anxiety.

Another unique form of cognitive-behavioral treatment for anxiety in early childhood is "Taming Sneaky Fears" (Monga, 2009). This approach to CBT was developed specifically for children ages 5-7. As such, the manual utilizes stories, games, and activities designed to be engaging for young children to ensure the retention of cognitive behavioral strategies. Similar to previously discussed treatments, child sessions focus on identifying and labeling emotional state, relaxation, and thinking of "brave thoughts." Cognitive strategies such as talking and labeling your feeling states to adults when anxious, ignoring the scary thoughts, and thinking of alternative or ''brave thoughts'' when feeling anxious are taught in later sessions. Parents are also considered clients as they attend the 12-week, 1 hour sessions separately but concurrently with their child's sessions. The goal of the parent program is to teach parents cognitive behavioral strategies to use with their children with a focus on psycho-education and parent management strategies. Later parents are taught relaxation exercises and desensitization strategies to help their child confront rather than avoid their fears. Results of a randomized clinical trial of this treatment demonstrated a significant decrease in number of anxiety disorders ($d= 1.48$). In addition, results showed significantly reduced anxiety symptoms on all subscales of the Screen for Child Anxiety Related Emotional Disorders (SCARED)

with the exception of the panic subscale. Further, an analysis of pre and post treatment symptoms of anxiety on the Revised Connor's Parenting Rating Scale: Long Version (CPRS-R:L) suggested a significant decrease on the anxious/shy subscale ($p < .0001$, $d = 0.82$) (Monga, 2009).

Parent Training as a Treatment of Childhood Anxiety

Another series of investigations have incorporated parent training aspects, such as Parent-Child Interaction Therapy (PCIT; Eyberg & Robinson 1982; Zisser & Eyberg 2008), into the treatment of anxious youth. PCIT was originally developed to treat oppositional or externalizing behavior (Brestan & Eyberg, 1998; Gallagher, 2003; Thomas & Zimmer-Gembeck, 2007), however, recently researchers have begun adapting PCIT for use with other childhood concerns, including Separation Anxiety Disorder (Choate et al., 2005; Pincus et al., 2005; Pincus et al., 2008).

This evidence-based treatment consists of two main components. The first component establishes a positive foundation that strengthens parent-child attachment. More specifically, in these sessions parents are taught child-directed interaction (CDI) in which they follow the child's lead utilizing play therapy skills. Parents are instructed to refrain from asking questions but to implement descriptions, be enthusiastic, ignore negative behaviors, praise positive behaviors, and reflect their child's emotions and actions. The second component aims to reverse a maladaptive pattern of coercion and withdrawal from the parent by training parents how to phrase directions, praise their child for following directions, and enforce time-outs for noncompliance (Eyberg, 1982; Callahan, Stevens, & Eyberg, 2010; Patterson, 1982). PCIT was originally developed based on research that demonstrated that an authoritative parenting style was correlated

with optimal mental health in children (Harwood & Eyberg, 2006; Baumrind, 1966). Over time, and with consistent implementation, the positive interactions between parent and child are believed to be progressively more reinforcing for both the parent and child, thus encouraging prosocial child behavior and strong parenting skills (Hood & Eyberg, 2003). Another advantage of PCIT is its regard for a child's developmental limitations. In other words, PCIT supplements parental skills training with education about preschoolers' cognitive, social and emotional development to facilitate understanding and adjustment of parental expectations. This is intended to alleviate frustration and resentment that may be present in parents with unrealistic expectations for their children. Further, the unique play-based intervention is designed to sustain the short attention spans of young children which sets them up for success (Callahan, Stevens, & Eyberg, 2010).

One example of a parent training intervention was conducted by Waters and colleagues (2009) in which they examined the efficacy of group-based CBT for children between the ages of 4 and 8 ($N = 60$). This study had three conditions: 1) a parent only condition ($N = 25$), 2) a parent + child condition ($N = 24$), and 3) a waitlist condition ($N = 11$). This study implemented the ''Take ACTION'' Program, a 10-week group based CBT program for children with anxiety disorders between 4 and 18 years of age (Waters, Donaldson, & Zimmer-Gembeck, 2008; Waters, Wharton, Zimmer-Gembeck, & Craske, 2008). The treatment for children included psycho-education about anxiety, relaxation techniques, identifying anxious self-talk and learning coping statements, graded exposure to anxiety-provoking situations, problem-solving skills, the identification of a ''strong team'' (i.e., supportive others in the child's life), and social skills training. Parent sessions were identical in the amount of information provided and format, consisting of a group

format of 10 weekly, 1 hour sessions. Parent sessions in both conditions included psychoeducation about child anxiety, strategies for managing child anxiety and improving the parent–child relationship, information about child session topics to facilitate their use at home, positive parental coping, and training in communication and problem-solving skills. Both parents and children were given workbooks and weekly assignments to complete and return. Results indicated that there was comparable symptom reduction in both the parent only (55.3% no longer meeting diagnostic criteria) and parent + child (54.8% no longer meeting diagnostic criteria) conditions. As expected, the waitlist condition demonstrated less improvement than treatment conditions, with 18.2% no longer meeting criteria for a diagnosis. These treatment gains were maintained in both treatment conditions at six-month and 12-month follow-up assessments. These results indicated that not only was a parent only condition beneficial, but that delivering treatment exclusively to parents may be sufficient in reducing anxiety symptoms in early childhood.

Finally, an additional intervention has recently been developed that incorporates parent training components, similar to PCIT, but also explicitly targets maladaptive parental factors (i.e., modeling, parental overprotectiveness, insecure attachment, etc.) that may be contributing to the development and maintenance of the child's anxiety (Cartwright-Hatton, McNally, & White, 2005; Cartwright-Hatton et al., 2011). Cartwright and colleagues (2005) created a cognitive-behavioral parent training program with young British children, entitled *Timid to Tiger*. This treatment consists of a 10 week group therapy format with the typical components of behavioral parent training (e.g., praise, play, ignoring unwanted behavior, etc.) based within a cognitive framework that educates parents on the impact of their own thoughts and behaviors on their child's anxiety. Child

participants were required to be at or above clinical cutoff on Child Behavior Checklist (CBCL) Internalizing Scale or Preschool Behavior Checklist Internalizing Scale at pre-treatment; and appear to have an anxiety disorder based on a preliminary interview with a clinical psychologist (Cartwright-Hatton et al., 2011). The therapists that facilitate the program keep the parents engaged and actively adapting their tools to specific situations within the home so that they can continue to encourage "brave behaviors" with their children. This treatment integrates techniques from previous studies, including strengthening the parent-child bond through play, praise, effective limit-setting and time-out, while teaching parents strategies to manage their child's worry and reinforce their brave behaviors. Moreover, Cartwright-Hatton and colleagues (2005), incorporated psychoeducation to facilitate the understanding of the development and maintenance of anxiety in childhood. Overall, *Timid to Tiger* creates two goals for families. The first goal is to facilitate a warm, calm, and predictable home environment. This allows parents to have a positive and gentle discipline approach to manage noncompliance and encourage confident, non-anxious behavior. The second goal is to teach parents how to utilize cognitive-behavioral skills such as problem solving and graded exposure to manage their child's anxiety at home.

Preliminary results of the *Timid to Tiger* program have been promising. Cartwright-Hatton and colleagues (2011) found that at post treatment, children whose parents received this treatment ($N = 38$) were more than seven times more likely to be free of their primary diagnosis than those in the control group ($N = 36$), as indicated by parent completion of the CBCL and the Screen for Child Anxiety Related Disorder (SCARED). Parent reports also

indicated a significant reduction in anxious symptoms. Further, these results were maintained at a 12-month follow-up.

Single vs Combined Parent Attendance

Past research has often examined the parental roles in the treatment of child anxiety (Ginsburg et al. 2004; Wood et al. 2003), unfortunately, this often neglects to demonstrate the role of fathers in treatment, as mothers are more likely to attend than fathers (Podell & Kendall, 2010). This is unfortunate given that past research has also suggested that differential supportive and disciplinary parenting or inconsistent parenting styles may have an impact on young children's social and emotional adjustment including children's sense of competence and self-worth (Dunn, Stocker, & Plomin, 1990), personality (e.g., Baker & Daniels, 1990), and behavioral problems and psychopathology (e.g., Tejerina-Allen, Wagner, & Cohen, 1994). When past research has examined the differences between single parent attendance and family treatment with both parents (Podell & Kendall, 2011), their results demonstrated that combined parent attendance resulted in higher symptom reduction than single parent attendance. Another interesting finding, the combined parent condition outperformed the child only condition when both parents had an anxiety disorder (Podell & Kendall, 2011). It was hypothesized that this family condition may have been particularly helpful for parents with an anxiety disorder, because this treatment considers parents as co-clients and therapists aim to help the parents cope with their own anxiety as well.

Unfortunately, there is limited research to support the importance of dual parent attendance in the treatment of early childhood anxiety. Therefore, more research is needed

to determine if the inclusion of fathers is beneficial or even necessary or if single parent attendance is sufficient in effectively treating childhood anxiety.

Attrition

While many treatments have been developed to treat childhood anxiety, one factor appears to be consistent for each: high attrition rates. Attrition is a common problem in many forms of treatment. For behavior parent training attrition rates can reach up to 87% (Barkley et al, 2001; Chacko et al., 2012; Kazdin, 1996). Unfortunately, past research has demonstrated that families who discontinue treatment prematurely may need additional and possibly more costly services in the future due to unresolved or escalated symptoms (Farmer & Burns, 1997). Past research has also examined potential predicting variables to attrition, and found that low socioeconomic status, minority group status, single-parent household, and the severity of the child's symptoms can often be linked to attrition (Warnick et al., 2012; Wierzbicki & Pekarik, 1993). In addition, factors such as parental stress, parent psychopathology, and parent perceptions of the intervention may influence completion status of treatment (Luk et al., 2001; Kazdin, Holland, & Crowley, 1997). As attrition rates are alarmingly high for this form of treatment, it is important to replicate the findings concerning the predictive role of these contributing factors and explore other possibilities. It is also important to begin examining ways of reducing these attrition rates.

Current Study

As previously mentioned, symptoms of anxiety are often seen in early childhood (Poulton, Pince & Harrington, 2009; Grills-Taquechel & Ollendick, 2007; Rapee, Schniering & Hudson, 2009). Further, studies have demonstrated that parental behaviors such as overprotectiveness, rejection or negative communication, and anxious modeling,

may be linked to symptoms of anxiety in children and have been found to be related to treatment outcomes (Ginsburg, Siqueland, Masia-Warner, & Hedtke, 2004; Rapee, 2002; Warren, 2004). Given the amount of influence parents have on young children, their own parenting styles, behaviors and beliefs may contribute to the development and maintenance of their children's anxiety.   Therefore, the education and training of parents during the treatment of anxiety in early childhood may not only be beneficial, but essential for long-term success.

In addition, empirical data has demonstrated the efficacy of cognitive–behavioral therapy (CBT) for anxiety during middle childhood (Kendall, 1994; Kendall et al., 1997), however, the most effective forms of treatment for early childhood often include parent training or parental involvement to reinforce the development of skills (Monga, 2009; Callahan, Stevens, & Eyberg, 2010; Cartwright-Hatton et al., 2011). Further studies have suggested that "parent-only" conditions may produce similar results to "parent-child" conditions, indicating that an exclusively parent-based approach to managing anxiety may be sufficient (Waters, 2009). However, this form of intervention is still in its early stages, and these initial findings need to be replicated in additional samples. Finally, past parent behavior training research has demonstrated high attrition rates and there is little research to suggest how to address or reduce these dropout rates. This tendency to prematurely end treatment often results in the need for more intensive treatment later as the development of anxiety tends to be pervasive and progressive.

The current study aimed to adapt the *Timid to Tiger* program with an American population. In order to expand upon previous research, this program utilized multiple informants, observers to evaluate and track parent-child interactions, more in depth

evaluations at pre and post treatment, and weekly satisfaction and tracking of anxiety levels throughout the program to pinpoint more effective or helpful strategies. This study also aimed to extend the research on attrition in parent behavior training by identifying potential contributing factors for drop out and examining potential solutions to this problem.

Hypotheses

1) *Full Sample*

   a. It is expected that parental anxiety, as indicated by diagnoses and symptom counts from the ADIS lifetime, will be significantly correlated with child anxiety, as indicated by diagnoses and symptom counts from the ADIS-IV-Parent report.

   b. Similar to past research, it is predicted that the most common form of anxiety in early childhood will be Separation Anxiety Disorder.

   c. No significant gender differences are expected for anxiety (as measured by the SCARED-R).

2) *Treatment Completers*

   a. It is predicted that parent-reported levels of child anxiety will significantly decrease from pre- to post-treatment, as measured by the SCARED-R, parent version.

   b. Given that past research has suggested that decreases in child anxiety may result in improvements in other child domains, it is predicted that parent-

reported child overall functioning, as measured by the YOQ, will improve

from pre- to post-treatment.

   c. It is expected that greater anxiety score decreases and overall functioning

   increases will be observed from pre- to post-treatment for children who had

   two parents attend the intervention, as compared with children with only

   one parent attending the intervention. This change will be measured with

   the YOQ and SCARED-R.

3) ***Comparisons among Completers/Non-Completers***

   a. It is predicted that severity of child anxiety will predict attrition.

   b. It is also predicted that parental psychopathology, such as anxiety, as

   measured by the ADIS lifetime, will predict dropout/completer status.

   c. It is predicted that gender, age and ethnic background will predict attrition.

   d. It is expected that non-completers will have attained satisfactory levels of

   improvement prior to the end of the treatment program, as indicated by the

   SCARED-R. In other words, it anticipated that those with less severe

   symptoms and rapid improvement will stop seeking services.

<center>Method</center>

Participants

Participants consisted of the parents of 15 children ranging from 4-10 years old (*M*

age =6.53 years; *SD*= 1.7). The child participants were 53% male and 47% female. The

parent participants consisted of 12 mothers and 5 fathers (with 2 children having both

parents attend). Fifty-three percent of the parent participants self-identified as Caucasian,

23% as Hispanic/Other, 12% Asian American, 6% African American, and 6% Biracial.

Child participants were not required to meet criteria for an anxiety disorder, but were

required to have at least subclinical elevations, per parent report, on either an anxiety

interview or questionnaire.

Participants were designated into one of two groups: treatment completers and non-

completers. Participants who attended six or more sessions were categorized as treatment

completers (*N*=11), due to the fact that one group in the program completed an

"abbreviated version" of the treatment where the materials from multiple sessions were

combined into one or two appointments. Participants who attended five or fewer sessions

were categorized as non-completers (*N*=6).

Materials

Anxiety Disorder Interview Schedule-Parent Version for DSM-IV (ADIS-IV-P;

Albano & Silverman, 1996): This measure is a semi-structured interview, conducted with

the child's parent, which examines the criteria of DSM-IV diagnoses for child anxiety

disorders, mood disorders and externalizing disorders. The interview takes approximately

1-2 hours to complete. The ADIS-IV-P provides a Clinical Severity Rating (CSR) which

identifies the degree of functional impairment and distress as a result of the disorder(s).

The CSR is based on a 9-point scale (0-8) with a score of 4 or higher necessary to indicate

a clinical diagnosis. Research examining the psychometric properties of the ADIS-IV-P

suggests reliability and validity that ranges from good to excellent. More specifically,

psychometric examinations of this measure has demonstrated good interviewer–observer

reliability (kappa $\kappa = .75$) and test–retest reliability (.75) (Brown-Jacobsen, Wallace, &

Whiteside, 2011). Inter-rater reliability for individual anxiety disorders based on both

parent and child interviews has been excellent (κ= .82–.96) (Lyneham, Abbott, & Rapee,

2007). In addition, Silverman and colleagues (2001) reported strong test–retest reliability

for the ADIS-C/P for combined diagnoses (κ = .80–.92) and individual diagnoses (κ= .62–

.88), with intraclass correlation coefficients ranging from .81 to .96 for the test–retest

reliability of ADIS symptom scales for individual reporters.

Anxiety Disorders Interview Schedule-Lifetime Version for DSM-IV (ADIS-

IV-L; Brown, DiNardo, & Barlow, 1994). The ADIS-IV-L is another semi-structured

interview designed to assess for current episodes of anxiety disorders, and to permit

differential diagnosis among the anxiety disorders according to DSM-IV criteria. As

opposed to the ADIS-IV-P which interviewed parents regarding their children's symptoms,

this interview was conducted to assess for anxiety and other potential psychopathology in

parent participants. This measure contains a Diagnostic Timeline that allows the

interviewer to determine the onset, remission, and temporal sequence of all possible

disorders across the parent's lifetime as well as those disorders that are s currently present.

Psychometrically, Brown and colleagues (2001) examined the reliability of anxiety

scales in the ADIS-IV-L with a large sample ($N = 362$). Their results indicated excellent

inter-rater reliability for social phobia (κ=.86) and agoraphobic avoidance (κ=.86), and

moderate reliability for panic (κ=.53). Further, factor analyses reported in Brown et al.

(2001) suggested that the fear ratings of 13 social situations and avoidance ratings of 22

agoraphobic situations were unidimensional.

Screen for Child Anxiety Related Emotional Disorders (SCARED-R, parent

version; Birmaher et al., 1997; See Appendix A). This measure is a 66-item questionnaire

that examines all possible DSM-defined anxiety disorder symptoms in children. More

specifically, there are questions that assess for panic (i.e., "When my child is frightened, it is hard for him/her to breathe), generalized anxiety disorder ("My child is nervous"), social phobia ("My child is shy with people she/he doesn't know well"), separation anxiety ("My child worries about sleeping alone"), specific phobia ("My child is afraid of heights"), posttraumatic stress ("My child has frightening dreams about a very aversive events he/she experienced"), and obsessive-compulsive disorder ("My child wants things to be in a fixed order"). Parents are asked to rate the frequency of their child's fear for each items on a 3-point scale (0= Almost Never, 1 = Sometimes, and 2 = Often). This measure was originally designed as a self-report questionnaire for children between the ages of 8-18, however, a parent measure is also available and was used in the current study. The parent version of the SCARED-R is identical to the child measure, but asks for the parents rating of their child's fears. Subscale scores and an overall anxiety score can be determined by adding relevant items and all items, respectively. The SCARED-R parent version was examined for reliability and validity by Birmaher and colleagues (1997) with a sample of 300 parents. Results demonstrated a low to moderate correspondence between parent and child (α = .20 for social phobia, and α = .47 for SAD; p < .001, all correlations). These low correlations do not necessarily indicate questionable validity for this measure, as past research has demonstrated that parent-child agreement is typically low across interview and self-report assessments alike (Achebach et al., 1987; Grills & Ollendick, 2002; Rapee et al., 1994). Further, this measure has been found to correlate well with other measures of the same construct when completed by the same informant (Birmaher et al., 1997). For the total score and each of the five factors, both the child and parent SCARED demonstrated good internal consistency (α = .74 to .93) and test-retest reliability (α = .70 to .90). Muris

and colleagues (1999) also conducted a study with 90 children and their parents and found the SCARED-R to be generally reliable in terms of internal consistency (α = .57-.92), with poor internal consistency in the obsessive-compulsive subscale. Overall, their results indicated that parents typically underreport their children's level of anxiety. Finally, in another study conducted by Muris and colleagues (1999), 88 children were recruited to test the concurrent validity of the SCARED-R. Results provided further support for the validity of this measure as it significantly and positively corresponded with the Children's Anxiety Scale (CAS, p < .001). Previous studies have also established concurrent validity with other traditional measures of childhood anxiety, such as the State-Trait Anxiety Inventory for Children (STAIC), the Children's Manifest Anxiety Scale (CMAS), and Fear Survey Schedule (FSS-C) (Muris et al., 1998). Further studies that have examined the SCARED-R for treatment sensitivity in intervention for childhood anxiety disorders found that the SCARED-R reliably identifies treatment effects and could therefore be regarded as a useful measure of childhood anxiety in clinical and research settings (Muris & Steerneman, 2001).

Youth Outcome Questionnaire (YOQ; Burlingame, Wells, & Lambert, 1996; See Appendix B). The YOQ is a brief 64-item parent report measure of treatment progress for children and adolescents (ages 4 – 17) participating in mental health intervention. The YOQ is designed to track actual change in functioning over time as opposed to assigning diagnoses. The Y-OQ generates six subscale scores which identify different behavioral domains including: (a) Intrapersonal distress, (b) Somatic, (c) Interpersonal relations, (d) Critical items, (e) Social problems, and (f) Behavioral dysfunction. The intrapersonal distress scale (ID) examines anxiety, depression, fearfulness, hopelessness, and self-harm.

The somatic scale (S) looks at symptoms such as headaches, dizziness, nausea, bowel difficulties, pain, or weakness. The interpersonal relations scale (IR) examines the child's attitude towards others, communication with peers, cooperativeness, aggressiveness and defiance. The critical item scale (CI) looks at more severe disordered thoughts such as paranoia, obsessive-compulsive behaviors, hallucinations, manic symptoms, delusions, and disordered eating. The social problems scale (SP) examines delinquent or aggressive behavior, sexual problems, and other behavioral problems such as running away from home or destroying property. Finally, behavioral dysfunction (BD) assesses for the child's ability to organize tasks, concentrate, handle frustration, and complete school work. High scores demonstrate a parent report of significant amounts of the problem behavior or symptom while low scores indicate either absence of symptoms or unawareness of the problem behaviors or symptoms.

Items are rated on a 5-point Likert Scale, ranging from 0 (Never or almost never) to 4 (Always or almost always). Participants are instructed to provide responses based on the child's behavior in the past 7 days. There are also eight negatively weighted items that are reverse scored and assess for more healthy or adaptive behaviors (e.g. Enjoys relationships with friends/family) which may be positively impacted the intervention. Including the negatively weighted items, the total Y-OQ score ranges from -16 to 240. The cut-off for the YOQ total score is 46.

Research that has examined reliability and validity of the YOQ has been promising. More specifically, the internal consistency for the Y-OQ total score across the four samples (A, B, E, G; combined N of 1620) was 0.94. The Pearson product moment correlation (r) was used to assess test–retest reliability at 2- and 4-week intervals. A strong relationship

was observed at both 2-week ($r = 0.84$) and 4-week ($r = 0.81$) intervals with an average

test–retest reliability coefficient of 0.83 (also across both intervals). When examining

criterion validity, all Y-OQ subscales were significantly correlated with their CBCL

criterion (using the student normal sample). In addition, the highest overall correlation was

between the Y-OQ Total problems and the CBCL Total problems scales ($r = 0.78$).

Overall, these observed moderate to high subscale relationships demonstrates strong

convergent validity between subscales on the Y-OQ and CBCL.

Pre-Session Parent Questionnaire (See Appendix C)**.** This brief assessment

measure was created to gauge parental satisfaction with treatment and perceived

effectiveness of newly learned skills based on previous sessions. This questionnaire

consists of 6 questions regarding their child's level of anxiety, what strategies were found

to be effective at home, which strategies were perceived as ineffective, how often parents

were utilizing skills, and overall satisfaction with the previous session. Parents were asked

to rate their satisfaction on a 5 point scale, with 0 indicating "unsatisfied," 1 indicating

"somewhat unsatisfied", 2 indicating "neutral", 3 indicating "somewhat satisfied" and 4

indicating "satisfied."

Procedure

Parents were the primary participants for this study. Parents who contacted the

Center for Anxiety and Depressive Disorders in Youth completed a telephone screening to

determine initial appropriateness for this study or alternatively receive a referral. Families

that seemed appropriate for the study then scheduled a pre-treatment assessment, during

which parental consent, child assent, and demographic information forms were completed.

In addition, parents were also asked to complete a battery of diagnostic measures to assess

for subtypes and severity of anxiety symptoms (SCARED-R, YOQ, ADIS-IV Parent, and ADIS-IV Lifetime). In addition to pre- and post-treatment diagnostic measures, brief treatment satisfaction (Pre-Session Parent Questionnaire) measures were administered weekly. Further, an anxiety measure (SCARED-R) and a measure of overall functioning (YOQ) were administered on alternating weeks to provide a more detailed measure of improvement over the course of treatment.

Participants were treated in small groups (consisting of 3-7 parents and two therapists). Treatment ranged from a 10-12 week period (one week of pre-treatment assessment, 10 weeks of treatment, and one week of post-treatment assessment). One group in this program completed an "abbreviated version" where they completed 6-7 sessions combining materials from multiple sessions into one or two sessions. Thus, treatment completers were those who completed 6 or more sessions. Therapists were graduate students completing their doctoral degree in Clinical Psychology at the University of Houston, supervised by a licensed Clinical Psychologist.

The treatment protocol was based on a parent behavioral training program (Cartwright-Hatton et al., 2011); thus, it included such components as play, praise/rewarding, ignoring unwanted behaviors, and time-out (See Table 1). These components were specifically applied to the anxiety experienced by youth, by discouraging these behaviors and encouraging age-appropriately designed "brave behaviors." Further, CBT techniques that were present in the protocol included: modeling of confident behaviors, problem-solving, distraction, behavioral experiments, and graded hierarchies. Parents were also made aware of their own cognitive involvement in anxiety, such as: 1) how their thoughts and attitudes influence their child's behavior as well as their own; 2)

how to identify and understand possible cognitions of an anxious child as well as how to encourage a confident cognitive style; and 3) how to implement cognitive therapy techniques to specific situations with anxious children. Given that the original form of this treatment was developed in the United Kingdom, this version incorporated minor changes to adapt this intervention for an American population. More specifically, there were some alterations to language used in handouts. Further, vignettes which were utilized to teach and provide examples were re-written and tailored to an American population to provide more culturally familiar or relevant information. These adjustments were intended to allow these materials and information to be more easily comprehended by participants.

After the termination of treatment, parents were given the same self-report measures that they had completed during pre-treatment assessment (SCARED-R, YOQ, ADIS-IV Lifetime, and ADIS-IV Parent). Parents were given a packet of these questionnaires along with a pre-addressed and stamped envelope and were asked to return these measures after completing them.

Data Analytic Plan

Data was evaluated using the Statistical Package for the Social Sciences (SPSS Version 20.0). Given that this is a pilot study with a small sample size, a combination of quantitative and qualitative analyses were selected.

Full Sample

The prevalence of certain anxiety disorders were examined qualitatively. Bonferroni corrected correlations were conducted to examine the associations between child anxiety and parent anxiety diagnoses and symptom counts as demonstrated by the

ADIS-IV-P and ADIS-IV-L. Gender differences were also examined by computing independent sample t-tests as measured by the YOQ and SCARED-R.

Treatment Completers

Non-parametric analyses were utilized given the non-normal distribution and small sample size of data. Thus, the Wilcoxon Signed Rank Tests were used to determine whether there were significant differences between pre- and post-treatment measures of anxiety (SCARED-R) and overall distress and dysfunction (YOQ).

In addition, changes in individual pre- and post-treatment anxiety levels were assessed using the reliable change index (RCI; Jacobson & Truax, 1991). The RCI is a tool to measure clinically significant improvement following treatment (See Figure 1). To calculate the RCI, a participant's pretest score is subtracted from their posttest score. The difference of these scores is then divided by the standard error of the difference. The standard error of the difference is determined from the standard error of the measurement using the standard deviation of participants' pretest scores in addition to the measure's reliability. The resulting RCI value is a Z score, and thus scores are required to be above 1.96 to represent significant change (Jacobson & Truax, 1991). Prior research supports that the RCI is a conservative estimate of clinically significant change (Hays, Brodsky, Johnston, Spritzer, & Hui, 2005).

Gender differences for overall functioning (YOQ) and anxiety (SCARED-R) were examined by conducting independent sample t-tests at both pre- and post-treatment. In addition, repeated measures ANOVAs were completed to identify potential gender differences in symptom reduction in response to treatment.

Comparisons of child anxiety with single versus two parent attendance was examined by conducting independent sample t-tests with parent attendance status serving as the independent variable and child anxiety (as demonstrated by the post-treatment SCARED-R) serving as the dependent variable.

Finally, average ratings of weekly parent questionnaires were examined to evaluate parent perceptions of effectiveness, anxiety reduction, and satisfaction of each week's topic. Overall value and effectiveness of session materials was assessed by collectively and qualitatively examining weekly parent responses.

Comparisons among Completers/Non-Completers

To examine a possible association between child psychopathology and dropout, independent sample t-tests were conducted with completion status serving as the dependent variable and child psychopathology (as demonstrated by the YOQ and SCARED-R) as the predictor variable. In addition, a chi-square test was completed to examine a potential relationship between parental psychopathology and attrition. This was completed with looking at drop-out status and whether or not a parent endorsed any personal mental health diagnoses on the ADIS-IV-L.

Finally, an examination of the average scores on weekly parent questionnaires regarding effectiveness, anxiety, and satisfaction were evaluated in three groups: participants who completed all 10 sessions, participants who completed an abbreviated version of the treatment (6-7 sessions), and participants who dropped out after 2 or fewer sessions. This was completed to assess whether or not attrition could be linked with symptom reduction, satisfaction with treatment, or perceived effectiveness. Completers and non-completers were also compared based on child and parent characteristics (e.g., gender,

pre-SCARED-R scores, pre-YOQ scores, and the ADIS-IV-L and ADIS-IV-P completed

at pre-treatment).

Results

Types of Anxiety

The most prevalent anxiety disorder observed in this study was separation anxiety

disorder (SAD), with all participants endorsing symptoms of separation anxiety on the pre-

treatment SCARED-R, and 6 out of 11 participants endorsing a clinically elevated level of

separation anxiety on the SCARED-R. The scores for separation anxiety on the SCARED-

R can range from 0 to 24. Participants in this sample had scores that ranged from 2-20 with

an average of 10.6. In addition to this measure, parent completion of the ADIS-IV-P

demonstrated that 4 out of 11 children in this study met criteria for SAD based on parent

report.

In addition to separation anxiety, 5 out of 11 participants demonstrated clinically

elevated symptoms of social anxiety (SCARED-R range = 0-8; participant range = 0-8;

average = 4.9) and 4 out of 11 participants exhibited elevated symptoms of generalized

anxiety (SCARED-R range 0-18; participants range 2-17; average = 8). Finally, 3

participants demonstrated elevations for specific phobia (SCARED-R range 0-30;

participants range 1-15; average = 8) and only one participant demonstrated significantly

elevated symptoms of obsessive-compulsive disorder (SCARED-R range = 0-18,

participant range = 0-10; average = 3.7). None of the participants had clinically significant

scores for panic disorder or post-traumatic stress (see Table 2). Interestingly, results on the

ADIS-IV Parent demonstrated that 4 out of 11 children also met criteria for social anxiety

and the same 4 children also met criteria for specific phobia.

Parent and Child Anxiety

It was hypothesized that parental anxiety, as indicated by anxiety disorder symptom counts on the ADIS-IV-Lifetime (i.e., the number of symptoms that were positively counted for any anxiety disorder), would be significantly correlated with child anxiety, as indicated by anxiety disorder symptom counts on the ADIS-IV-Parent report. Parent anxiety symptoms on the ADIS-IV Lifetime ranged from 1-29, while child anxiety symptoms on the ADIS-IV Parent report ranged from 11-40. Bonferroni corrected correlations were conducted to examine the associations between child anxiety, as assessed by number of diagnoses endorsed on the ADIS-IV-Parent report and parent anxiety, as assessed by number of diagnoses self-reported on the ADIS-IV-Lifetime. The correlation between child and parental anxiety levels was not significant ($r(15) = .375$, $p = .138$, two-tailed). To further analyze a possible correlation between parent and child anxiety, correlation were conducted with the ADIS-IV-Lifetime and another measure of child anxiety (SCARED-R). Again, the correlation was not significant ($r(15) = .259$, $p = .392$, two-tailed There was a significant correlation, however, between the two child anxiety measures, to ensure consistency ($r(15) = .786$, $p = .001$). A post hoc power analysis was conducted to determine whether or not this non-significant result may be due to a lack of statistical power (G*Power; Erdfelder, Faul, & Buchner, 1996). Power ($1 - \beta$) was set at 0.80 and α at .05, two-tailed. Results demonstrated that power was low ($1 - \beta = .229$).

Treatment Completers

Pre-Post YOQ and SCARED-R

Average parent ratings of their children's distress, dysfunction, and anxiety, as seen on both the YOQ and SCARED-R demonstrated consistent weekly symptom reduction

(see Figure 2). Out of the 11 treatment completers, 10 experienced symptom reduction on the YOQ, while one participant's YOQ score remained consistent (See Table 3). The participant with consistent anxiety also began treatment with the lowest anxiety score of all 11 treatment completers (pre-YOQ= 14, average pre-treatment YOQ = 54.73). When examining the pre- and post YOQ scores, results demonstrated that participants scored significantly lower at post-treatment ($M = 40.09$) than at pre-treatment ($M= 52.73$) (Wilcoxon $Z = -2.313$, $p = .021$), which demonstrates improved overall functioning.

In addition, anxiety levels were reduced on the SCARED—R for 9 out of the 11 treatment completers, with two participants remaining consistent (See Figure 3). Again, the two participants without symptom reduction began treatment with a subclinical level of anxiety (pre-SCARED-R = 18 & 29, average pre-SCARED-R = 37.1). Examination of the pre- and post-treatment performance on the SCARED-R also showed that participants scored significantly lower at post-treatment (pre-$M = 37.09$, post-$M = 26.83$; Wilcoxon $Z = -2.446$, $p = .014$). These results demonstrate that the treatment, when considered overall and across all participants, was associated with symptom reduction, especially when symptoms of anxiety were clinically elevated at pre-treatment.

The Reliable Change Index (RCI) was computed for each participant's pre- and post-treatment YOQ and SCARED-R scores. Two participants obtained a significant RCI score (>1.96) on the YOQ. Further, one participant reached a clinically significant RCI on the pre- and post-treatment SCARED-R (see Table 3).

Gender Differences on YOQ and SCARED-R

Gender differences in anxiety and overall functioning were assessed by conducting independent sample t-tests. At pre-treatment, no significant differences were found for

child gender on the YOQ ($t(9) = 1.31$; $p = .22$) or the SCARED-R ($t(9) = 1.02$; $p = .33$).

Further, no significant gender differences were observed at post-treatment for overall

functioning ($t(9) = 1.48$; $p = .17$) or anxiety ($t(9) = .99$; $p = .35$). Interestingly, a qualitative

examination of this data demonstrates that males exhibited higher levels of anxiety and

overall dysfunction (See Table 4). Thus, a post hoc power analysis was conducted to

determine whether or not this non-significant result may be due to a lack of statistical

power (G*Power; Erdfelder, Faul, & Buchner, 1996). Results demonstrated low power (1

$- \beta = .264$).

Co-Parent Attendance vs. Single Parent Attendance

Independent sample t-tests were conducted to examine child anxiety and overall

functioning for children who had a single parent versus two parents attend treatment. At

pre-treatment, no significant differences were observed for overall functioning ($t(9) = -.78$;

$p = .47$) nor anxiety levels ($t(9) = -.08$; $p = .94$) regardless of parent attendance. Further,

parent attendance was not significantly related to overall functioning at post-treatment ($t(9)$

$= -1.29$; $p = .23$) or anxiety ($t(9) = -1.39$; $p = .20$).

Participant Impressions of Intervention

Weekly pre-session questionnaires allowed parents to rate their child's changes in

symptom severity, their satisfaction with treatment, and their perceived effectiveness of

treatment. Results of these questionnaires indicated a consistent overall increase in

perceived effectiveness of treatment, satisfaction with treatment and anxiety symptom

reduction (see Figure 4).

When results are broken down to review individual participant responses, 8 out of

11 treatment completers indicated a 4/5 on satisfaction after the final session, which

indicates "satisfied" while the remaining 3 participated indicated a 3 or "somewhat satisfied." In addition, satisfaction steadily increased, on average, throughout treatment (Post Session 1- $M = 3.1$ and Post Final Session- $M = 3.8$).

Effectiveness of treatment was also assessed. This question examined how parents rated the effectiveness or helpfulness of the previous week's training and tools. Results demonstrated that 4 out of 11 participants indicated a rating of 4 (extremely effective), 4 participants endorsed a rating of 3 (very effective), and 6 participants described a rating of 2 (effective) at post-treatment. The average level of effectiveness also increased steadily throughout the treatment (Post Session 1- $M = 1.3$ and Post Final Session- $M = 2.8$).

Finally, parents' perceived symptom reduction was examined each week to observe any patterns of symptom reduction in response to certain areas of treatment. It was determined that 5 out of 11 participants indicated a rating of 1 (less anxious), 4 participants endorsed a rating of 2 (no change), and 2 participants indicated a rating of 3 (more anxious) at the final session (Post Session 1- $M = 1.4$ and Post Final Session- $M = 2.5$). Again, there was a pattern of steady symptom reduction from pre-treatment to post-treatment.

Session Analysis

In addition to examining overall participant satisfaction and effectiveness, a pattern also emerged regarding individual session symptom reduction, satisfaction and perceived effectiveness. An overall increase in satisfaction and perceived effectiveness was consistently observed throughout the treatment, as evidenced by pre-session questionnaires. An evaluation of change in anxiety and weekly topics demonstrated that parents may have found particular sessions to be more helpful in reducing their child's

anxiety. A more dramatic overall decrease in anxiety occurred following the session where Play was introduced. Furthermore, after Play was introduced to parents, their satisfaction with treatment and perceived effectiveness of treatment also increased greatly from the previous session (See Figure 4).

In addition to Play, parents also endorsed a noticeably higher level of satisfaction and perceived effectiveness following the introduction of Praise. Moreover, a more noticeable level of symptom reduction was observed immediately following the introduction of Praise.

Finally, there was a steady and consistent increase of perceived effectiveness, satisfaction, and symptom reduction in the final three sessions (Ignoring, Time Out, and Review). This may reflect that parents found these sessions as particularly helpful, or it may be that parents noticed that implementing the overall tools associated with the treatment were useful, as it was the final sessions of treatment. In other words, their satisfaction or symptom reduction may not be associated solely with those weeks, but with an overall satisfaction and effectiveness of treatment.

Comparison of Completers/Non-Completers

Out of 17 participants who completed initial interviews and assessment measures, 6 terminated prematurely. As previously mentioned, dropout rates for behavior parent training can be up to 87% (Barkley et al, 2001; Chacko et al., 2012; Kazdin, 1996). In this study, 6 out of 17 participants dropped out of treatment, which is a 35% attrition rate and lower than the average reported.

Anxiety and Attrition

Independent sample t-tests were conducted to determine if a significant relationship existed between child psychopathology and attrition. Participants who completed 6 or more sessions were considered treatment completers ($N = 11$), while participants who completed 2 or fewer sessions were non-completers ($N = 6$). The first independent samples t-test examined relationships between child anxiety levels, as seen from the SCARED-R total score at pre-treatment, and drop out status. Results of this analysis did not demonstrate a significant relationship between child anxiety and attrition ($t(11) = 1.51$; $p = .16$).

While these results did not demonstrate a link between child symptoms and drop out, parent self-reported symptoms were noticeably different. An independent sample t-test indicated a significant relationship, such that drop out status differed significantly by parent psychopathology, ($t(15) = 3.89$; $p = .001$). More specifically, five out of the six non-completing parents met criteria for at least one anxiety disorder. Out of the 11 treatment completers, only 1 parent self-reported clinically elevated anxiety (see Table 5).

Ethnicity and Attrition

Given that past research has shown correlations between ethnicity and attrition (Southam-Gerow et al. 2003), the ethnic backgrounds of participants were also examined. Similar to past research, participants that were part of an ethnic minority were more likely to terminate treatment prematurely. In this sample, 5 out of the 6 non-completers were members of an ethnic minority. In other words, 83% of non-completers were members of an ethnic minority, versus the 17% of non-completers being Caucasian. Therefore, an independent sample t-test was conducted with attrition being the grouping variable, and ethnicity serving as the test variable. Due to the small sample size, specific minority

groups could not be observed, and thus ethnicity was coded in a binary as Caucasian or minority. Results demonstrated a significant relationship between ethnicity and attrition ($t(15) = 2.46$; $p = .03$).

Improvement and Attrition

Finally, an assessment of whether or not attrition could be linked with perceived effectiveness, satisfaction, or perceived improvement in symptoms was completed by examining average scores on weekly parent questionnaires. Completion status was evaluated in three groups: participants who completed all 10 sessions, participants who completed the abbreviated treatment (i.e., 6-7 sessions), and participants who dropped out of 2 sessions (see Table 6). Results demonstrated that participants who completed all 10 sessions reported the highest ratings of effectiveness ($M = 2.7$), satisfaction ($M = 3.75$), and the highest symptom reduction ($M = 2.5$). Those who dropped out after two sessions indicated lower perceived effectiveness ($M = 1.5$) and moderate symptom reduction ($M = 2.0$). In fact, symptom reduction for these non-completers were actually higher than participants who completed the abbreviated 6-7 sessions ($M = 1.75$), despite participants in the abbreviated version endorsing higher perception of effectiveness ($M = 2.5$).

A further analysis of weekly satisfaction, perceived effectiveness and anxiety reduction was completed by running independent sample t-tests, with drop out status serving as the grouping variable, and satisfaction, effectiveness, and anxiety reduction serving as the testing variables. Results demonstrated that there was a significant difference by group in satisfaction ($t(1) = 29$; $p = .02$), perceived effectiveness ($t(2) = 6.02$; $p = .03$), and anxiety reduction ($t(2) = 9.5$; $p = .01$).

Discussion

This study examined a CBT parent training for anxiety in early childhood, and it also aimed to examine contributing factors to attrition and parent attendance in the treatment of children. An examination of anxiety symptoms demonstrated that, similar to past research, these young children were likely to be experiencing separation anxiety as the primary concern (Cartwright-Hatton, McNicol, & Doubleday, 2006). Past research has demonstrated that parent behaviors and parenting styles can play a role in the development and maintenance of childhood anxiety; therefore, it may be that parent behavior can influence this form of anxiety. More specifically, it could be that parents utilize verbal instruction or transmission of information (Fisak & Grills-Taquechel, 2007; Muris & Field, 2010), which may communicate excessive danger or threat. This may result in children feeling the need to have parents close to feel protected or safe. Further, it may be possible that this anxiety is positively reinforced by parents (Rapee, 2002) who may support or in some way facilitate their children's anxious behavior. In the case of separation anxiety, parents may give children attention or stay with a child if they are feeling anxious about separated which may reinforce the belief that they need their parents to be safe. The prevalence of this particular diagnosis in early childhood may further support the idea for parental involvement in treatment of childhood anxiety, as separation anxiety is directly related to the child-caregiver relationship.

Also in support of past research, examination of the participants illustrated that there were no observable gender differences in level of anxiety or anxiety disorder at this age (Bosquet & Egeland, 2006; Costello, Egger, & Angold, 2004; Ollendick, King, &

Muris, 2002). It is possible that, similar to previous longitudinal studies, these gender

differences may not develop until adolescence.

Examination of Timid to Tiger

An examination of the effectiveness of this treatment demonstrated that parents

who completed this intervention (i.e., attended a minimum of 6 sessions) reported a

significant decrease in symptoms of anxiety in their children from pre-treatment to post-

treatment. These results support that this adaptation of the Timid to Tiger program is a

potentially efficacious intervention for young children with anxiety. In addition,

participants also reported improved overall functioning in their children from pre-treatment

to post-treatment as shown by the Youth Outcome Questionnaire. These findings may

suggest that this form of treatment may not only reduce symptoms of anxiety, but may

benefit children in other areas of functioning such as behavioral dysfunction, interpersonal

distress, somatic problems, and other social problems. In other words, while parent training

is not a novel form of treatment for early childhood (Michelson et al., 2013; Rapee, 2002;

Rapee & Jacobs, 2002), research has rarely looked at how parent training can impact

multiple areas of distress (i.e, both internalizing and externalizing concerns).. This research

may suggest that psychoeducation and behavior modification might be beneficial in

addressing multiple areas of concern at once.

Single or Combined Parent Attendance

Given that there is limited research on the role of fathers in treatment (Podell &

Kendall, 2010), and given that past research has suggested improved sense of self-

competence (Dunn, Stocker & Plomin, 1990), personality (Baker & Daniels, 1990), and

psychopathology (Tejerina-Allen, Wagner, & Cohen, 1994) when there is consistency in

discipline and parenting styles, this study attempted to examine the differences in symptom reduction between single parent attendance and dual parent attendance with this population of young children. In this study, however, results did not demonstrate a significant difference in symptom reduction regardless of parent attendance status. It is important to note, that only two participants had dual parent attendance, and thus a larger sample size is necessary to draw conclusions about differences in single/dual parent attendance with this intervention. .It is important to note, that similar to past research, mothers were more likely to attend treatment than fathers (12 mothers, 5 fathers; Volling, Blandon, & Gorvine, 2006). Past studies have also demonstrated that fathers potentially display less positive affect with their children than mothers (Forbes, Cohn, Allen, and Lewinsohn, 2004), and are more directive and controlling than mothers (Blandon & Volling, 2008; Volling, Blandon, & Gorvine, 2006). Given that key components of this treatment are related to child-directed play and positive interactions, it may be beneficial to observe the impact parent training might have when fathers are also included in the treatment.

Session by Session Analysis

A more thorough session-by-session analysis was conducted to determine whether or not particular interventions were perceived as more helpful than others. This analysis could assist in making improvements in the treatment or help inform parents of what to expect. When sessions were broken down to examine perceived effectiveness and satisfaction, certain trends were observed. More specifically, satisfaction, perceived effectiveness, and reported symptom reduction was higher following the introduction of Play and Praise. This may demonstrate that utilization of positive reinforcement and relationship building may play a crucial role in treating anxiety in young children. Further,

these results may suggest that parents may not naturally utilize these tools with their children and may rely more on extinguishing behaviors by using aversive control strategies or punishment. Children with anxiety may respond so well to this because these children often view the world as less safe and unpredictable, and this form of interaction provides a consistently positive interaction that is within their control.

In addition to highlighting valuable sessions, it is important to also note sessions that may result in temporarily increased symptoms of anxiety. More specifically, many participants endorsed increased levels of anxiety immediately following the introduction of Time Out. This may demonstrate that children may have difficulty adjusting to the addition of consequences or changes in discipline. For example, children who have grown accustomed to attention or positive reinforcement for their negative behaviors may initially be confused or distressed when these behaviors do not result in overt comforting or reassurance. While overall anxiety decreased at post-treatment, it may be important to inform parents that research has shown that the introduction of consequences or alteration in discipline may be met with some distress or confusion (Owen, Slep, & Heyman, 2012), and help parents not misconstrue that adjustment period as regression, but testing boundaries and adjusting to change. Results also demonstrated that participants who completed all 10 sessions (including discipline and limit setting) demonstrated the most successful reductions in symptoms, perceived effectiveness, and satisfaction with treatment. While parents may feel satisfied with the symptom reduction that they see early in treatment and may feel comfortable terminating early, this may be to the detriment of symptom reduction. This information is important to convey to parents, as the best outcomes were observed by not only increasing positive behaviors (as seen with Play and

Praise), but extinguishing negative behaviors as well (as seen with Ignoring, Limit Setting, and Time Out), which is covered in the final sessions.

Overall, the results of the pre-session questionnaires suggest that participants were generally satisfied with treatment, and found treatment to be helpful and effective in reducing their children's symptoms of anxiety. It may also show that anxiety in young children may quickly decrease following the introduction of positive interactions and temporarily increase immediately following the introduction of consequences, such as time out.

Treatment Completers vs. Non-Completers

Attrition impacts most treatments with an average dropout rate of 43% in adult interventions, and up to 87% for behavior parent training (Barkley et al, 2001; Chacko et al., 2012; Kazdin, 1996). In this study, there was a 35% attrition rate. This may be in part because, as past research has shown, attrition rates tend to be lower with short-term treatments (Sledge, Moras, Hartley, & Levine, 1990), like that used in this treatment. Despite a comparatively low attrition rate, potential contributing factors for attrition were examined.

Previous research has suggested several possible factors that may contribute to attrition, including ethnic minority group status and symptom severity (Kendall and Sugarman, 1997). This study examined these potential contributing factors. Given that many of the children in this study exhibited subclinical levels of anxiety (with only 4 children receiving clinically elevated total anxiety scores on the SCARED-R), parent psychopathology was also examined to see if there may have been an association between their symptom severity and dropout. Further, past research has also demonstrated that

milder symptoms or quick improvement in treatment may result in drop out (Werner-Wilson & Winter, 2010; Issakidis & Andrews, 2004), thus symptom improvement was examined in regards to attrition.

Similar to past research, these results demonstrated a link between ethnic background and attrition, such that Caucasian parents were more likely to complete treatment than parents who were members of an ethnic minority. This may indicate that the Timid to Tiger program may benefit from addressing cultural differences in families. Past research has demonstrated that certain ethnic minorities are more likely to implement an authoritarian parenting style (Halgunseth, Cushinberry, & Bordere, 2003,), and therefore these families may be less comfortable or motivated to implement some of the behavior modification techniques (i.e., rewards, play, ignoring, etc.) taught in this treatment. It may be beneficial to address this in treatment and acknowledge any discomfort in trying new techniques. It is also possible that these differences may not be due to a minority status, but other related factors such as socioeconomic status which could influence access to transportation, flexibility in scheduling, or being able to find child care while at treatment. These variables should be further explored in future large-scale investigations.

In addition to ethnic background, this study examined child psychopathology and attrition. Interestingly, severity of child symptoms was not significantly related to drop out. In fact, symptom reduction for non-completers were actually higher than participants who completed the abbreviated 6-7 sessions ($M = 1.75$). These results may suggest that participants dropped out because the subclinical anxiety did not warrant treatment, or because improvement occurred quickly. These finding are consistent with a previous study

which demonstrated that premature termination was actually associated with lower levels of anxiety (Kendall and Sugarman, 1997).

Given that child psychopathology did not appear to predict attrition, parent psychopathology was then examined. Results revealed that parents with their own mental health diagnosis were more likely to drop out than parents without such a diagnosis. These participants may have had difficulty committing to their children's treatment and might benefit from their own treatment prior to addressing their parenting style. This finding has been supported by past research which has demonstrated not only an increased likelihood of attrition with parent psychopathology, but also progression in symptoms of anxiety for the child over time and the need for more intensive future treatment (Luk et al., 2001; Kazdin, Holland, & Crowley, 1997). Therefore, it may be beneficial for this to be addressed with parents during pre-treatment assessments and inquire more about their history of mental health treatment, stigmas they may have about mental health treatment and their commitment to this particular treatment.

Limitations

Given that this was a pilot study, the results provided are based on a limited sample size and therefore the statistical significance of the data could not always be provided. More specifically, this study had limited statistical power because of the small sample size in the present study (N = 11) which may have contributed to the limited significance of the statistical analyses conducted. A post hoc power analysis revealed that a sample of approximately 80 would be needed to obtain statistical power at the recommended .80 level (Cohen, 1988).

In addition to low power, some of the participants began treatment with subclinical levels of anxiety and thus a significant change was not always observed. Further, post-treatment materials were taken immediately following the final session, with no follow-up to see long-term results of the intervention. This study lacked a control group which results in some limitations in the interpretation of the results, as we cannot know how the participants' anxiety may have changed over time without this treatment. Another limitation is that the abbreviated forms of this treatment (i.e., participants who completed 6-7 sessions) combined materials from multiple sessions into single sessions, which resulted in difficulty distinguishing the effectiveness of particular session materials and the results of said materials (i.e., the SCARED-R and YOQ). Finally, given the young age of the children involved, we had only parents completing forms. A single-rater could result in self-report bias or inaccuracy in reporting.

While the limitations of this pilot study suggest that this program should be more thoroughly and consistently implemented with a larger sample size in a population with clinical levels of anxiety, overall, findings suggested improvements for the youth whose parents completed this treatment.

Future Directions

Given that one of the most common anxiety disorders for this age group is SAD, future forms of this treatment may benefit from additional education focused on this form of anxiety, or providing examples relevant to separation anxiety.

In addition, the results revealed that participants found particular topics to be more helpful than others. In fact, many participants chose an abbreviated version after seeing quick improvements. Future treatments may benefit from being transparent about what to

expect and encourage parents to commit to all 10 sessions so that they experience the full benefits of all techniques.

Future research may also want to look into different functions of the Timid to Tiger program. Interestingly, the majority (9 out of 13) of our participants were children with subclinical levels of anxiety. However, many of the parents who participated did endorse their own personal clinical levels of anxiety (6 out of 13). Perhaps this finding is consistent with previous research, which has suggested that the median age of onset for anxiety disorders is 11 years (Kessler et. al, 2005). In other words, it may be that these children had not yet developed anxiety at a clinical level. Given that past research has indicated a possible transmission of anxiety within the family (Beidel & Turner, 1997; Biederman et al., 1991; Ginsburg & Schlossberg, 2002; Last, Hersen, Kazdin, Francis, & Grubb, 1987; Turner, Beidel, & Costello, 1987), where anxious parents are more likely to have anxious children, Timid to Tiger may serve as not only an intervention, but potential prevention of the development of clinical levels of anxiety in children. In this respect, future uses of this intervention may benefit from the addition of explaining thoroughly the development of anxiety to encourage parents with anxiety diagnoses to be consistent with their children's and their own treatment even if their young children have not yet developed an anxiety disorder. Future research may also want to develop longitudinal studies to examine child anxiety levels for anxious parents who complete this program when children are in infancy or early childhood.

Given that the measures from this study were completed only by the parent participating, future studies may want to implement a multi-rater approach to avoid any potential self-report bias that could occur with a mono-rater method.

Further, the prevalence of parent psychopathology suggests that more thorough assessment of parent anxiety may help portray a clearer picture of familial levels of anxiety.

Summary

Results of this pilot study supported that the Timid to Tiger program is a potentially efficacious intervention for young children with anxiety. All participants with clinically elevated levels of anxiety experienced a decrease in their symptoms, as reported by their parents. In addition, parents reported improvement in overall functioning and decreased distress. Further, parents reported increased levels of satisfaction with the treatment, as well as a perceived effectiveness of the treatment.

Interestingly, attrition in this sample appeared to be predicted by ethnicity and parent psychopathology, with a possible link between improvement and attrition. This demonstrated that while severity of child symptoms may not have been related to attrition, parent psychopathology may impair the likelihood of completing treatment.

Overall, this study suggests that this form of treatment may be an effective form of intervention for a population that is often overlooked or under-treated.

Table 1: *Weekly Session Topics*

Session	Topic
1	Introductions: causes of anxiety disorders; cognitive behavioral therapy; parenting pyramid; Seven Confident Thoughts; tips on diet, caffeine, routines.
2	Play: Building parent-child relationship; child-centered play; building self-esteem
3	Understanding your Child's Anxiety: modeling; avoidance; flight-fight response
4	Praise and Encouragement: Effective/labeled praise; shaping brave behaviors
5	Rewards: Encouraging brave behaviors through rewards and star charts
6	Effective Limit Setting: Use of clear, predictive and positive commands
7	Ignoring: Withdrawing attention to reduce mild unwanted behaviors
8	Time Out: How to use consequences for more severe unwanted behaviors
9	Problem Solving/Testing Worries: revision; relapse prevention; specific examples
10	Problem Solving/Testing Worries: review; future concerns; celebration; certificates

Table 2. *Participant Scores on SCARED-R*

ID#	Type of Anxiety							
	Panic	Generalized Anxiety	Social Anxiety	Separation Anxiety	Specific Phobia	PTSD	Obsessive-Compulsive	Total
101	5	13**	8	10**	15**	2	10**	63**
201	6	7	4	9*	7	1	5	39
202	5	5	4	7	5	0	3	29
203	0	2	0	2	1	0	3	8
204	8	10	8	20**	8*	2	4	60*
205	6	11*	8	15**	15**	2	3	60*
301	1	5	5	5	2	0	0	18
302	4	2	7	5	13**	0	2	33
303	1	2	2	6	0	1	0	12
402	6	17**	8	20**	12**	6**	7	76**
403	6	8	2	15**	10**	3	3	47
404	2	9	0	9*	9*	2	5	36
405	1	13**	8	15**	7	0	3	47
AVG	3.9	8	4.9	10.6	8*	1.6	3.7	40.6
# significant	0	3	0	6	5	1	1	4

* an elevated score outside of the normal range (Panic $\geq$ 9, GAD $\geq$11, Social Anxiety $\geq$ 9, SAD $\geq$ 9, Specific Phobia $\geq$ 8, PTSD $\geq$ 4, OCD $\geq$ 9, Total Score $\geq$ 60)
**clinically elevated (Panic $\geq$ 10, GAD $\geq$ 13, Social Anxiety $\geq$ 10, SAD $\geq$ 10, Specific Phobia $\geq$ 9, PTSD $\geq$ 6, OCD $\geq$ 10, Total Score $\geq$ 62)
(Muris et al., 2007)

Table 3. *Pre- and Post-Treatment Scores and Reliable Change Index for YOQ and*

SCARED-R

	Pre-YOQ	Post-YOQ	YOQ RCI	Pre-SCARED-R	Post-SCARED-R	SCARED-R RCI
101	19	4	-1.012	63	18	-3.517**
201	60	46	-0.944	39	33	-0.469
202	54	43	-0.742	29	33	0.313
203	25	-11	-2.428**	8	1	-0.547
301	88	70	-1.214	18	19	0.078
302	14	16	0.000	33	24	-0.703
303	20	14	-0.405	12	10	-0.156
402	101	94	-0.472	76	58	-1.407
403	63	55	-0.540	47	39	-0.625
404	94	83	-0.742	36	35	-0.078
405	62	27	-2.361**	47	25	-1.719*

**p<.05 is when RCI > 1.96

*p<.09 is when RCI > 1.65

Table 4. *Pre- and Post-Treatment Scores by Gender*

	Pre-SCARED	Post-SCARED	Pre-YOQ	Post-YOQ
Male	41.00	29.63	60.13	48.75
Female	26.67	19.33	33.00	17.00

Table 5. *Summary of Participant Demographics and Pre- and Post-Treatment Results*

	# of sessions	Age	Gender	Parent Gender	Race	# of Parent Diagnoses	Pre-YOQ	Post-YOQ	Pre-SCARED	Post-SCARED	Pre-CBCL
101	6	8	male	female	Caucasian	0	19	4	63	18	73
102	0	5	male	male	Asian/Indian	1	X	X	X	X	X
201	10	7	female	female	Caucasian	0	60	46	39	33	63
202	10	7	female	male	Caucasian	0	54	43	29	33	63
203	10	8	female	female	Hispanic	0	25	-11	8	1	59
204	2	6	female	female	Hispanic	0	X	X	60	X	X
205	2	6	female	male	Hispanic	3	X	X	60	X	X
301	7	5	female	female	Hispanic	0	88	70	18	19	60
302	6	6	female	female	Asian	0	20	16	33	24	67
303	7	4	male	female	Caucasian	0	20	14	12	10	X
401	0	7	male	female	Caucasian	3	X	X	X	X	X
402	10	10	male	male	Caucasian	0	101	94	76	58	78
403	10	5	male	male	Caucasian	0	63	55	47	39	X
404	10	5	male	female	Caucasian	2	94	83	36	35	72
405	10	10	male	female	Caucasian	0	62	27	47	25	72
406	0	5	female	female	Hispanic/black	2	X	X	X	X	X
407	0	7	female	female	black	2	X	X	X	X	X

☐ = Non-completers

Table 6: *Average Parent Impressions of Treatment Scores by Completion Status*

	Post-Effectiveness	Post-Satisfaction	Post-Anxiety
10-Session Completers	2.7	3.75	2.5
6-7 Session Completers	2.5	3.5	1.75
Non-Completers	1.5	Not indicated	2

Figure 1. *Reliable Change Index (RCI)*

$$RC = \frac{x_2 - x_1}{S_{diff}} \qquad S_{diff} = \sqrt{2(S_E)^2}$$

Where x_1 = pretest score, x_2 = post-test score, and S_{diff} = standard error of difference between the two test scores. S_{diff} can be computed directly from the standard error of measurement (S_E)

Figure 2. *Average Weekly Child Anxiety on SCARED-R and YOQ*
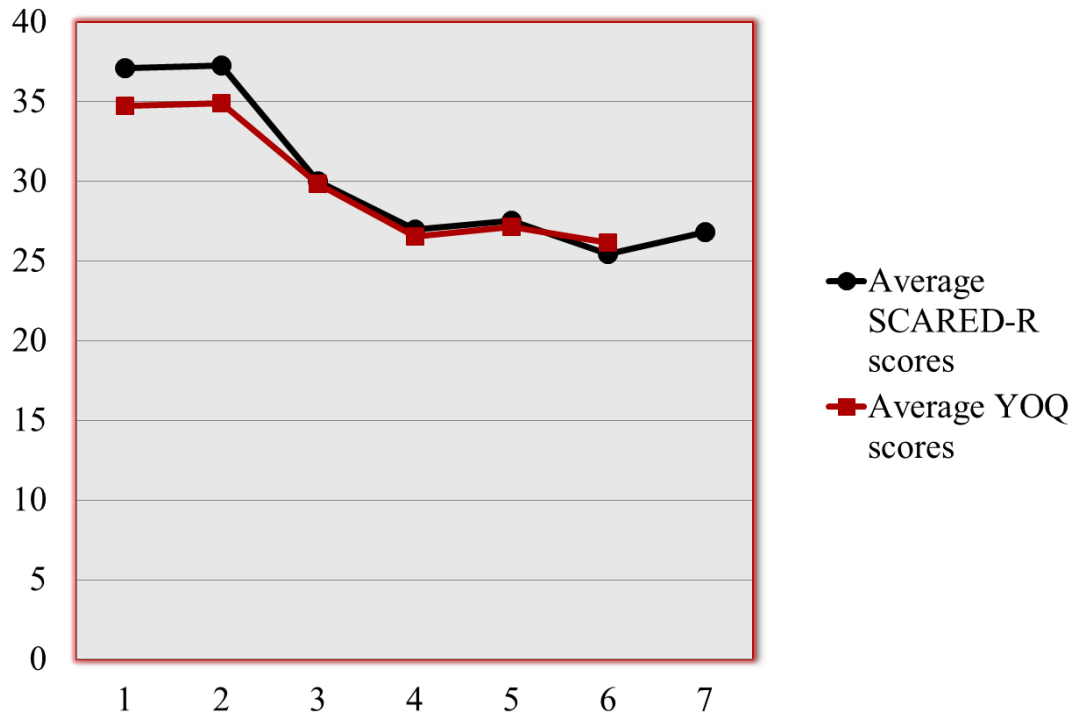
Note: 7 averages include pre-treatment, biweekly administrations during 10 week treatment, and post-treatment.

Figure 3. *Individual Weekly Child Anxiety Ratings on SCARED-R*
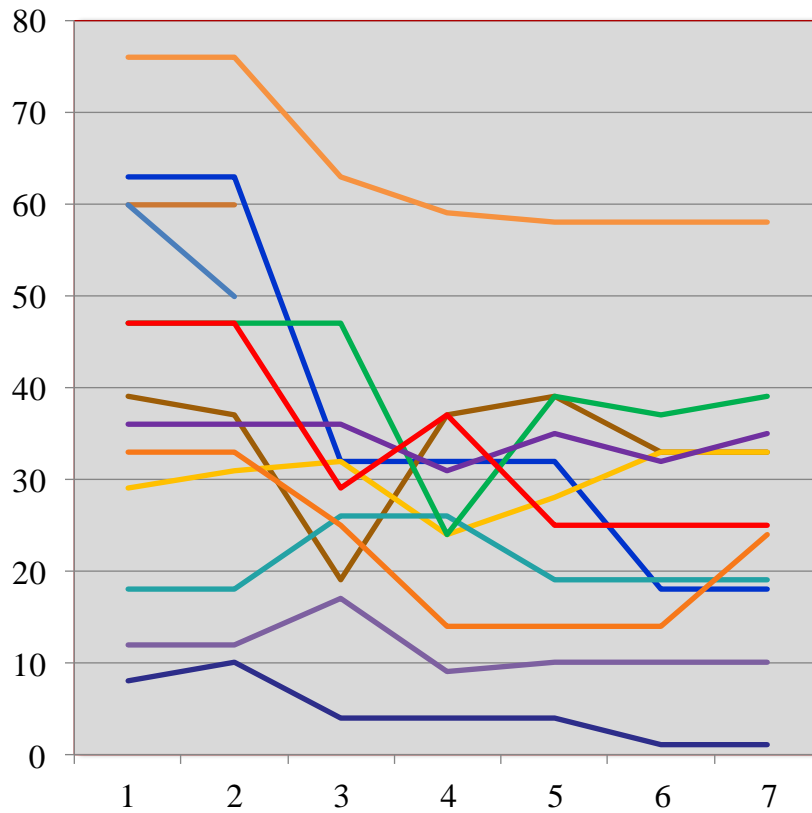
Note: 7 averages include pre-treatment, biweekly administrations during 10 week treatment, and post-treatment.

Figure 4. *Average Parent Ratings on Weekly Pre-Session Questionnaires*
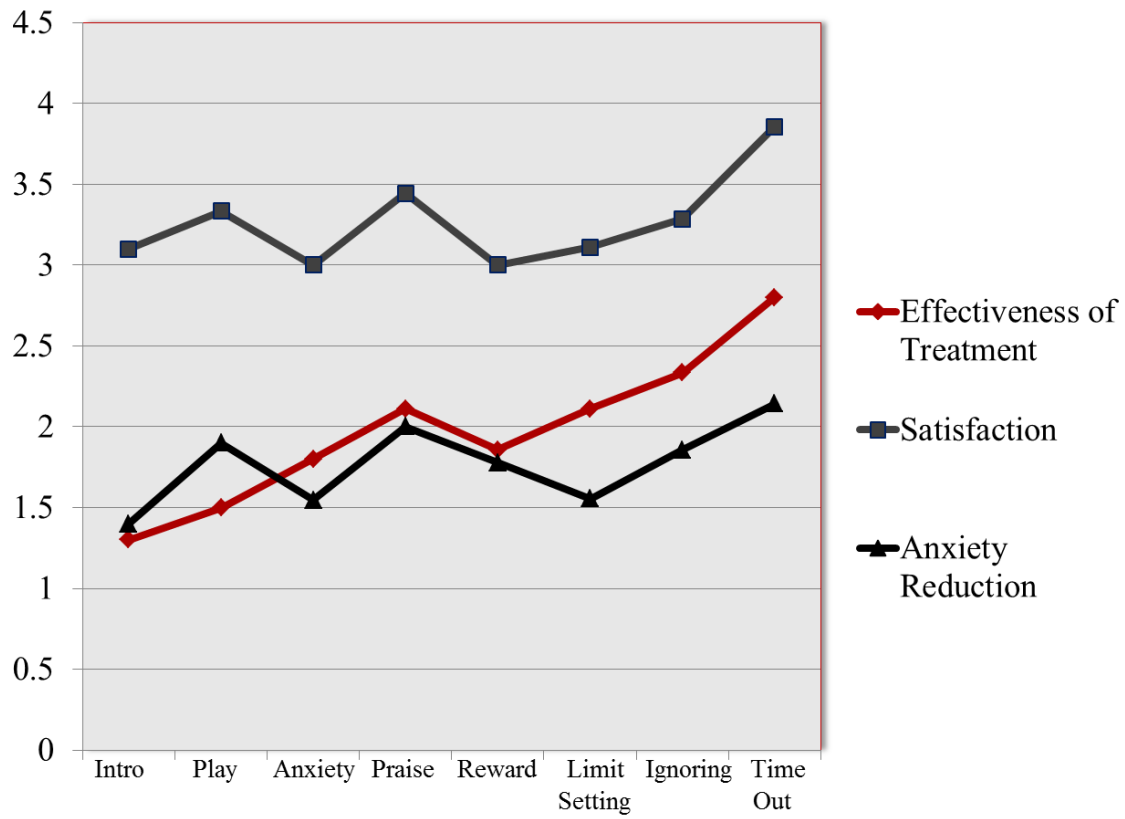
Appendix A. *Screen for Child Anxiety Related Emotional Disorders-Revised (SCARED-R)*

Instruction
Below, you will find a number of statements, which refer to children's fears and anxiety. Please read each statement carefully and indicate how frequently you have experienced that symptom **during the last 3 months**: *never or almost never*, *sometimes*, or *often*.

|		0 almost never	1 Sometime	2 Often
1.	When my child is frightened, it is hard for him/her to breathe	O	O	O
2.	My child is afraid of heights	O	O	O
3.	My child gets headaches or bellyaches when he/she is at school	O	O	O
4.	My child doesn't like to be with people he/she doesn't know	O	O	O
5.	When my child sees blood, he/she get dizzy	O	O	O
6.	My child wants things to be in a fixed order	O	O	O
7.	My child gets scared when he/she sleeps away from home	O	O	O
8.	My child worries about others not liking him/her	O	O	O
9.	When my child gets frightened, he/she feels like passing out	O	O	O
10.	My child thinks that he/she will be contaminated with a serious disease	O	O	O
11.	My child is nervous	O	O	O
12.	My child has strange thoughts that frighten him/her	O	O	O
13.	My child follows me wherever I go	O	O	O
14.	People tell my child that he/she looks nervous	O	O	O
15.	My child feels nervous with people he/she doesn't know well	O	O	O
16.	My child is afraid to visit the doctor	O	O	O
17.	My child doesn't like going to school	O	O	O
18.	When my child gets frightened, he/she feels like he/she is going crazy	O	O	O
19.	My child worries about sleeping alone	O	O	O
20.	My child is afraid to visit the dentist	O	O	O
21.	My child worries about being as good as other kids	O	O	O
22.	My child is afraid of an animal that is not really dangerous	O	O	O
23.	My child gets scared when there is thunder in the air	O	O	O
24.	My child does things more than twice in order to check whether he/she did it right	O	O	O
25.	My child has frightening dreams about a very aversive event he/she once experienced	O	O	O
26.	My child wants things to be clean and tidy	O	O	O
27.	When my child gets frightened, my child feels like things are not real	O	O	O
28.	My child would feel scared if he/she had to fly in an airplane	O	O	O
29.	My child has nightmares about something bad happening to me	O	O	O
30.	My child worries about going to school	O	O	O
31.	My child performs rituals that help him/her to get less scared of my thoughts	O	O	O
32.	When my child feels frightened, his/her heart beats fast	O	O	O
33.	My child is scared when he/she get an injection	O	O	O
34.	My child is afraid of getting a serious disease	O	O	O
35.	My child feels weak and shaky	O	O	O
36.	My child has nightmares about something bad happening to him/her	O	O	O
37.	My child is so scared of a harmless animal that he/she does not dare touch it	O	O	O
38.	My child worries about things working out for him/her	O	O	O
39.	My child doubts whether he/she really did something	O	O	O
40.	When my child gets frightened, he/she sweat a lot	O	O	O
41.	My child is a worrier	O	O	O

		0 almost never	1 Sometime s	2 Often
42.	My child feels scared when he/she watches a medical operation on TV	O	O	O
43.	My child tries not to think about a very aversive event he/she once experienced	O	O	O
44.	Suddenly my child gets really frightened for no reason at all	O	O	O
45.	My child is afraid to be alone in the house	O	O	O
46.	My child gets scared when he/she thinks back of a very aversive event he/she once experienced	O	O	O
47.	It is hard for my child to talk with unfamiliar people	O	O	O
48.	When my child gets frightened, my child feels like he/she is choking	O	O	O
49.	People tell my child that he/she worries too much	O	O	O
50.	My child doesn't like to be away from his/her family	O	O	O
51.	My child is afraid of having anxiety (or panic) attacks	O	O	O
52.	My child worries that something bad might happen to myself or my spouse (his/her parents)	O	O	O
53.	My child feels shy with people he/she doesn't know well	O	O	O
54.	My child has unwanted thoughts about hurting other people	O	O	O
55.	My child worries about what is going to happen in the future	O	O	O
56.	When my child gets frightened, he/she feels like throwing up	O	O	O
57.	My child worries about how well he/she does things	O	O	O
58.	My child is scared to go to school	O	O	O
59.	My child worries about things that happened in the past	O	O	O
60.	When my child feels frightened, he/she gets dizzy	O	O	O
61.	My child gets scared in small, closed places	O	O	O
62.	My child has strange, scary thoughts that he/she prefers not to have	O	O	O
63.	My child is afraid of the dark	O	O	O
64.	My child has unbidden thoughts about a very aversive event he/she once experienced	O	O	O
65.	My child is afraid of an animal that most children do not fear	O	O	O
66.	My child doesn't like being in a hospital	O	O	O

Scoring

A total anxiety symptoms score can be obtained by summing the ratings across all items.
Items 1, 9, 14, 18, 27, 32, 35, 40, 44, 48, 51, 56, and 60 = Panic disorder
Items 2, 23, 28, 61, and 63 = Specific phobia, situational/environmental type
Items 3, 17, 30, and 58 = School phobia
Items 4, 15, 47, 53, = Social phobia
Items 5, 16, 20, 33, 34, 42, and 66 = Specific phobia, blood-injection-injury type
Items 6, 10, 12, 24, 26, 31, 39, 54, and 62 = Obsessive-compulsive disorder
Items 7, 13, 19, 29, 36, 45, 50, and 52 = Separation anxiety disorder
Items 8, 11, 21, 38, 41, 49, 55, 57, and 59 = Generalised anxiety disorder
Items 22, 37, and 65 = Specific phobia, animal type
Items 25, 43, 46, and 64 = Acute or post-traumatic stress disorder

Appendix B. *Youth Outcome Questionnaire (Y-OQ® 2.01)*

Youth Outcome Questionnaire (Y-OQ® 2.01)

Child's Name_____ ID#_____ Today's Date_____

Child's Date of Birth_____ Child's Sex: Male   Female   Parent/Guardian_____

PURPOSE: The Y-OQ® 2.01 is designed to describe a wide range of troublesome situations, behaviors, and moods that are common in children and adolescents. You may discover that some of the items do not apply to your child's current situation. If so, please do not leave these items blank but check the "Never or almost never" category. When you begin to complete the Y-OQ® 2.01 you will see that you can easily make your child look as healthy or unhealthy as you wish. Please do not do that. If you are as accurate as possible it is more likely that you will be able to receive the help that you are seeking for your child.

DIRECTIONS:
- Read each statement carefully
- Decide how true this statement is for you child during the past **7 days.**
- Check the box that most accurately describes your child during the past week.
- Check only one answer for each statement and erase unwanted marks clearly

PLEASE COMPLETE BOTH SIDES

For Office Use Only

My Child:	Never or Almost Never	Rarely	Sometimes	Frequently	Almost Always or Always	ID	S	IR	SP	BD	CI
1. Wants to be alone more than other children of the same age	0	1	2	3	4						
2. Complains of dizziness or headaches	0	1	2	3	4	XXX					
3. Doesn't participate in activities that were previously enjoyable	0	1	2	3	4						
4. Argues or is verbally disrespectful	0	1	2	3	4						
5. Is more fearful than other children of the same age	0	1	2	3	4						
6. Cuts school or is truant	0	1	2	3	4						
7. Cooperates with rules and expectations	2	1	0	-1	-2						
8. Has difficulty completing assignments, or completes them carelessly	0	1	2	3	4						
9. Complains or whines about things being unfair	0	1	2	3	4						
10. Experiences trouble with her/his bowels, such as constipation or diarrhea	0	1	2	3	4						
11. Gets into physical fights with peers or family members	0	1	2	3	4						
12. Worries and can't get certain ideas off his/her mind	0	1	2	3	4						
13. Steals or lies	0	1	2	3	4						
14. Is fidgety, restless, or hyperactive	0	1	2	3	4						
15. Seems anxious or nervous	0	1	2	3	4						
16. Communicates in a pleasant and appropriate manner	2	1	0	-1	-2						
17. Seems tense, easily startled	0	1	2	3	4						
18. Soils or wets self	0	1	2	3	4						
19. Is aggressive toward adults	0	1	2	3	4						
20. Sees, hears, or believes things that are not real	0	1	2	3	4						
21. Has participated in self-harm (e.g., cutting or scratching self, attempting suicide)	0	1	2	3	4						
22. Uses alcohol or drugs	0	1	2	3	4						
23. Seems unable to get organized	0	1	2	3	4						
24. Enjoys relationships with family and friends	2	1	0	-1	-2						
25. Appears sad and unhappy	0	1	2	3	4						
26. Experiences pain or weakness in muscles or joints	0	1	2	3	4						
27. Has a negative, distrustful attitude toward friends, family members, or other adults	0	1	2	3	4						
28. Believes that others are trying to hurt him/her even when they are not	0	1	2	3	4						
29. Threatens to, or has run away from home	0	1	2	3	4						
30. Experiences rapidly changing and strong emotions	0	1	2	3	4						

SUBTOTALS

My Child:	Never or Almost Never	Rarely	Sometimes	Frequently	Almost Always or Always	ID	S	IR	SP	BD	CI
31. Deliberately breaks rules, laws, or expectations	☐0	☐1	☐2	☐3	☐4				☐		
32. Appears happy with her/himself	☐2	☐1	☐0	☐-1	☐-2	☐					
33. Sulks, pouts, or cries more than other children of the same age	☐0	☐1	☐2	☐3	☐4						
34. Pulls away from family or friends	☐0	☐1	☐2	☐3	☐4						
35. Complains of stomach pain or feeling sick more than other children of the same age	☐0	☐1	☐2	☐3	☐4			☐			
36. Doesn't have or keep friends	☐0	☐1	☐2	☐3	☐4				☐		
37. Has friends of whom I don't approve	☐0	☐1	☐2	☐3	☐4				☐		
38. Believes that others can hear her/his thoughts, or that s/he can hear the thoughts of others	☐0	☐1	☐2	☐3	☐4						☐
39. Engages in inappropriate sexual behavior (e.g., sexually active, exhibits self, sexual abuse towards family members or others)	☐0	☐1	☐2	☐3	☐4					☐	
40. Has difficulty waiting his/her turn in activities or conversations	☐0	☐1	☐2	☐3	☐4					☐	
41. Thinks about suicide, says s/he would be better off if s/he were dead	☐0	☐1	☐2	☐3	☐4		☐				
42. Complains of nightmares, difficulty getting to sleep, oversleeping, or waking up from sleep too early	☐0	☐1	☐2	☐3	☐4			☐			
43. Complains about or challenges rules, expectations, or responsibilities	☐0	☐1	☐2	☐3	☐4					☐	
44. Has times of unusual happiness or excessive energy	☐0	☐1	☐2	☐3	☐4						☐
45. Handles frustration or boredom appropriately	☐2	☐1	☐0	☐-1	☐-2				☐		XXX
46. Has fears of going crazy	☐0	☐1	☐2	☐3	☐4						☐
47. Feels appropriate guilt for wrongdoing	☐2	☐1	☐0	☐-1	☐-2				☐		
48. Is unusually demanding	☐0	☐1	☐2	☐3	☐4					☐	
49. Is irritable	☐0	☐1	☐2	☐3	☐4	☐					
50. Vomits or is nauseous more than other children of the same age	☐0	☐1	☐2	☐3	☐4			☐			
51. Becomes angry enough to be threatening to others	☐0	☐1	☐2	☐3	☐4					☐	
52. Seems to stir up trouble when bored	☐0	☐1	☐2	☐3	☐4					☐	
53. Is appropriately hopeful and optimistic	☐2	☐1	☐0	☐-1	☐-2	☐					
54. Experiences twitching muscles or jerking movement in face, arms, or body	☐0	☐1	☐2	☐3	☐4			☐			
55. Has deliberately destroyed property	☐0	☐1	☐2	☐3	☐4					☐	
56. Has difficulty concentrating, thinking clearly, or attending to tasks	☐0	☐1	☐2	☐3	☐4					☐	
57. Talks negatively, as though bad things are all his/her fault	☐0	☐1	☐2	☐3	☐4	☐					
58. Has lost significant amounts of weight without medical reason	☐0	☐1	☐2	☐3	☐4						☐
59. Acts impulsively, without thinking of consequences	☐0	☐1	☐2	☐3	☐4					☐	
60. Is usually calm	☐2	☐1	☐0	☐-1	☐-2					☐	
61. Will not forgive her/himself for past mistakes	☐0	☐1	☐2	☐3	☐4	☐					
62. Lacks energy	☐0	☐1	☐2	☐3	☐4	☐					
63. Feels that he/she doesn't have any friends, or that no one likes him/her	☐0	☐1	☐2	☐3	☐4	☐					
64. Gets frustrated and gives up, or gets upset easily	☐0	☐1	☐2	☐3	☐4	☐					
This Page Subtotals…											
Side 1 Subtotals											
SUBSCALE TOTALS (Sum of Subtotals)											

Appendix C. *Pre-Session Parent Questionnaire*

We want to know how things went for your child and you during the past week. Please answer the questions below about your child's anxiety level during the past week and the previous treatment session. There are no correct answers, please just choose the most appropriate/representative answer for your family.

1. During the past week, what was your child's anxiety level? (Circle one answer.)

0	1	2	3	4
No Anxiety	Mild (A little)	Moderate (Some)	Severe (A Lot)	Very Severe (Extreme)

2. How does your child's anxiety level from the past week (rated in Question 1) compare to her/his anxiety level before the last session? (Circle one answer.)

0	1	2	3	4
A Lot Less Anxious	Less Anxious	No Change	More Anxious	A Lot More Anxious

3a. Which strategies from the previous session did you find to be *effective*?

_____
_____
_____
_____
_____

3b. Please place a mark (star*, X, etc…) next to the strategy you found MOST effective.

3c. In general, how *effective* were these strategies from the last session? (Circle one answer.)

0	1	2	3	4
A Little Effective	Somewhat Effective	Effective	Very Effective	Extremely Effective

4a. Which strategies from the previous session did you find were **NOT** *effective*?

_____
_____
_____
_____

4b. In general, how ***ineffective*** were these strategies from the last session? (Circle one.)

0	1	2	3	4
A Little Ineffective	Somewhat Effective	Ineffective	Very Ineffective	Extremely Ineffective

5. During the past week, how often did you use the strategies discussed in the previous session? (Circle one answer).

0	1	2	3	4
Never	Rarely	Sometimes	Often	Many Times

Not Applicable (Choose this answer if you feel your child's behavior did not require use of any strategy discussed from the previous session.)
Explain.

_____
_____
_____
_____
_____

6. Overall, how satisfied were you with previous treatment session? (Circle one.)

0	1	2	3	4
Unsatisfied	Somewhat Satisfied	Neutral	Somewhat Satisfied	Satisfied

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