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Child & Adolescent Social Anxiety and Family Accommodation: Exploring the Role of Coping

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Child & Adolescent Social Anxiety and Family Accommodation: Exploring the Role of Coping

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Abstract

Child & Adolescent Social Anxiety and Family Accommodation: Exploring the Role of Coping

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Research demonstrates that family accommodation is positively correlated with the severity of childhood anxiety. This finding is particularly interesting in the case of social anxiety, due to the role of the caregiver in the psychogenesis of the disorder. The prevalence of effective coping strategies is important in the mitigation of stress during childhood. Therefore, due to the need for effective parent modeling to acquire these strategies, it is hypothesized that higher levels of family accommodation reduce opportunities to acquire coping, which then results in more severe social anxiety. The proposed study seeks to use multiple regression to evaluate childhood coping skills as a mediator variable between family accommodation and the severity of social anxiety.

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INTRODUCTION

Family accommodation, which describes ways family members alter their behavior to mitigate distress in other family members, is a burgeoning area of research within the field of child psychology. Until recently, however, this area has remained largely unstudied. Consequently, little is known regarding the effect of family accommodation on childhood anxiety—a prevalent psychological disorder among children and adolescents with a seemingly comprehensive scope of existing research. Most efforts to study family accommodation have focused on the understanding and treatment of pediatric Obsessive Compulsive Disorder (OCD; e.g., Lebowitz, Panza, & Bloch, 2016; Lebowitz, Panza, Su, & Bloch, 2012; Lebowitz, Scharfstein, & Jones, 2014a; Storch et al., 2007). Only recently have researchers begun to examine family accommodation within anxiety disorders (e.g., Lebowitz et al., 2013)—a logical progression due to the minimal difference between anxiety and pediatric OCD with regards to their relationship with family accommodation (Lebowitz et al., 2014a). Unfortunately, due to a gap in the research focusing on family accommodation and anxiety disorders, it is difficult to project its weight of importance and prevalence within the psychogenesis of anxiety disorders. However, it can be helpful to understand the role of family accommodation by examining current findings on the topic through the contexts in which it has been studied. For instance, approximately 90% of families have been found to accommodate to both pediatric and adult OCD (Pinto, Van Noppen, & Calvocoressi, 2013). Given this staggering figure, family accommodation appears to play a significant role in the maintenance of OCD and likely other anxiety disorders.

Recent theories of social anxiety posit the importance of family factors within the emergence and maintenance of the disorder among child and adolescent populations. For

instance, the roles of attachment, parental anxiety, and parenting style have been linked to social anxiety which helps to better understand the etiology the disorder (Ollendick & Benoit, 2011). While the relationship between family accommodation and anxiety is still relatively new, researchers have already begun to establish the links between accommodation and family factors. For example, family accommodation has been found to mediate the relationship between maternal and child anxiety (Jones, Lebowitz, Marin, & Stark, 2015). Due to the importance of family factors within social anxiety, family accommodation is a logical area to study within this domain.

Interestingly, family accommodation somewhat mirrors disengagement coping strategies (i.e., strategies that involve avoidance to alleviate distress). One basic difference is that children cannot use family accommodation as a skill—instead, it acts as an external factor in the child's environment that works to reduce anxiety. Coping, and its effect on distress and anxiety, is a well-established area of research. Findings in this area have helped support an understanding in both the etiology and treatment of anxiety disorders. In general, effective coping strategies reduce anxiety and negative affective responses to potentially difficult stimuli. This cannot be emphasized enough. If children are able to develop and maintain strong coping skills, their psychological outcomes are much more positive (Connor-Smith & Flachsbart, 2007). Family accommodation, however, can be argued to be an ineffective form of coping due to its inability to generalize to various new settings. Additionally, when family accommodation takes place, it likely dominates child and adolescent coping strategies due to the degree to which they are able to rely on accommodation to reduce or avoid distress in early life.

The proposed study seeks to better understand the role of coping, specifically engagement coping (i.e., effective coping strategies that do not involve avoidance behaviors), within the context of family accommodation and social anxiety. More

specifically, this study seeks to evaluate whether engagement coping mediates the relationship between family accommodation and the severity of anxiety in socially anxious children and adolescents. Exploring the relationship between these variables will highlight the importance of family accommodation in the development and maintenance of social anxiety in children. Additionally, this information will provide a significant contribution to the newly developing area of research in family accommodation.

INTEGRATIVE ANALYSIS & INTERPRETATION

Social Anxiety

Anxiety disorders are the most pervasive class of all mental health disorders with a 12-month prevalence of approximately 18% among the general population (Kessler, Chiu, Demler, & Walters, 2005) and even higher rates among individuals from a low socioeconomic status (Miech, Caspi, Moffitt, Wright, & Silva, 1999). Social anxiety disorder (SAD; formerly, social phobia), a subtype of anxiety, involves marked and persistent fear of negative evaluation in social and/or performance situations (Diagnostic and Statistical Manual of Mental Disorders, 5th Edition, 2013). People with social anxiety fear the scrutiny of others so much that they avoid interpersonal situations or experience immense discomfort while in them. Concern in social situations stems from a fear of embarrassing oneself or feeling humiliated. Social anxiety disorder is relatively common with lifetime prevalence rates ranging from 7% to 12.1% in the United States (Diagnostic and Statistical Manual of Mental Disorders, 5th Edition, 2013; Ruscio et al., 2008) and onset often begins in childhood and early adolescence (Chavira & Stein, 2005). Social anxiety disorder is associated with severe impairment and is regarded as a chronic condition that affects people of all ages and genders (Kessler, 2003). When compared to males, females more often report symptoms of anxiety (Costello, Egger, & Angold, 2005). Despite these differences in self-reporting, actual prevalence rates of anxiety disorders have generally not been found to vary significantly between genders even though some evidence supports this claim (Costello et al., 2005).

Some theorists have conceptualized SAD using a cognitive-behavioral model (e.g., Rapee & Heimberg, 1997). This model has been one of the most influential models within the study of social anxiety and will be explored in detail in a following section. However,

to provide a more comprehensive background, an exploration of cognitive behavioral therapy (CBT) including its origins and its application to SAD will first be discussed.

COGNITIVE-BEHAVIORAL & INFORMATION PROCESSING MODELS.

CBT was derived from the original works of Beck (1970) and Ellis (1962), which contend that maladaptive cognitions (i.e., thoughts) contribute to the development and maintenance of emotional distress and behavioral problems. Beck's model posits that these maladaptive cognitions include schemas (i.e., general beliefs), which give rise to automatic thoughts that engender psychological distress. When applied to social anxiety via two prominent models, namely the Cognitive-Behavioral Model (Rapee & Heimberg, 1997) and the Information Processing Model (Clark & Wells, 1995), theory dictates that an anxious state will be experienced to the extent that negative evaluations are thought and believed to be likely and could lead to potentially serious consequences. Related to maladaptive cognitions, socially anxious individuals often distort perceptions to affirm negative aspects of the self. Therefore, when negative information is received from surrounding people (e.g., an audience), it will have much greater weight for socially anxious individuals than people who are not anxious. This is due to the salience of the socially anxious individual's negative schema.

Beyond cognitions, anxiety also consists of somatic (i.e., physiological) responses. While socially anxious individuals often experience internal somatic responses similar to other anxiety disorders (e.g., pounding heart, butterflies in stomach), there are visible somatic symptoms that can have greater perceived social consequence; blushing, stammering, and sweating (Amies, Gelder, & Shaw, 1983; Solyom, Ledwidge, & Solyom, 1986). Similar to the misattribution present in cognitions, socially anxious individuals are thought to overemphasize the presence of these visible somatic symptoms because of their

potential for negative evaluation. For instance, there is often a perception that people will know how insecure they feel if they are seen blushing. This can then exacerbate the anxiety (Rapee & Heimberg, 1997). In essence, the pairing of cognitive, behavioral, and physiological responses to social situations in socially anxious individuals results in faulty information processing. This renders these individuals to only process and experience potentially negative stimuli that is often reinforced by their preparation for such situations. For example, if an individual goes to great lengths to meticulously plan out a conversation and then does not experience as much anxiety, he or she will learn that planning was necessary.

Other models have also theorized about the pathogenesis of social anxiety via risk and vulnerability factors. They describe four areas of contribution; genetic and temperament factors, cognitive aspects, parent-child interactions, and unhealthy environments, which all occur in the context of societal and cultural influences (for a review, see Brook & Schmidt, 2008). Parenting and family environment are two important areas that are most commonly cited in the research and that have strong empirical support in their relationship to social anxiety. Specifically, results show a connection between parental over-control as well as parental psychopathology with childhood social anxiety (Brook & Schmidt, 2008). Adverse life events (i.e., sexual abuse, negative peer relationships), different cultural values, socioeconomic status, and traditional gender roles and gender differences in parent-child interactions also contribute to the etiology of the disorder (Brook & Schmidt, 2008). However, research has often failed to move beyond the examination of parental factors as a contributor to child social anxiety, so caution must be used when considering the influence of these additional factors.

PARENT-CHILD INTERACTION MODEL OF SOCIAL ANXIETY

Ollendick and Benoit (2011) proposed the Parent-Interaction Model of Social Anxiety in youth that is more focused than other theories on the role of family and attachment factors in social anxiety. Namely, their theory draws from literature on behavioral inhibition, attachment, parental anxiety, parental practices, and aspects already present in the information processing models of anxiety (e.g., parent and child information processing). The components of this theory are described below.

Behavioral inhibition is the temperamental reticence, distress, fear, avoidance or quiet restraint in early childhood to engage with unfamiliar situations (Kagan, Reznick, & Snidman, 1987). A genetic component of behavioral inhibition has been established as well as its moderate heritability (Dilalla, Kagan, & Reznick, 1994). Depending on the developmental age of the child, behavioral inhibition manifests in different ways. For example, adolescents experience behavioral inhibition through social anxiety, social withdrawal, and aggression, whereas school-aged children may exhibit quiet isolation with new peer acquaintances and difficulty withdrawing from parents when presented with new social situations. Behavioral inhibition is generally stable as children age with approximately 50% of children continuing to exhibit characteristics of it into adolescence (Fox, Henderson, Marshall, Nichols, & Ghera, 2005; Hirshfeld et al., 1992).

Parental anxiety is another factor that Ollendick and Benoit (2011) claim is a core component of the psychogenesis of social anxiety. Specifically, it is but one of a number of factors theorized to maintain behavioral inhibition over time. In brief, parental anxiety is the occurrence of pathological levels of anxiety in a parent expressed as either high trait anxiety or an anxiety disorder. Elevated parental anxiety has been linked to the onset and course of anxiety disorders in children, especially SAD (Manassis & Hood, 1998; Ollendick & Horsch, 2007). In the parent-child interaction model, it is thought that parental

anxiety and child behavioral inhibition are correlated (Rosenbaum et al., 2000), which is likely due to their shared genetic component.

Attachment has also been theorized in the parent-child interaction model to play a central role in the onset and maintenance of child and adolescent social anxiety. Both behavioral inhibition and parent anxiety appear to be related to attachment between parent and child. Insecure-ambivalent attachment (Ainsworth, 1979), a relational and behavioral pattern between parent and child where the child has difficulty soothing his/herself or being soothed after a brief separation, is a risk factor for the development of anxiety disorders in general, and SAD in particular (Manassis & Bradley, 1994; Warren, Huston, Egeland, & Sroufe, 1997). Furthermore, insecure attachment has been associated with behavioral inhibition (Warren et al., 1997). Based on attachment theory, children who have insecure attachments interpret their caregivers as unreliable figures who are untrustworthy and who do not communicate well. As such, they do not provide a safe, secure environment. Consequently, as children develop, they establish a maladaptive approach to interpersonal and relational experiences. This approach can often lead to poor social interactions paired with negative social feedback. This feedback then causes children to internalize and strengthen their beliefs that the world is hostile and unsafe. This is similar to the information processing and cognitive-behavioral models of social anxiety discussed above in that children will learn to attend to negative stimuli even in the presence of alternate evidence.

The final components of Ollendick and Benoit's (2011) parent-child interaction model of social anxiety are parent and child information processing biases and parenting practices. Parent and child information processing biases are similar to that of the cognitive-behavioral theory outlined above in which parents and children interpret ambiguous information in a threatening way (for a review, see Muris [2010]). Parenting

practices include parenting styles, attitudes, behaviors, and beliefs in which parents engage to influence the environment of children. Overly controlling, protective, and critical parenting practices have been linked to the onset of symptoms of social anxiety. For example, a longitudinal study evaluating the effects of inhibition and parenting practices on social reticence in children ages 2 to 4 indicated significant relationships among these variables. While a main effect of inhibition on social anxiety was found, researchers also discovered that the presence of maternal intrusive, controlling, and/or derisive comments to their children moderated the relationship (Rubin, Burgess, & Hastings, 2002). Conversely, warm and responsive parenting practices are associated with increased adaptive behavior in childhood social interactions and decreased inhibition (Hane, Cheah, Rubin, & Fox, 2008). Interestingly, warmth and responsive parenting practices have also been linked with increased behavioral inhibition by reinforcing avoidance behaviors (Degnan, Henderson, Fox, & Rubin, 2008). It is likely that some parents using supportive strategies exhibit an overprotectiveness that communicates that environments are unsafe and that children an unable to cope without the support of their parents.

COMORBIDITY

Problematically, social anxiety can be highly comorbid with other mental health issues (Schneier, Johnson, Hornig, Liebowitz, & Weissman, 1992). This has been a problem for researchers, specifically when studying other comorbid anxiety disorders. Inconsistent reporting of the prevalence of more than one anxiety disorder in research studies is a limitation in much of the extant literature. However, despite this limitation, it does appear that there is a high prevalence of other comorbid anxiety disorders when a diagnosis for one anxiety disorder has been made (Costello et al., 2005).

In addition to the comorbid nature of various anxiety disorders, depression is also highly comorbid with anxiety. It has been demonstrated that children are 8.2 times more likely to experience depression when already diagnosed with an anxiety disorder (Angold, Costello, & Erkanli, 1999). Cummings, Caporino, and Kendall (2014) reviewed various pathways of development for anxiety and depression during childhood and adolescence—the time in life with the most common onset of disordered anxiety—and found that many of these pathways are linked. The pathways discussed involve the order in which individuals acquire characteristics of each disorder. Social anxiety was often found to beget depression. Commonly, individuals suffering from social anxiety go untreated and cope by avoiding social situations and interactions. This avoidance leaves these individuals isolated, which then leads to depression. Inversely, it is also possible for individuals with depression to develop social anxiety due to their inability to interact with others (i.e., due to low motivation, low energy, anhedonia, etc.). These individuals believe that others may not want to be around them and, as a result, become socially anxious. While additional research needs to be completed to confirm the pathways for the development of social anxiety, this initial research illuminates the intimate relationship between social anxiety and depression.

SOCIAL ANXIETY & FUTURE OUTCOMES

When compared to non-anxious children, anxious children experience more impaired outcomes. In a study of 27 socially anxious children with matched non-anxious peers, children with social anxiety demonstrated lower expected performance, higher instances of negative self-talk on socially evaluative tasks, more social skills deficits, and judged themselves to be significantly less socially competent (Spence, Donovan, & Brechman-Toussaint, 1999). Additional researchers (e.g., Greca & Lopez, 1998; Rubin,

LeMare, & Lollis, 1990; Vernberg, Abwender, Ewell, & Beery, 1992) have found associations between social anxiety and impaired social relationships. For instance, socially anxious adolescents report poorer social functioning including less support from classmates and less social acceptance (Greca & Lopez, 1998). Furthermore, the more socially anxious adolescent girls are, the higher likelihood they report fewer friendships as well as less support, intimacy, and companionship among their close friends (Greca & Lopez, 1998).

Not surprisingly, poorer relationships in life predict more depressive symptomology and loneliness. In a longitudinal study the presence of an anxiety disorder dramatically increased the rate of experiencing a depressive disorder (and vice-versa)—especially the presence of social anxiety disorder in youth (Pine, Cohen, Gurley, Brook, & Ma, 1998). Essentially, as participants in this sample aged, primary diagnoses of social anxiety decreased in the presence of primary diagnoses of major depressive disorder. Considering that positive social interactions are somewhat limited in socially anxious adolescents, it could be that they become increasingly lonely and have limited access to positive social supports as they progress through life. Specifically, socially anxious individuals cope by withdrawing or avoiding social contact, which hinders the development of friendships—a powerful protective factor for depressive disorders (Rubin et al., 1990).

SOCIAL ANXIETY SUMMARY

Social anxiety is a prevalent disorder that can have staggering outcomes later in life. This is at least partially due to the high comorbidity with other psychological impairments—namely, depression. Several theories outline the psychogenesis of the disorder, but perhaps none better than Ollendick and Benoit's (2011) Parent-Child

Interaction Model of Social Anxiety. The authors discuss the importance of behavioral inhibition, attachment, parental anxiety, parental practices, and information processing models of anxiety (e.g., Clark & Wells, 1995). Adding family factors within the model does well to communicate the complexity of social anxiety. Not only do children become socially anxious due to their tendency to give attention to negative social cues, but their beliefs and coping skills regarding these cues are likely driven by familial interactions and behaviors. Given this, the role of family accommodation seems an essential facet to consider in socially anxious individuals.

Family Accommodation

Family accommodation describes ways in which family members (usually parents) alter their behavior and interactional style to avoid and/or reduce distress in other family members (usually children) caused by emotional disorders. Accommodation is a relatively new area of research and is most prevalent when studied in children with Obsessive Compulsive Disorder (OCD), and more recently, various anxiety disorders (e.g., (Lebowitz et al., 2013; Lebowitz, Scharfstein, & Jones, 2014b; Storch et al., 2007). Examples of family accommodation in OCD include excessive reassurance and/or removing knives from an environment to decrease distress in a family member with aggressive compulsions, spending excessive amounts of time listening to a family member confess due to a compulsion to tell on oneself, or engaging in excessive hand washing with a relative who is concerned about contamination. In social anxiety, family accommodation can manifest by parents allowing their child to not attend scheduled summer camps due to a concern that other children will make fun of them. Family accommodation behavior is inadvertently reinforcing to struggling family members due to the validation that their fear is a real threat/problem. Research has advanced quickly in this area, and it is now considered an

established and relatively important area in the field of OCD and anxiety treatments (for a review, see Lebowitz, Panza, & Bloch, 2016; Lebowitz, Panza, Su, & Bloch, 2012).

In pediatric OCD, researchers have established the connection between increased family accommodation and OCD symptoms (Albert et al., 2010; Caporino et al., 2011; Flessner et al., 2011; Storch et al., 2007), increase impairment related to OCD (Caporino et al., 2011; Storch et al., 2007), and poorer treatment outcomes (Garcia et al., 2010). Recently, researchers have found that approximately 90% of families accommodate in both children and adults with OCD to some extent, as measured in the validation of a gold-standard measure of family accommodation in OCD (Pinto et al., 2013). Due to its prevalence, researchers are now more frequently measuring family accommodation as a component of OCD—especially in treatment studies. For example, family accommodation is reduced after treatment of OCD with cognitive behavioral therapy (Lebowitz et al., 2016). Furthermore, in a clinical trial comparing OCD treatments, all treatment modalities demonstrated decreased family accommodation (Gorenstein, Gorenstein, de Oliveira, Asbahr, & Shavitt, 2015). These findings support a strong link between OCD severity and symptomology and family accommodation.

In a study comparing pediatric OCD, anxiety disorders, and non-anxious children, few differences were found between the OCD and anxiety group in relation to their rating on family accommodation measures (Lebowitz et al., 2014a). This evidence strongly suggests similarity between the role of family accommodation across both disorders. As stated above, only recently has family accommodation been applied to the area of anxiety disorders. The first study evaluating family accommodation and anxiety was conducted by Lebowitz and colleagues (2013). In that study, the authors developed and evaluated the Family Accommodation Scale Anxiety (FASA)—a modified version of the already validated Family Accommodations Scale (FAS) designed for measuring family

accommodation in individuals with OCD. After validating the measure, the authors reported that accommodation was highly prevalent across all anxiety disorders and especially for children who met criteria for Separation Anxiety Disorder. Additionally, similar to findings between accommodation and OCD, Lebowitz et al. (2013) reported that higher levels of family accommodation were significantly correlated with more severe anxiety symptoms. These findings have since been replicated (e.g., Jones, Lebowitz, Marin, & Stark, 2015; Storch et al., 2015). For example, in Jones et al. (2015), the authors asked 85 mothers to self-report their levels of anxiety, family accommodation, and the severity of their child's anxiety via the State-Trait Anxiety Inventory (STAI), FASA, and Screen for Child Anxiety Related Disorders (SCARED), respectively. Results indicated that family accommodation mediates the relationship between maternal anxiety and child anxiety. Other research indicates that as a child's anxiety increases in severity, the family is more likely to accommodate in order to mitigate the child's distress (Storch et al., 2015).

Until very recently, one limitation in the literature on family accommodation and anxiety has been the exclusive use of parent reports and not considering the child's self-report of these constructs. Research involving child reports of anxiety and family accommodation (via the child version of the FASA, the FASA-CR) has indicated that while parent-child agreement was good for overall measures of family accommodation and moderate for its subdomains, mothers reported significantly higher levels of accommodation compared to their children (Lebowitz et al., 2014b). Additionally, maternal anxiety moderated the relationship between mother and child ratings of family accommodation, such that higher instances of maternal anxiety were associated with a stronger positive correlation (Lebowitz et al., 2014b). In the same study, children also reported that family accommodation helps reduce feelings of anxiety and they do not believe that parents should accommodate less. This could be due to the fact that children

are highly reliant on family accommodation to reduce anxiety because they are less capable of coping without that behavior. For example, it is easier for a child to rely on parents not taking them to a summer camp if they express anxiety rather than develop the coping skills needed to adequately function in that setting while anxious about social judgment.

FAMILY ACCOMMODATION SUMMARY

To date, the literature on family accommodation mostly focuses on its relationship and interaction with OCD. This is somewhat surprising due to the similarity between OCD and anxiety. Furthermore, due to the role of the family within family accommodation, it appears particularly relevant in the area of social anxiety. As specified earlier in the Parent-Child Interaction Model of Social Anxiety, parents have a critical role in the etiology of the disorder. Parenting styles, parental anxiety, and parent-child attachment greatly contribute to the development and maintenance of the disorder. For this reason, it seems a logical step to evaluate family accommodation specifically within social anxiety.

Coping

Coping, originally defined as "cognitive and behavioral efforts made to master, tolerate, or reduce external and internal demands and conflicts among them" (Folkman & Lazarus, 1980, p. 223) has been studied extensively within empirical and theoretical literature. The most prominent original works occurred in the 1970s and 1980s. As a construct, coping has progressed since that time with differences in definition based on several prominent researchers in the area. Overall, it seems as though the most widely accepted and inclusive definition considers coping as a way in which individuals identify, appraise, and respond to stressors in order to alleviate or reduce psychological distress and negative affect caused by them (Skinner, Edge, Altman, & Sherwood, 2003).

Understandably, it has been theorized that strong, adaptive coping skills may influence the development of positive mental health outcomes.

Problematically, attempts to measure coping have been less than ideal. One problem that exists is the broad conceptual nature of the construct of coping. This results in a vast number of coping measures, each with its own unique set of strengths and weaknesses. To understand why this is the case and how it is seemingly unavoidable, one needs to more intimately understand some of the theoretical components driving measurement.

Initially, two categories of coping were theorized; problem-focused coping and emotion-focused coping (Folkman & Lazarus, 1980). Problem-focused coping includes problem-solving efforts and behavioral strategies used for altering or managing the source of a problem or stressor. For example, socially anxious individuals may plan to hang around a close friend when in a new social situation. Emotion-focused coping deals with strategies that alter or manage emotional distress. For example, a socially anxious individual may try to forget about an experience when he/she embarrassed his/herself while meeting a new person or he/she may try to look on the bright-side by identifying positive things about the encounter. As mentioned, this category of coping was focused on mitigating the emotional impact of negative feelings.

Emerging from this work was the differentiation between focus of coping (i.e., problem- and emotion-focused) and method of coping (Billings & Moos, 1981). In Billings and Moos' (1981) seminal paper attempting to better operationalize coping, the authors describe various methods of coping. Specifically, this formulation divides active attempts to resolve stressful experience into active-cognitive, active-behavioral, and avoidance. Active-cognitive coping can be thought of as ways to alter or manage appraisal of a stressful experience. For example, socially anxious individuals may try to focus on past

successes when publicly speaking when they are about to give another public speech. Active-behavioral coping is an attempt to mitigate an individual's response when presented with a stressful event. For example, before a socially anxious individual is about to give a stress-provoking speech, they may chat with members of the audience in a friendly way. Avoidance coping, according to Billings and Moos (1981), entails "attempts to avoid actively confronting the problem (for example, 'prepare for the worst,' 'kept my feelings to myself') or to indirectly reduce emotional tension by such behavior as eating or smoking" (p. 141). These "methods of coping," have been synonymously called approach/active (cognitive and behavioral) vs. avoidance/passive (Billings & Moos, 1981).

Problematically, while these seminal works do well in conceptualizing broad areas of coping, other areas of coping remain unaccounted for. Specifically, in the development of the Coping Orientation to Problems Experienced (COPE; Carver, Scheier, & Weintraub, 1989), the authors outlined thirteen scales of coping to better indicate some of these nuances. Many of the scales are derived directly from the seminal works summarized above, but others are not. Those scales not derived from previous research were included to address areas that appeared to have some empirical evidence, but were not present in the theoretical literature at that time.

Since then, the COPE has undergone numerous re-examinations to better understand its underlying factor structure. Examining these works is useful for understanding the progression of the coping literature. Developing a better understanding of this work is imperative due to the widespread use of the COPE throughout the last several decades (Kato, 2015). Examinations of the COPE have resulted in a revised, brief version (Carver, 1997), and at least two detailed psychometric reevaluations of the factor structure of the measure. Interestingly, when the COPE's factor structure was evaluated in 2000, it was found to be comprised of just three factors; rational, emotion-focused, and

avoidance coping—compared to the original thirteen factors found in its first psychometric evaluation (Lyne & Roger, 2000). This three-factor structure was determined in a study examining the COPE responses of 539 participants (nearly 90% female and all participants mostly between the ages of 31 and 40 years old). The clear three-factor structure was similar to other coping measures such as the Multidimensional Coping Inventory (MCI; Endler & Parker, 1990) and Coping Styles Questionnaire (CSQ; Roger, Jarvis, & Najarian, 1993). Interestingly, it was not psychometrically possible to force the items into the original thirteen-factor structure even when attempts were made (Lyne & Roger, 2000). Despite this work, the most recent reevaluation of the COPE has, again, led to different results. More specifically, in a study of 217 individuals being treated for depression and anxiety with higher gender heterogeneity than previous studies (approximately 64% female) and a mean age of 44.04 years, the COPE was found to have poor fit for both lower and higher order factors based on Lyne and Rogers' (2000) findings (Pang, Strodl, & Oei, 2012). Instead, exploratory factor analysis identified six primary factors that explained approximately 60% of the variance in coping; active planning, social support, denial, acceptance, disengagement, and restraint (Pang et al., 2012).

Theories of coping have continued evolving over time, with the most recent theories categorizing coping into multi-tiered factor structures that typically encompasses most, if not all, of the various definitions and categories of coping summarized above. One major distinction in coping, that prevails in multiple models, is the distinction between engagement and disengagement (e.g., Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000; Tobin, Holroyd, Reynolds, & Wigal, 1989). While these terms generally reflect distinctions already made within past literature (i.e., active and passive, approach and avoidance), they typically emerge as higher order factors to conceptualize coping. This

added level of structure helps to further understand the construct of coping and how many of the past theories can be unified.

While more recent coping measures appear to drop the distinction between problem- and emotion-focused coping in their models, the Coping Strategies Inventory (CSI), developed by Tobin et al. (1989), does well to incorporate both historic models into the construction of the measure (i.e., Folkman & Lazarus, 1980). Therefore, the CSI examines both problem- and emotion-focused coping as well as the more recent higher order understanding of engagement and disengagement within coping (e.g., Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Connor-Smith et al., 2000). In brief, the CSI breaks down coping into tertiary subscales (Engagement and Disengagement), secondary subscales (Problem-focused Engagement, Emotion-focused Engagement, Problem-focused Disengagement, and Emotion-focused Disengagement), and primary subscales (Problem Solving, Cognitive Restructuring, Social Support, Express Emotions, Problem Avoidance, Wishful Thinking, Self-criticism, and Social Withdrawal). A graphical representation of this factor structure can be viewed in Figure 1 in Appendix B.

COPING WITHIN CHILDHOOD AND ADOLESCENCE

Many of the models of coping have been applied to child and adolescent populations. Further exploring the importance of coping during these developmental ages aids in the understanding of how some children acquire and maintain various psychological difficulties. For instance, coping has been linked with resilience, an essential component in the course of psychological well-being (Leipold & Greve, 2009). While the literature on resilience typically differentiates it from coping (e.g., Fletcher & Sarkar, 2013), the relationship between the two remains essential and difficult to disentangle. For instance, it

is difficult for individuals to be resilient without effective coping strategies (Major, Spencer, Schmader, Wolfe, & Crocker, 1998).

Children learn coping skills through various ways, but perhaps none more important than the influence of parents. In a comprehensive review of the extant literature in the area, Power (2004) generated multiple pathways in which parents influence the development of child coping. Namely, Power (2004) discusses the role of parents in the development of a child's appraisal of stressful situations and then the subsequent coping behaviors that follow. In the case of appraisal, parents support effective skill through modeling, coaching, and other contextual cues such as praise or criticism (Power, 2004). For example, effective parental modeling for a child's appraisal of various potentially anxiety provoking social situations could include helping the child to attend to relevant stimuli, seeking out appropriate information, and encouraging adaptive perspective taking. Furthermore, in the case of social anxiety, parents could also model effective behavior and emotionality when interacting in new social situations of their own (e.g., when meeting new parents at a back-to-school night). The way a child appraises a situation will determine whether or not he/she will employ coping strategies. These coping strategies are then influenced by parental involvement. Specifically, parents convey coping strategies through modeling, responding to emotions, assisting children when in need, utilizing rewards or punishments, or by doing things for the child (i.e., distraction or accommodation) (Power, 2004).

Reinforcement, in addition to modeling and transferring information, is another key component of how children learn to cope. Reinforcement has been studied since its origin in behaviorism. Parental responses to children's emotions, as well as their adaptations to these emotions, can be considered reinforcers. For example, in a study comparing anxious and non-anxious children between the ages of 7 and 13, maternal anxiety and intrusive

parenting (i.e., overprotectiveness) were found to significantly affect the severity and maintenance of a child's anxiety (Hudson, Comer, & Kendall, 2008). Essentially, when anxious children exhibit responses of distress, their parents are more likely to respond by assisting the child—a behavior not present in instances of other positive emotional experiences. In this example, parents are reinforcing a child's emotional reaction (anxiety) as well as their need for parental involvement to decrease their negative arousal. This process likely inhibits a child's ability to practice and form other adaptive coping strategies that may generalize in settings when parents are not present—such as when interacting with peers in school.

COPING OUTCOMES

Effective coping strategies are important in promoting psychological well-being. Without strong coping skills, children are at risk for various negative life outcomes. For instance, children with poor responses to stress and coping strategies are at far greater risk for developing and maintaining symptoms of depression (Compas, Connor-Smith, & Jaser, 2004). This seems to be related to child and adolescent temperament—the individual differences in emotional and behavioral style that appear early in life. Interestingly, poor coping in childhood and adolescence appears to predict personality difficulties later in life, whereas adaptive ways of coping are linked with more positive qualities. Specifically, characteristics such as optimism, conscientiousness, extraversion, and openness are linked with engagement coping, whereas neuroticism is linked with disengagement coping (Connor-Smith & Flachsbart, 2007). For a further review on this topic, see Carver and Connor-Smith (2009).

COPING SUMMARY

Coping has been studied in great depth over the last several decades. Theories of coping typically categorize the construct into some form of engagement vs. disengagement as well as into problem- vs. emotion-focused. Parents play a central role in the development of childhood coping skills, which is rather important considering the empirically established links between various coping strategies/categories of coping and mental health outcomes. As discussed in the Parent-Child Interaction Model of Social Anxiety, family factors are important in the development of the disorder. Given that child coping appears to be influenced by these familial factors as well, it is likely that family behaviors (i.e., family accommodation) have an important role in the presentation of social anxiety in children and adolescents. As stated previously, family accommodation appears similar to disengagement coping, which is less helpful in producing healthy psychological outcomes in children. Examining the relationship between family accommodation, coping, and social anxiety will help to provide further insight on the topic

PROPOSED STUDY

The proposed study seeks to understand the connection between family accommodation and severity of social anxiety in children and adolescents. Beyond OCD, family accommodation is a relatively new field of research in anxiety disorders. While past research indicates a strong relationship between family accommodation and the severity of most DSM-5 anxiety disorders (e.g., Jones et al., 2015; Lebowitz et al., 2013; Storch et al., 2015), no research has focused specifically on social anxiety. The Parent-Child Interaction Model of Social Anxiety hypothesizes a link between parental factors (e.g., parenting style, parental anxiety, attachment) and the emergence and maintenance of social anxiety (Ollendick & Benoit, 2011). Due to the relationship between such factors and family accommodation, it is highly likely that family accommodation has a significant relationship with the development and maintenance of social anxiety. While that connection has been found (although in different terms than family accommodation), it is reasonable to assume that family accommodation is not the sole mechanism affecting the severity of social anxiety. More specifically, it is likely that the relationship between family accommodation and severity of anxiety is mediated by another factor. Literature regarding coping strategies suggests that social anxiety severity is negatively correlated with effective coping (e.g., Connor-Smith & Flachsbart, 2007). In other words, children with fewer coping skills have higher levels of anxiety (e.g., Cowen & Work, 1988). In family accommodation, parents enable avoidance behaviors in children by accommodating—a behavioral experience that likely inhibits the learning of other effective coping strategies. The proposed study hypothesizes that child and adolescent coping strategies mediate the relationship between family accommodation and severity of social anxiety. Understanding this relationship will

help not only inform the treatment of social anxiety disorder, but it will also add important knowledge to the relatively new and growing literature on family accommodation.

Research Questions & Hypotheses

RESEARCH QUESTION 1

Controlling for gender and socioeconomic status (SES), is family accommodation a significant predictor of severity of social anxiety?

Hypothesis 1

Family accommodation will significantly predict severity of a child's social anxiety. Specifically, higher levels of family accommodation will be associated with higher levels of social anxiety.

Rationale

Previous research demonstrates links between family accommodation and anxiety in the same direction—increased family accommodation leads to higher instances of anxiety and greater impairment (Jones et al., 2015; Lebowitz et al., 2013; Storch et al., 2015). There have not been any studies to date that have specifically investigated this relationship within social anxiety and there is no evidence to support that social anxiety would deviate from other types of anxiety studied. To further support this claim, the Parent-Child Interaction Model of Social Anxiety (Ollendick & Benoit, 2011) would suggest that much of the etiology of a child's social anxiety is due to parental factors influencing symptomology. Specifically, parental anxiety and attachment may lead parents to accommodate their children's anxiety more often due to the need to mitigate their own anxiety responses.

RESEARCH QUESTION 2

Controlling for gender and SES, is family accommodation a significant predictor of engagement coping skills?

Hypothesis 2

Family accommodation will significantly predict engagement coping skills. Specifically, higher instances of family accommodation will be associated with lower instances of engagement coping.

Rationale

Family accommodation appears to be more consistent with disengagement coping—children can rely on their parents to mitigate anxious responses by removing them from or allowing them to avoid potentially challenging social situations. Due to the avoidance of anxiety-provoking situations, engagement coping skills are less likely to be practiced as a child develops as it is easier for children to rely on parents' accommodations (Lebowitz et al., 2014b). Empirical evidence has demonstrated that less effective coping strategies, such as avoidance, are more commonly associated with internalizing difficulties, such as anxiety and depression (Findlay, Coplan, & Bowker, 2009). Furthermore, considering Ollendick and Benoit's (2011) model of social anxiety, parenting styles will likely be found to influence the severity of symptoms among the socially-anxious participants in the current study. For example, avoidance behaviors are reinforced by warm and responsive mothers, likely due to their desire to overcompensate in an overprotective way (Degnan et al., 2008). Since the sample is inherently comprised of socially anxious individuals, such findings will generalize to this proposed study.

RESEARCH QUESTION 3

Controlling for gender, SES, and family accommodation, are engagement coping skills a significant predictor of the severity of a child's social anxiety?

Hypothesis 3

Engagement coping skills will significantly predict the severity of a child's social anxiety. Specifically, higher instances of engagement coping will be associated with less severe anxiety symptomology. This effect will persist despite the presence of family accommodation in the analysis, indicating a mediational relationship between the three variables.

Rationale

Based on much of the content in the review above, there seems to be a clear connection between family accommodation, coping, and social anxiety. Family accommodation can be viewed in the context of maladaptive coping; specifically, avoidance. When family accommodation is higher, it is likely that less engagement coping is used—disengagement coping is likely used in its place for many situations associated with anxiety. For this reason, children's social anxiety is likely more severe due to their inability to utilize adaptive coping (e.g., engagement coping) as readily. In essence, family accommodation decreases children's practice and learning of engagement coping in such a way that they feel more socially anxious.

RESEARCH QUESTION 4

Controlling for gender and SES, are engagement coping skills a partial mediator between family accommodation and the severity of a child's social anxiety?

Hypothesis 4

Engagement coping skills will partially mediate the relationship between family accommodation and severity of social anxiety.

Rationale

Assuming that the other three research questions are consistent with the proposed hypotheses, a mediation will be present (see Figure 3 in Appendix B). Considering that family accommodation is somewhat similar with some forms of disengagement style coping (e.g., ones related to avoidance), a partial mediation will be present. Family accommodation and severity of social anxiety will be partially mediated, and not fully mediated, because family accommodation can be adaptive in some circumstances to mitigate the severity of anxiety—albeit in less adaptive ways for independent functioning. A lack of engagement coping strategies will strongly explain the mechanism with which family accommodation influences severity of social anxiety, due to the ability of the child to depend on family accommodation as a partial coping strategy for managing anxiety. This does not mean a child is unable to utilize engagement coping, but rather they possess a learned and reinforced predilection of disengagement strategies (Degnan et al., 2008).

Method

PARTICIPANTS

The population of interest is socially anxious children and adolescents between the ages of 8 and 14. Participants will be part of a larger treatment study conducted through the Texas Child Study Center (TCSC) at the University of Texas at Austin. Based on an apriori power analysis conducted with G*Power, in order to yield medium effect sizes (0.15) with a power of 0.8 and an error of 0.05, 92 participants are needed (see Figure 2 in Appendix B). To be eligible to participate in the study, participants must have a primary

diagnosis of Social Anxiety Disorder as determined via the Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version (K-SADS-PL). Participants who also meet criteria for other comorbid anxiety disorders (e.g., Separation Anxiety Disorder, Generalized Anxiety Disorder, Specific Phobia) will be allowed to participate as long as Social Anxiety Disorder is the primary diagnosis. Participants will be excluded from the study if they meet criteria for the following disorders on the K-SADS-PL or if they have been historically diagnosed with them: neurodevelopmental disorders (e.g., Intellectual Disability, Specific Learning Disorder, Attention-Deficit/Hyperactivity Disorder, Autism Spectrum Disorder), schizophrenia spectrum and other psychotic disorders (e.g., Schizophrenia, Brief Psychotic Disorder), bipolar and related disorders (e.g., Bipolar I & II Disorders, Cyclothymia), depressive disorders (e.g., Major Depressive Disorder, Persistent Depressive Disorder, Disruptive Mood Dysregulation Disorder), obsessive-compulsive and related disorders, trauma- and stressor-related disorders, feeding and eating disorders (e.g., Anorexia Nervosa, Bulimia Nervosa), and substance use disorders. Children will be excluded from the study if they are on medication specifically to treat their anxiety. Finally, all participants must be able to read, speak, and write in English.

MEASURES

Demographic Information

Demographic information will be obtained via the standard intake form used within the larger study treatment study at TCSC. The proposed study is interested in extracting the following information from the form: child's age, gender (male, female, or other [please specify]), and the family's gross income. To view the measure, see Appendix C.

Anxiety

Screen for Child Anxiety Related Disorders (SCARED)

The SCARED (Birmaher et al., 1997, 1999) is a 41-item measure used to screen childhood anxiety disorders. It provides five factors including somatic, generalized, separation, school, and social anxiety as well as an overall score. In the parent rating form (SCARED-PR), parents are asked to rate their child's anxiety on a three-point scale (0 = Never True, 1 = Sometimes True, 2 = Often True). In the child version (SCARED-CR), children are asked to complete the same items, but about themselves. The SCARED demonstrates strong psychometric properties; good internal consistency (alpha = 0.74 to 0.93), test-retest reliability (intra-class correlation coefficients [ICC] = 0.7 to 0.9), discriminative validity between other psychiatric disorders (e.g., Major Depressive Disorder) as well as other anxiety disorders, and low to moderate parent-child agreement (r = 0.2 to 0.47) (Birmaher et al., 1999). To view the measure, see Appendix C.

Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version (K-SADS-PL)

The K-SADS-PL (Kaufman et al., 1997) is a semi-structured interview designed to assess a wide spectrum of past and current episodes of psychopathology in children and adolescents. Specifically, the K-SADS-PL assesses affective disorders, psychotic disorders, anxiety disorders, behavioral disorders, and substance abuse and other disorders. The K-SADS-PL is the gold standard in research for assessing psychopathology in children and adolescents. It demonstrates strong psychometric properties including excellent to good test-retest reliability (kappa = 0.5 to 0.7), strong concurrent validity (especially for anxiety), and excellent inter-rater reliability (Kaufman et al., 1997).

Social Phobia and Anxiety Inventory (SPAI)

The SPAI has two versions, a self-report (SPAI-C) and a parent-report (SPAI-C-P). The SPAI-C (Beidel, Turner, & Morris, 1995) is a self-report measures for children and adolescents between that ages of 8 and 14. It consists of 26 items assessing somatic symptoms, cognitions, and behaviors across socially fear-producing situations. Questions are answered on a 3-point Likert-type scale (0 = Never to 2 = Most of the Time or Always). The measure demonstrates strong internal consistency (Cronbach Alpha = 0.95) and adequate test-retest reliability (Beidel et al., 1995). It discriminates social phobia from other anxiety disorders, disruptive disorders, and psychiatric disorders (Beidel, 1996; Beidel, Turner, Hamlin, & Morris, 2000). The SPAI-C-P is virtually identical to the SPAI-C. Only the stem is changed in each question; "My child feels scared . . ." changed from "I feel scared . . ." Similar to the SPAI-C, the SPAI-C-P demonstrates good internal consistency, concurrent validity, and is significantly correlated with child self-reported social anxiety (Higa, Fernandez, Nakamura, Chorpita, & Daleiden, 2006). For a list of items as shown in Higa et al. (2006), see Appendix C.

Family Accommodation

Family Accommodation Scale—Anxiety (FASA)

The FASA (Lebowitz et al., 2013) was originally adapted from the Family Accommodation Scale (FAS; (Calvocoressi et al., 1999; Storch et al., 2007). It is a 13-item parent-report questionnaire used to assess family accommodation in families with anxious children. FASA consists of two different 5-point scales; frequency of behaviors and level of distress. For frequency of behaviors, parents are asked to select one option on a Likert scale (0 = No, 4 = Daily). For level of distress, parents are asked to select one option on a Likert scale (0 = No, 4 = Extreme). The original FAS demonstrated strong psychometric

properties with excellent inter-rater reliability (0.75 to 0.95), good internal consistency (alpha = 0.82) (Calvocoressi et al., 1999). In a preliminary study that reported the psychometric properties of the FASA, it showed high internal consistency, alpha levels of 0.9 and 0.91 for specialty and general clinics, respectively, strong convergent validity with other anxiety measures, and divergent validity with a non-significant correlation with measures of depression (Lebowitz et al., 2013). To view the measure, see Appendix C.

Coping Skills

Coping Strategies Inventory (CSI)

The CSI (Tobin et al., 1989) is a 72-item index of coping strategies comprising a three-tier factor structure. Tertiary factors include engagement and disengagement. Secondary factors include problem-focused engagement, emotion-focused engagement, problem-focused disengagement, and emotion-focused disengagement. Primary factors include problem solving, cognitive restructuring, express emotions, social support, problem avoidance, wishful thinking, self-criticism, and social withdrawal. For a figure illustrating this structure, please refer to Figure 1 in Appendix B. Different from other measures of coping (e.g., COPE), the CSI assesses coping in specific situations. Participants can be asked to describe a stressful event that occurred during the last month and then to indicate the extent to which they used the specific coping strategies assessed in the measure. Alternatively, and as will be the case in this proposed study, the CSI can also be used by assessors giving participants a stressful situation to respond to—for example, relating to social anxiety. Participants respond by indicating on a 5-point Likert-type scale the degree to which they performed the particular coping strategy in the previously described situation (None, A Little, Some, Much, and Very Much). Initial alpha coefficients for the primary scales range from 0.71 to 0.94, and two-week test-retest

reliability coefficients range from 0.67 to 0.83 (Tobin et al., 1989). Reliability for the tertiary scales were 0.9 for engagement and 0.89 for disengagement (Tobin et al., 1989). In terms of criterion and construct validity, CSI has been demonstrated to discriminate between neurotic and normal samples (Tobin, Holroyd, & Reynolds, 1982). This measure will be used with slightly altered stems to specify "My child . . ." instead of "I . . ." To view the measure, see Appendix C.

PROCEDURE

The proposed investigation will be conducted as a part of a larger treatment study evaluating the additive benefit of parental participation in an empirically validated and manualized cognitive-behavioral therapy protocol (Coping Cat; Kendall, Hedtke, & Child and Adolescent Anxiety Disorders Clinic [Temple University], 2006). Participants will be recruited from community referrals to the anxiety disorders treatment program. When parents contact the investigators, they will complete the SCARED-PR over the phone to assess for current symptoms of anxiety. If children present with elevated levels (as indicated by the cut-off scores on the SCARED), the family will be invited to complete the K-SADS-PL. In keeping with the protocol of the K-SADS-PL, both children and parents will be interviewed separately and then the trained assessor will combine the information into summary ratings. Only children who meet the criteria for Social Anxiety Disorder as their primary diagnosis will become participants.

Once families are in the study, they will be asked to complete the parent versions of the SPAI-C, FASA, and CSI. For the CSI, a real-life example from each child's K-SADS-PL will be used to describe a social anxiety provoking situation. Individual parents completing the CSI will use their situation specific prompt tailored to their child to complete the measure.

ANALYSIS & EXPECTED RESULTS

For reference, a list of all the variables in this study can be found in Table 1 in Appendix A. Data will be evaluated with IBM SPSS Statistics. As previously stated, a power analysis was conducted using G*Power to discern the total sample size needed for the study. Five predictor variables are planned; gender, socioeconomic status, social anxiety, engagement coping skills, and family accommodation. Additional information regarding the sample size can be found in the Participants section. In brief, 92 participants will complete the measures.

Prior to running the main analyses, steps will be taken to ensure the quality of data. The assumptions for using multiple regression will be tested. This will include testing of normality of the residuals, checking for linearity between outcome and exploratory variables, testing for homoscedasticity of the residuals, and any instances of multicollinearity. Preliminary analyses will also include assessment regarding the psychometric properties of all scales used. Factor structures for the SPAI-C-P, CSI, and FASA will be examined using confirmatory factor analyses. This is to ensure that the measures are functionally consistent with previous literature. Reliability analyses will also be conducted to examine Cronbach's alpha coefficients of each measure; SPAI-C-P, CSI, and FASA. Based on past literature, it is expected that all scales will score in the acceptable or higher ranges.

The following research questions were designed to evaluate whether coping strategies mediate the relationship between family accommodation and the severity of a child's social anxiety. As such, four research questions were developed to address the various conditions necessary to confirm the presence of a mediation as recommended by Baron & Kenny (1986).

Research question 1

Controlling for gender and socioeconomic status (SES), is family accommodation a significant predictor of the severity of a child's social anxiety?

Analysis plan and expected results

A multiple regression will be completed using the total score on the FASA as the independent variable and total score on the SPAI-C-P as the dependent variable. To control for gender and socioeconomic status, both variables will be entered into the regression. Male (or "gender") will be dummy coded with 1 = male and 0 = female. After doing this, standardized slope coefficients will be derived. It is predicted that the p-value will be significant between the FASA and SPAI-C-P, thus satisfying the first condition of mediation.

Research question 2

Controlling for gender and SES, is family accommodation a significant predictor of engagement coping skills?

Analysis plan and expected results

Another multiple regression analysis will be completed, but this time using the total score on the FASA as the independent variable and the total score of the engagement scale on the CSI as the dependent variable. As in the previous research question, to control for gender and social economic status, each will be input into the regression. After doing this, standardized slope coefficients will be derived. It is predicted that the p-value will be significant between the FASA and CSI, thus satisfying the second condition of mediation.

Research question 3

Controlling for gender, SES, and family accommodation, are engagement coping skills a significant predictor of the severity of a child's social anxiety?

Analysis plan and expected results

Another multiple regression analysis will be completed with the total score on the SPAI-C-P as the dependent variable and the total score on the FASA and total score on the engagement scale on the CSI as independent variables. To control for gender and socioeconomic status, similar to previous questions, those variables will also be added into the regression and dummy coded as needed. The slope coefficient for the CSI will be evaluated for significance. It is predicted that the p-value will be significant, thus satisfying the third condition of mediation.

Research question 4

Controlling for gender and SES, are engagement coping skills a partial mediator between family accommodation and the severity of a child's social anxiety?

Analysis plan and expected results

The same analysis from the previous condition/research question will analyzed, but this time the slope coefficient for the FASA will be examined. It predicted that the slope coefficient will be significant, indicating the presence of a mediation. Not all variance will be accounted for with the addition of engagement coping skills, so a partial mediation is expected (as compared to a total mediation).

DISCUSSION

Summary

The proposed study seeks to add to the extant literature by providing added insight regarding the relationship between family accommodation and the severity of social anxiety. Specifically, it is hypothesized that engagement coping skills mediate the relationship between family accommodation and social anxiety. Participants who are part of a larger treatment study for anxiety disorders will be included within the proposed study if, after completing a comprehensive semi-structured clinical interview, they have primary diagnoses of Social Anxiety Disorder and no other diagnoses of psychological disorders other than comorbid anxiety disorders. Data will be collected with various self-report measures and analyzed using multiple regression.

Limitations

There are a number of limitations within the proposed study. First, due to the nature of the larger study in which this proposed study is a part, the sample will not be randomized and cannot guarantee a representative sample of the population. Therefore, caution will need to be exercised regarding the generalizability of the findings. Second, while effort was made to select the best measures for the purposes of this study, it is important to acknowledge the possibility that not all facets of family accommodation and coping may be assessed by the scope of the chosen instruments. As such, there is an inherent limitation to using only one instrument per construct and convergent validity will not be able to be assessed, which may limit the meaning of the findings. Third, only self-report measures will be used for the analysis, which may limit the reliability of specific measures when approximating the "true" value of participant's characteristics. Fourth, measures are being used from only one rater, which may limit the scope of the study as being mostly from

parent reports. However, at least in the case of family accommodation, while child and parent report differ in the magnitude of the construct, they still display a significant positive correlation with one another (Lebowitz et al., 2014b). This finding suggests that ratings, although differing in magnitude, still seem to measure a similar indication of the given trait—children commonly under-report. Considering this, while a clear limitation of the proposed study is the use of one-rater per measure, it is unlikely (at least in the case of family accommodation) that it would have a meaningful effect within the analysis. Finally, since a modified version of the CSI was used, it is possible that the measure will be unreliable and invalid. This seems highly unlikely due to the minor changes made in the measure. Additionally, when similar procedures have been used for other measures, factors structure, reliability, and validity have not differed significantly (e.g., Higa et al., 2006).

Implications & Future Research

Findings from this study will help to further the understanding of the role of family accommodation within children who struggle with social anxiety. Should the predicted findings emerge, it will help guide clinicians treating social anxiety in child and adolescent populations. Rather than focus strictly on eliminating family accommodation—a task that can be very difficult for some parents—treatment can focus more on improving and mastering engagement coping strategies in families who engage in problematic levels of accommodation. Furthermore, given the relatively recent status of family accommodation research in anxiety disorders, the proposed study will help to further the field's knowledge of the construct. Results will define the link between coping, an area of psychology with a rich background in empirical study and application, to the course and treatment of anxiety. Additionally, linking coping to family accommodation will help guide future research in the mechanisms of action behind anxiety.

While this study will help, it will add but one small piece of data to the field. More work must be done. Future research should first focus on replicating the proposed study in such a way that eliminates the limitations discussed above. While self-report measures are useful and quick in nature, they limit perspective. Behavioral, qualitative ratings from clinicians could be implemented as ways to measure family accommodation, social anxiety, and coping. Additionally, the use of additional measures should be used to study the same constructs. For instance, using various coping measures will help to eliminate doubt in the validity of the current measure used—especially since the measurement of coping appears to still need work within the field. Finally, after replication, it will be important for future researchers to test the implications of this study in treatment. If engagement coping does mediate the relationship between family accommodation and social anxiety, researchers and clinicians must determine if this serves as an effective treatment target among for children with social anxiety. Developing a comprehensive understanding of the theories and ideas proposed within this study will lead to progress in the field of psychology and research and will have lasting implications for helping children and adolescents who suffer from social anxiety.

Appendices

APPENDIX A – TABLES

Table 1. Variables

Variable	Measure	Type
Severity of Social Anxiety	SPAI-C-P	Ordinal
Family Accommodation	FASA	Ordinal
Engagement Coping	CSI	Ordinal
Socioeconomic Status	Demographic Form – Gross Family Income	Interval
Gender	Demographic Form – Gender	Nominal

Note: SPAI-C-P = Social Phobia

APPENDIX B – FIGURES

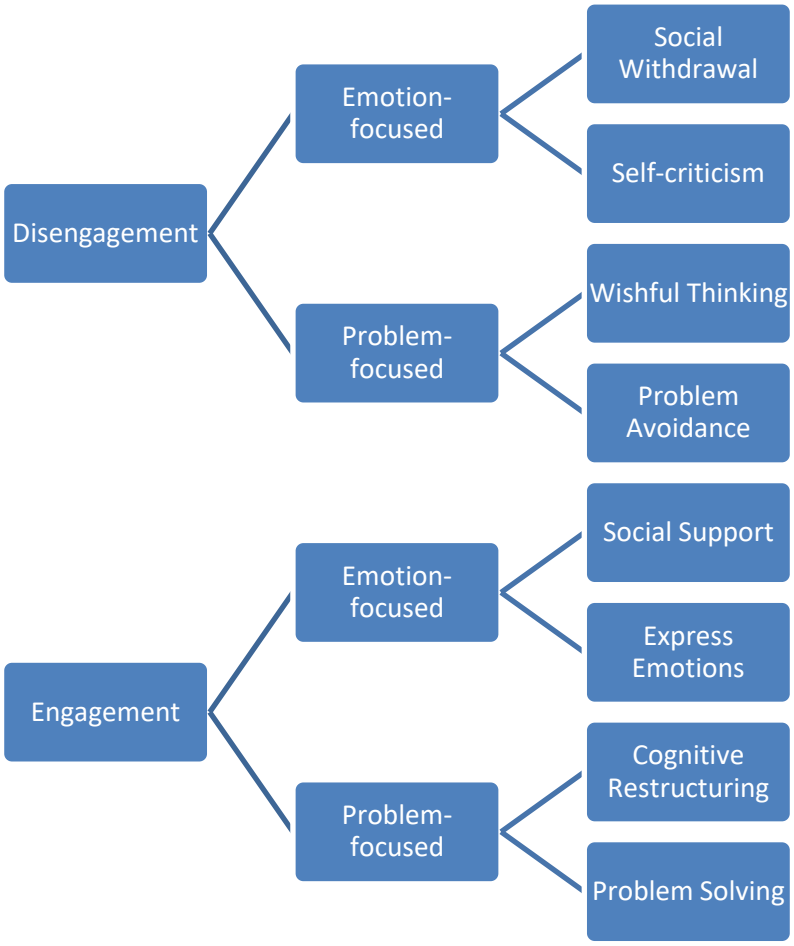

Figure 1. Factor Structure of the Coping Strategies Inventory (CSI)

[1] *-- Sunday, August 28, 2016 -- 16:37:45*

F tests – Linear multiple regression: Fixed model, R^2 deviation from zero

Analysis:	A priori: Compute required sample size		
Input:	Effect size f^2	=	0.15
	α err prob	=	0.05
	Power (1−β err prob)	=	0.8
	Number of predictors	=	5
Output:	Noncentrality parameter λ	=	13.8000000
	Critical F	=	2.3205293
	Numerator df	=	5
	Denominator df	=	86
	Total sample size	=	92
	Actual power	=	0.8041921

Figure 2. Power Analysis

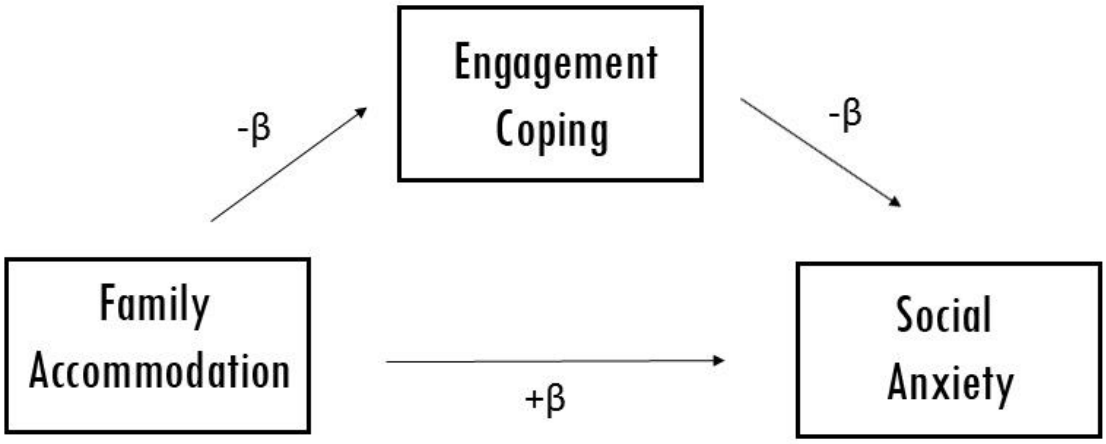

Figure 3. Mediation diagram

APPENDIX C – MEASURES

Family Accommodation Scale – Anxiety

Participation in symptom related behaviors in the past month						
		Never	1-3 times a month	1-2 times a week	3-6 times a week	Daily
1	How often did you reassure your child?	0	1	2	3	4
2	How often did you provide items needed because of anxiety?	0	1	2	3	4
3	How often did you participate in behaviors related to your child's anxiety?	0	1	2	3	4
4	How often did you assist your child in avoiding things that might make him/her more anxious?	0	1	2	3	4
5	Have you avoided doing things, going places or being with people because of your child's anxiety?	0	1	2	3	4
Modification of functioning during the past month						
		No	Mild	Moderate	Severe	Extreme
6	Have you modified your family routine because of your child's symptoms?	0	1	2	3	4
7	Have you had to do things that would usually be your child's responsibility?	0	1	2	3	4
8	Have you modified your work schedule because of your child's anxiety?	0	1	2	3	4
9	Have you modified your leisure activities because of your child's anxiety?	0	1	2	3	4
Distress						
10	Does helping your child in these ways cause you distress?	0	1	2	3	4
Consequences						
11	Has your child become distressed when you have not provided assistance? To what degree?	0	1	2	3	4
12	Has your child become angry/abusive when you have not provided assistance? To what degree?	0	1	2	3	4
13	Has your child's anxiety been worse when you have not provided assistance? How much worse?	0	1	2	3	4

Screen for Child Anxiety Related Disorders (SCARED)

Parent Version—Pg. 1 of 2 (To be filled out by the PARENT)

Name: _____

Date: _____

Directions:
Below is a list of statements that describe how people feel. Read each statement carefully and decide if it is "Not True or Hardly Ever True" or "Somewhat True or Sometimes True" or "Very True or Often True" for your child. Then for each statement, fill in one circle that corresponds to the response that seems to describe your child for the last 3 months. Please respond to all statements as well as you can, even if some do not seem to concern your child.

	0 Not True or Hardly Ever True	1 Somewhat True or Sometimes True	2 Very True or Often True
1. When my child feels frightened, it is hard for him/her to breathe.	○	○	○
2. My child gets headaches when he/she is at school.	○	○	○
3. My child doesn't like to be with people he/she doesn't know well.	○	○	○
4. My child gets scared if he/she sleeps away from home.	○	○	○
5. My child worries about other people liking him/her.	○	○	○
6. When my child gets frightened, he/she feels like passing out.	○	○	○
7. My child is nervous.	○	○	○
8. My child follows me wherever I go.	○	○	○
9. People tell me that my child looks nervous.	○	○	○
10. My child feels nervous with people he/she doesn't know well.	○	○	○
11. My child gets stomachaches at school.	○	○	○
12. When my child gets frightened, he/she feels like he/she is going crazy.	○	○	○
13. My child worries about sleeping alone.	○	○	○
14. My child worries about being as good as other kids.	○	○	○
15. When he/she gets frightened, he/she feels like things are not real.	○	○	○
16. My child has nightmares about something bad happening to his/her parents.	○	○	○
17. My child worries about going to school.	○	○	○
18. When my child gets frightened, his/her heart beats fast.	○	○	○
19. He/she gets shaky.	○	○	○
20. My child has nightmares about something bad happening to him/her.	○	○	○

Screen for Child Anxiety Related Disorders (SCARED)

Parent Version—Pg. 2 of 2 (To be filled out by the PARENT)

	0 Not True or Hardly Ever True	1 Somewhat True or Sometimes True	2 Very True or Often True
21. My child worries about things working out for him/her.	○	○	○
22. When my child gets frightened, he/she sweats a lot.	○	○	○
23. My child is a worrier.	○	○	○
24. My child gets really frightened for no reason at all.	○	○	○
25. My child is afraid to be alone in the house.	○	○	○
26. It is hard for my child to talk with people he/she doesn't know well.	○	○	○
27. When my child gets frightened, he/she feels like he/she is choking.	○	○	○
28. People tell me that my child worries too much.	○	○	○
29. My child doesn't like to be away from his/her family.	○	○	○
30. My child is afraid of having anxiety (or panic) attacks.	○	○	○
31. My child worries that something bad might happen to his/her parents.	○	○	○
32. My child feels shy with people he/she doesn't know well.	○	○	○
33. My child worries about what is going to happen in the future.	○	○	○
34. When my child gets frightened, he/she feels like throwing up.	○	○	○
35. My child worries about how well he/she does things.	○	○	○
36. My child is scared to go to school.	○	○	○
37. My child worries about things that have already happened.	○	○	○
38. When my child gets frightened, he/she feels dizzy.	○	○	○
39. My child feels nervous when he/she is with other children or adults and he/she has to do something while they watch him/her (for example: read aloud, speak, play a game, play a sport.)	○	○	○
40. My child feels nervous when he/she is going to parties, dances, or any place where there will be people that he/she doesn't know well.	○	○	○
41. My child is shy.	○	○	○

SCORING:

A total score of ≥ **25** may indicate the presence of an **Anxiety Disorder**. Scores higher than 30 are more specific.

A score of **7** for items 1, 6, 9, 12, 15, 18, 19, 22, 24, 27, 30, 34, 38 may indicate **Panic Disorder** or **Significant Somatic Symptoms**.

A score of **9** for items 5, 7, 14, 21, 23, 28, 33, 35, 37 may indicate **Generalized Anxiety Disorder**.

A score of **5** for items 4, 8, 13, 16, 20, 25, 29, 31 may indicate **Separation Anxiety Disorder**.

A score of **8** for items 3, 10, 26, 32, 39, 40, 41 may indicate **Social Anxiety Disorder**.

A score of **3** for items 2, 11, 17, 36 may indicate **Significant School Avoidance**.

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SPAI-C-P Items

Scared when joining in a social situation with a large group of boys and girls (more than six) (1)
Scared when he or she becomes the center of attention (and other people look at her or him) (2)
Scared when has to do something while others watch him or her (read aloud, etc.) (3)
Scared when speaking or reading in front of a group of people (4)
Scared when answering questions in class or at meetings (e.g., scouts) even when he or she knows the answer (5)
Goes home early when at parties, dances, school, where there will be more than two people (6)
Scared to ask questions in class (8)
Scared when in the school cafeteria (9)
Scared and doesn't know what to do if somebody starts arguing with him or her (10)
Scared and doesn't know what to do if somebody asks him or her to do something that he or she doesn't want to (11)
Scared and doesn't know what to do when in an embarrassing situation (12)
Scared to say what he or she thinks if somebody says something that is wrong or bad (13)
Scared when starts to talk (14)
Scared talking for longer than a few minutes (15)
Scared when speaking (giving a book report, reading aloud) in front of others (16)
Scared when he or she is in a school play, choir, music, or dance recital in front of others (17)
Scared when ignored or made fun of (18)
Avoids social situations (parties, playing with others) (19)
Leaves social situations (parties, school, playing with others) (20)
Thinks about what might go wrong before going someplace with others (21)
Has scary thoughts when with others (24)
Experiences physical symptoms before going someplace (a party, school, soccer game, etc.) (25)
Experiences physical symptoms at someplace (a party, school, soccer game, etc.) (26)

Coping Strategies Inventory
(Revised 1984)

Once again, take a few minutes to think about your chosen event. As you read through the following items please answer them based on how you handled your event.

Please read each item below and determine the extent to which you used it in handling your chosen event. Please do not mark on this inventory. Please use the provided answer sheet in the following manner.

a. Not at all
b. A Little
c. Somewhat
d. Much
e. Very much

1. I just concentrated on what I had to do next; the next step.
2. I tried to get a new angle on the situation.
3. I found ways to blow off steam.
4. I accepted sympathy and understanding from someone.
5. I slept more than usual.
6. I hoped the problem would take care of itself.
7. I told myself that if I wasn't so careless, things like this wouldn't happen.
8. I tried to keep my feelings to myself.
9. I changed something so that things would turn out all right.
10. I looked for the silver lining, so to speak; tried to look on the bright side of things.
11. I did some things to get it out of my system.
12. I found somebody who was a good listener.
13. I went along as if nothing were happening.
14. I hoped a miracle would happen.
15. I realized that I brought the problem on myself.
16. I spent more time alone.

17. I stood my ground and fought for what I wanted.

18. I told myself things that helped me feel better.

19. I let my emotions go. '

20. I talked to someone about how I was feeling.

21. I tried to forget the whole thing.

22. I wished that I never let myself get involved with that situation.

23. I blamed myself.

24. I avoided my family and friends.

25. I made a plan of action and followed it.

26. I looked at things in a different light and tried to make the best of what was available.

27. I let out my feelings to reduce the stress.

28. I just spent more time with people I liked.

29. I didn't let it get to me; 1 refused to think about it too much.

30. I wished that the situation would go away or somehow be over with.

31. I criticized myself for what happened.

32. I avoided being with people.

33. I tackled the problem head-on.

34. I asked myself what was really important, and discovered that things weren't so bad after all.

35. I let my feelings out somehow.

36. I talked to someone that I was very close to.

37. I decided that it was really someone else's problem and not mine.

38. I wished that the situation had never started.

39. Since what happened was my fault, I really chewed myself out. .

40. I didn't talk to other people about the problem.

41. I knew what had to be done, so I doubled my efforts and tried harder to make things work.

42. I convinced myself that things aren't quite as bad as they seem.

43. I let my emotions out.

44. I let my friends help out.

45. I avoided the person who was causing the trouble.

46. I had fantasies or wishes about how things might turn out.

47. I realized that I was personally responsible for my difficulties and really lectured myself.

48. I spent some time by myself.

49. It was a tricky problem, so 1 had to work around the edges to make things come out OK.

50. I stepped back from the situation and put things into perspective.

51. My feelings were overwhelming and they just exploded.

52. I asked a friend or relative I respect for advice.

53. I made light of the situation and refused to get too serious about it.

54. I hoped that if I waited long enough, things would turn out OK.

55. I kicked myself for letting this happen.

56. I kept my thoughts and feelings to myself.

57. I worked on solving the problems in the situation.

58. I reorganized the way I looked at the situation, so things didn't look so bad.

59. I got in touch with my feelings and just let them go.

60. I spent some time with my friends.

61. Every time I thought about it I got upset; so I just stopped thinking about it.

62. I wished I could have changed what happened.

63. It was my mistake and I needed to suffer the consequences.

64. I didn't let my family and friends know what was going on.

65. I struggled to resolve the problem.

66. I went over the problem again and again in my mind and finally saw things in a different light.

67. I was angry and really blew up.

68. I talked to someone who was in a similar situation.

69. I avoided thinking or doing anything about the situation.

70. I thought about fantastic or unreal things that made me feel better.

71. I told myself how stupid I was.

72. I did not let others know how I was feeling.

NOTE: CSI will be modified to read “My child . . .” instead of “I . . .” in addition to other necessary pronoun changes.

Texas Child Study Center
PATIENT INFORMATION

Date_____

Patient Information

Name_____ Nickname:_____
DOB_____ Age_____ Sex___ Race/Ethnicity:_____
Language(s) spoken at home:_____
Person completing form:_____ Relationship to Child:_____
Child's Address_____
City_____ State_____ Zip_____
Home Phone_____ Other (e.g. Child's Mobile):_____
Medical Doctor_____ Phone_____
Preferred Pharmacy_____
Referred by_____ Phone_____

Caregiver Information (Custodial)

Name_____Age____ Sex___ Relationship to Child:_____
Address if other than above_____
Work Phone _____Other Phone_____
Please indicate if we may leave a message at home:_____ work:____ other:____
Employer_____Position_____

Caregiver Information (Custodial)

Name_____ Age____ Sex___ Relationship to Child:_____
Address if other than above_____
Work Phone _____ Other Phone_____
Please indicate if we may leave a message at home:_____ work:____ other:____
Employer_____Position_____

Caregiver Information (Non-Custodial)

Name_____ Age____ Sex___ Relationship to Child:_____
Address_____
City_____ State_____ Zip_____
Home Phone_____ Work Phone _____ Other_____
Please indicate if we may leave a message at home:_____ work:____
other:___Employer_____Position_____Biological parent___ Adoptive parent___ Foster parent___ Step-parent___Other_____

In Case Of Emergency Notify:

Name_____ Relation_____
Phone_____ Other#_____

Texas Child Study Center
PATIENT INFORMATION

Please tell us what type(s) of services you are seeking:
___ Therapy (if so, what type:_____)
___ Evaluation (if so, what type:_____)
___ Medication

Briefly, please describe the concerns about your child and/or the reason you are seeking services (e.g. any behavioral, emotional, or learning concerns at home and/or school, difficulties with peer relationships, etc):

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Family Information

Parents' Marital Status: __Married __Never married __ Separated __ Divorced __Widowed
If separated or divorced, how long?_____
Contact with non-custodial parent or custody arrangement if any:_____

Household Yearly Income: __Less than $25,000 __$25,000 to $49,999 __$50,000 to $74,999 __$75,000 to $99,999 __$100,000 to $124,999 __$125,000 to $149,999 __$150,000 to $174,999 __$175,000 to $199,999 __$200,000 and above

Any special circumstances in the family situation? _____

Please list all individuals living in the home:

Name	Age	Relationship	Occupation/School

Texas Child Study Center
PATIENT INFORMATION

School Information

Name of School:_____ School District:_____ Phone:_____
Main Teacher (or teacher who knows your child best):_____Current Grade:_____

Placement and Services (current or past)	No	Yes	Describe (e.g. when, which subject failed or grade repeated)
Early Intervention			
Repeated Grade			
Suspended			
Failed or is failing a grade or subject			
Received any special education services			

Please describe any current special education services (e.g. IEP, 504 Plan, resource room support):

_____
_____
_____
_____
_____

Previous Evaluations and Treatments (please bring copies of any reports)

Testing (such as educational, emotional, speech/language)

Date	Type of Testing	Where was the testing done? (e.g. School, Private Psychologist, etc)	Result/Diagnosis/Outcome

Outpatient Mental Health Professionals Seen:

Professional's Name/Specialty (e.g. psychiatrist, psychologist, social worker, school counselor)	Start Date	End Date	Type of services received

3

Is there any history of physical or sexual abuse?

_____
_____
_____
_____
_____

Child Protective Services Report? _____

If your child has taken medication for attention, behavior, or emotional problems, please list:

Medication	Dosage (e.g. 20 mg 3x day)	Start	End	Prescribed By	Adverse Effects

Please List ANY Drug or Food
Allergies_____

If your child takes any other medication or supplements for any other reason, please list:

_____

Psychiatric Hospitalization or Inpatient Drug Treatment

Place	Date Started	Date Stopped	Reason for admission

Has your child or family received services or case management through an agency (e.g. Child Protective Services, Department of Mental Health and Mental Retardation, etc.)?

Agency:_____ Service:_____
Agency:_____ Service:_____

Developmental/Health History

Pregnancy and Delivery

Age of mother at birth: _____ yrs
Medications taken during pregnancy: _____
Gestational diabetes? Yes No
Problems with blood pressure or toxemia? Yes No
Infections (including herpes) _____
Smoking (if so, how many packs per day) _____
Alcohol _____
Drugs taken _____
Any problems during labor or delivery: _____
Duration of pregnancy: _____weeks
Type of labor: _____
Birth weight: _____
Any problems after birth: _____

Infancy/Toddler

Describe your child as an infant and toddler: _____

Problems with feeding	Y	N
Severe colic or excessive crying	Y	N
Irritable	Y	N
Overactive	Y	N
Easily overstimulated	Y	N
Withdrawn	Y	N
Didn't like to be held	Y	N
Difficult to soothe	Y	N

Developmental Milestones:

Indicate the age at which your child achieved the following:

Sit up _____
Crawl _____
Walk without assistance _____
Speak in 2 word sentences _____
Toilet trained during the day _____
Dry at night _____

Texas Child Study Center
PATIENT INFORMATION

Medical History

Major Illness	Date	Hospitalized?	Surgery?

Has your child ever had a head injury with loss of consciousness? If yes, please describe:

_____

Has your child ever had a seizure? If yes, please describe:

_____

Family History

Does anyone in the child' biological family have:	No	Yes	Relationship to child
Attention problems/ADHD			
Behavior problems in youth			
Learning Disability			
Seizures			
Mental Retardation			
Tics/Tourette's Syndrome			
Autistic spectrum disorder			
Thyroid Problems			
Heart Problems before age 50			
Depression			
Bipolar Disorder			
Anxiety or Panic Attacks			
Obsessive Compulsive Disorder			
Schizophrenia			
Alcohol Problems			
Drug Problems			
Trouble with the law			

Any other significant family medical or psychiatric history_____

_____

Texas Child Study Center
PATIENT INFORMATION

Significant psychiatric, behavioral or medical problems in step-, adoptive, or foster family:_____
_____
_____

Other Information

Please add any other information you feel may help us understand your child:_____
_____
_____
_____

References

Ainsworth, M. S. (1979). Infant–mother attachment. *American Psychologist*, *34*(10), 932–937. http://doi.org/10.1037/0003-066X.34.10.932

Albert, U., Bogetto, F., Maina, G., Saracco, P., Brunatto, C., & Mataix-Cols, D. (2010). Family accommodation in obsessive–compulsive disorder: Relation to symptom dimensions, clinical and family characteristics. *Psychiatry Research*, *179*(2), 204–211. http://doi.org/10.1016/j.psychres.2009.06.008

Amies, P. L., Gelder, M. G., & Shaw, P. M. (1983). Social phobia: a comparative clinical study. *The British Journal of Psychiatry*, *142*(2), 174–179. http://doi.org/10.1192/bjp.142.2.174

Angold, A., Costello, E. J., & Erkanli, A. (1999). Comorbidity. *Journal of Child Psychology and Psychiatry*, *40*(1), 57–87. http://doi.org/10.1111/1469-7610.00424

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173–1182. http://doi.org/10.1037/0022-3514.51.6.1173

Beck, A. T. (1970). Cognitive therapy: Nature and relation to behavior therapy. *Behavior Therapy*, *1*(2), 184–200. http://doi.org/10.1016/S0005-7894(70)80030-2

Beidel, D. C. (1996). Assessment of childhood social phobia: Construct, convergent, and discriminative validity of the Social Phobia and Anxiety Inventory for Children

(SPAI-C). *Psychological Assessment*, *8*(3), 235–240. http://doi.org/10.1037/1040-3590.8.3.235

Beidel, D. C., Turner, S. M., Hamlin, K., & Morris, T. L. (2000). The social phobia and anxiety inventory for children (SPAI-C): External and discriminative validity. *Behavior Therapy*, *31*(1), 75–87. http://doi.org/10.1016/S0005-7894(00)80005-2

Beidel, D. C., Turner, S. M., & Morris, T. L. (1995). A new inventory to assess childhood social anxiety and phobia: The Social Phobia and Anxiety Inventory for Children. *Psychological Assessment*, *7*(1), 73–79. http://doi.org/10.1037/1040-3590.7.1.73

Billings, A. G., & Moos, R. H. (1981). The role of coping responses and social resources in attenuating the stress of life events. *Journal of Behavioral Medicine*, *4*(2), 139–157. http://doi.org/10.1007/BF00844267

Birmaher, B., Brent, D. A., Chiappetta, L., Bridge, J., Monga, S., & Baugher, M. (1999). Psychometric properties of the Screen for Child Anxiety Related Emotional Disorders (SCARED): A replication study. *Journal of the American Academy of Child & Adolescent Psychiatry*, *38*(10), 1230–1236. http://doi.org/10.1097/00004583-199910000-00011

Birmaher, B., Khetarpal, S., Brent, D., Cully, M., Balach, L., Kaufman, J., & Neer, S. M. (1997). The Screen for Child Anxiety Related Emotional Disorders (SCARED): Scale construction and psychometric characteristics. *Journal of the American Academy of Child & Adolescent Psychiatry*, *36*(4), 545–553. http://doi.org/10.1097/00004583-199704000-00018

Brook, C. A., & Schmidt, L. A. (2008). Social anxiety disorder: A review of environmental risk factors. *Neuropsychiatric Disease and Treatment*, 123. http://doi.org/10.2147/NDT.S1799

Calvocoressi, L., Mazure, C. M., Kasl, S. V., Skolnick, J., Fisk, D., Vegso, S., … Price, L. (1999). Family accommodation of obsessive-compulsive symptoms: Instrument development and assessment of family behavior. *Journal of Nervoice & Mental Health Disease*, *187*(10), 636–642.

Caporino, N. E., Morgan, J., Beckstead, J., Phares, V., Murphy, T. K., & Storch, E. A. (2011). A structural equation analysis of family accommodation in pediatric Obsessive-Compulsive Disorder. *Journal of Abnormal Child Psychology*, *40*(1), 133–143. http://doi.org/10.1007/s10802-011-9549-8

Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the Brief COPE. *International Journal of Behavioral Medicine*, *4*(1), 92–100. http://doi.org/10.1207/s15327558ijbm0401_6

Carver, C. S., & Connor-Smith, J. (2009). Personality and coping. *Annual Review of Psychology*, *61*(1), 679–704. http://doi.org/10.1146/annurev.psych.093008.100352

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, *56*(2), 267–283. http://doi.org/10.1037/0022-3514.56.2.267

Chavira, D. A., & Stein, M. B. (2005). Childhood Social Anxiety Disorder: From Understanding to Treatment. *Child and Adolescent Psychiatric Clinics*, *14*(4), 797–818. http://doi.org/10.1016/j.chc.2005.05.003

Clark, D. M., & Wells, A. (1995). A cognitive model of social phobia. In R. G. Heimberg, M. R. Liebowitz, D. A. Hope, & F. R. Scheier (Eds.), *Social Phobia: Diagnosis, Assessment and Treatment* (pp. 69–93). New York: Guilford Press.

Compas, B. E., Connor-Smith, J., & Jaser, S. S. (2004). Temperament, stress reactivity, and coping: Implications for depression in childhood and adolescence. *Journal of Clinical Child & Adolescent Psychology*, *33*(1), 21–31. http://doi.org/10.1207/S15374424JCCP3301_3

Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin*, *127*(1), 87–127. http://doi.org/10.1037/0033-2909.127.1.87

Connor-Smith, J. K., Compas, B. E., Wadsworth, M. E., Thomsen, A. H., & Saltzman, H. (2000). Responses to stress in adolescence: Measurement of coping and involuntary stress responses. *Journal of Consulting and Clinical Psychology*, *68*(6), 976–992. http://doi.org/10.1037/0022-006X.68.6.976

Connor-Smith, J. K., & Flachsbart, C. (2007). Relations between personality and coping: A meta-analysis. *Journal of Personality and Social Psychology*, *93*(6), 1080–1107. http://doi.org/10.1037/0022-3514.93.6.1080

Costello, E. J., Egger, H. L., & Angold, A. (2005). The developmental epidemiology of Anxiety Disorders: Phenomenology, prevalence, and comorbidity. *Child and Adolescent Psychiatric Clinics of North America*, *14*(4), 631–648. http://doi.org/10.1016/j.chc.2005.06.003

Cowen, E. L., & Work, W. C. (1988). Resilient children, psychological wellness, and primary prevention. *American Journal of Community Psychology*, *16*(4), 591–607.

Cummings, C. M., Caporino, N. E., & Kendall, P. C. (2014). Comorbidity of anxiety and depression in children and adolescents: 20 years after. *Psychological Bulletin*, *140*(3), 816–845. http://doi.org/10.1037/a0034733

Degnan, K. A., Henderson, H. A., Fox, N. A., & Rubin, K. H. (2008). Predicting social wariness in middle childhood: The moderating roles of childcare history, maternal personality and maternal behavior. *Social Development*, *17*(3), 471–487. http://doi.org/10.1111/j.1467-9507.2007.00437.x

Diagnostic and Statistical Manual of Mental Disorders, 5th Edition: DSM-5. (2013) (5 edition). Washington, D.C: American Psychiatric Publishing.

Dilalla, L. F., Kagan, J., & Reznick, J. S. (1994). Genetic etiology of behavioral inhibition among 2-year-old children. *Infant Behavior and Development*, *17*(4), 405–412. http://doi.org/10.1016/0163-6383(94)90032-9

Ellis, A. (1962). *Reason and emotion in psychotherapy*. Oxford, England: Lyle Stuart.

Endler, N. S., & Parker, J. D. (1990). Multidimensional assessment of coping: A critical evaluation. *Journal of Personality and Social Psychology*, *58*(5), 844–854. http://doi.org/10.1037/0022-3514.58.5.844

Findlay, L. C., Coplan, R. J., & Bowker, A. (2009). Keeping it all inside: Shyness, internalizing coping strategies and socio-emotional adjustment in middle childhood. *International Journal of Behavioral Development*, *33*(1), 47–54. http://doi.org/10.1177/0165025408098017

Flessner, C. A., Freeman, J. B., Sapyta, J., Garcia, A., Franklin, M. E., March, J. S., & Foa, E. (2011). Predictors of parental accommodation in pediatric Obsessive-Compulsive Disorder: Findings from the Pediatric Obsessive-Compulsive Disorder Treatment Study (POTS) Trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, *50*(7), 716–725. http://doi.org/10.1016/j.jaac.2011.03.019

Fletcher, D., & Sarkar, M. (2013). Psychological resilience: A review and critique of definitions, concepts, and theory. *European Psychologist*, *18*(1), 12–23. http://doi.org/10.1027/1016-9040/a000124

Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior*, *21*(3), 219–239. http://doi.org/10.2307/2136617

Fox, N. A., Henderson, H. A., Marshall, P. J., Nichols, K. E., & Ghera, M. M. (2005). Behavioral inhibition: Linking biology and behavior within a developmental

framework. *Annual Review of Psychology*, *56*(1), 235–262. http://doi.org/10.1146/annurev.psych.55.090902.141532

Garcia, A. M., Sapyta, J. J., Moore, P. S., Freeman, J. B., Franklin, M. E., March, J. S., & Foa, E. B. (2010). Predictors and moderators of treatment outcome in the Pediatric Obsessive Compulsive Treatment Study (POTS I). *Journal of the American Academy of Child & Adolescent Psychiatry*, *49*(10), 1024–1033. http://doi.org/10.1016/j.jaac.2010.06.013

Gorenstein, G., Gorenstein, C., de Oliveira, M. C., Asbahr, F. R., & Shavitt, R. G. (2015). Child-focused treatment of pediatric OCD affects parental behavior and family environment. *Psychiatry Research*, *229*(1–2), 161–166. http://doi.org/10.1016/j.psychres.2015.07.050

Greca, A. M. L., & Lopez, N. (1998). Social anxiety among adolescents: Linkages with peer relations and friendships. *Journal of Abnormal Child Psychology*, *26*(2), 83–94. http://doi.org/10.1023/A:1022684520514

Hane, A. A., Cheah, C., Rubin, K. H., & Fox, N. A. (2008). The role of maternal behavior in the relation between shyness and social reticence in early childhood and social withdrawal in middle childhood. *Social Development*, *17*(4), 795–811. http://doi.org/10.1111/j.1467-9507.2008.00481.x

Higa, C. K., Fernandez, S. N., Nakamura, B. J., Chorpita, B. F., & Daleiden, E. L. (2006). Parental Assessment of Childhood Social Phobia: Psychometric Properties of the Social Phobia and Anxiety Inventory for Children–Parent Report. *Journal of*

Clinical Child & Adolescent Psychology, *35*(4), 590–597. http://doi.org/10.1207/s15374424jccp3504_11

Hirshfeld, D. R., Rosenbaum, J. F., Beiderman, J., Bolduc, E. A., Faraone, S. V., Snidman, N., … Kagan, J. (1992). Stable behavioral inhibition and its association with anxiety disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, *31*(1), 103–111. http://doi.org/10.1097/00004583-199201000-00016

Hudson, J. L., Comer, J. S., & Kendall, P. C. (2008). Parental responses to positive and negative emotions in anxious and nonanxious children. *Journal of Clinical Child & Adolescent Psychology*, *37*(2), 303–313. http://doi.org/10.1080/15374410801955839

Jones, J. D., Lebowitz, E. R., Marin, C. E., & Stark, K. D. (2015). Family accommodation mediates the association between anxiety symptoms in mothers and children. *Journal of Child & Adolescent Mental Health*, *27*(1), 41–51. http://doi.org/10.2989/17280583.2015.1007866

Kagan, J., Reznick, J. S., & Snidman, N. (1987). The physiology and psychology of behavioral inhibition in children. *Child Development*, *58*(6), 1459–1473. http://doi.org/10.2307/1130685

Kato, T. (2015). Frequently used coping scales: A meta-analysis. *Stress and Health*, *31*(4), 315–323. http://doi.org/10.1002/smi.2557

Kaufman, J., Birmaher, B., Brent, D., Rao, U., Flynn, C., Moreci, P., … Ryan, N. (1997). Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version (K-SADS-PL): Initial reliability and validity data.

Journal of the American Academy of Child & Adolescent Psychiatry, *36*(7), 980–988. http://doi.org/10.1097/00004583-199707000-00021

Kendall, P. C., Hedtke, K. A., & Child and Adolescent Anxiety Disorders Clinic (Temple University). (2006). *The coping cat workbook*. Ardmore, Pa.: Workbook Pub.

Kessler, R. C. (2003). The impairments caused by social phobia in the general population: implications for intervention. *Acta Psychiatrica Scandinavica*, *108*, 19–27. http://doi.org/10.1034/j.1600-0447.108.s417.2.x

Kessler, Chiu, W., Demler, O., & Walters, E. E. (2005). Prevalence, severity, and comorbidity of 12-month dsm-iv disorders in the national comorbidity survey replication. *Archives of General Psychiatry*, *62*(6), 617–627. http://doi.org/10.1001/archpsyc.62.6.617

Lebowitz, E. R., Panza, K. E., & Bloch, M. H. (2016). Family accommodation in obsessive-compulsive and anxiety disorders: a five-year update. *Expert Review of Neurotherapeutics*, *16*(1), 45–53. http://doi.org/10.1586/14737175.2016.1126181

Lebowitz, E. R., Panza, K. E., Su, J., & Bloch, M. H. (2012). Family accommodation in obsessive–compulsive disorder. *Expert Review of Neurotherapeutics*, *12*(2), 229–238. http://doi.org/10.1586/ern.11.200

Lebowitz, E. R., Scharfstein, L. A., & Jones, J. (2014a). Comparing family accommodation in pediatric Obsessive-Compulsive Disorder, anxiety disorders, and nonanxious children. *Depression and Anxiety*, *31*(12), 1018–1025. http://doi.org/10.1002/da.22251

Lebowitz, E. R., Scharfstein, L., & Jones, J. (2014b). Child-report of family accommodation in pediatric anxiety disorders: Comparison and integration with mother-report. *Child Psychiatry & Human Development*, *46*(4), 501–511. http://doi.org/10.1007/s10578-014-0491-1

Lebowitz, E. R., Woolston, J., Bar-Haim, Y., Calvocoressi, L., Dauser, C., Warnick, E., … Leckman, J. F. (2013). Family accommodation in pediatric anxiety disorders. *Depression and Anxiety*, *30*(1), 47–54. http://doi.org/10.1002/da.21998

Leipold, B., & Greve, W. (2009). Resilience: A conceptual bridge between coping and development. *European Psychologist*, *14*(1), 40–50. http://doi.org/10.1027/1016-9040.14.1.40

Lyne, K., & Roger, D. (2000). A psychometric re-assessment of the COPE questionnaire. *Personality and Individual Differences*, *29*(2), 321–335. http://doi.org/10.1016/S0191-8869(99)00196-8

Major, B., Spencer, S., Schmader, T., Wolfe, C., & Crocker, J. (1998). Coping with negative stereotypes about intellectual performance: The role of psychological disengagement. *Personality and Social Psychology Bulletin*, *24*(1), 34–50. http://doi.org/10.1177/0146167298241003

Manassis, K., & Bradley, S. J. (1994). The development of childhood anxiety disorders: Toward an integrated model. *Journal of Applied Developmental Psychology*, *15*(3), 345–366. http://doi.org/10.1016/0193-3973(94)90037-X

Manassis, K., & Hood, J. (1998). Individual and familial predictors of impairment in childhood anxiety disorders. *Journal of the American Academy of Child &*

Adolescent Psychiatry, *37*(4), 428–434. http://doi.org/10.1097/00004583-199804000-00021

Miech, R. A., Caspi, A., Moffitt, T. E., Wright, B. R. E., & Silva, P. A. (1999). Low socioeconomic status and mental disorders: A longitudinal study of selection and causation during young adulthood. *American Journal of Sociology*, *104*(4), 1096–1131. http://doi.org/10.1086/210137

Muris, P. (2010). Anxiety-related reasoning biases in children and adolescents. In J. A. Hadwin & A. P. Field (Eds.), *Information processing biases and anxiety: A developmental perspective* (pp. 21–46). Chichester: John Wiley & Sons.

Ollendick, T. H., & Benoit, K. E. (2011). A Parent–Child Interactional Model of Social Anxiety Disorder in Youth. *Clinical Child and Family Psychology Review*, *15*(1), 81–91. http://doi.org/10.1007/s10567-011-0108-1

Ollendick, T. H., & Horsch, L. M. (2007). Fears in clinic-referred children: Relations with child anxiety sensitivity, maternal overcontrol, and maternal phobic anxiety. *Behavior Therapy*, *38*(4), 402–411. http://doi.org/10.1016/j.beth.2006.12.001

Pang, J., Strodl, E., & Oei, T.-P. S. (2012). The factor structure of the COPE questionnaire in a sample of clinically depressed and anxious adults. *Journal of Psychopathology and Behavioral Assessment*, *35*(2), 264–272. http://doi.org/10.1007/s10862-012-9328-z

Pine, D. S., Cohen, P., Gurley, D., Brook, J., & Ma, Y. (1998). The risk for early-adulthood anxiety and depressive disorders in adolescents with anxiety and

depressive disorders. *Archives of General Psychiatry*, *55*(1), 56–64. http://doi.org/10.1001/archpsyc.55.1.56

Pinto, A., Van Noppen, B., & Calvocoressi, L. (2013). Development and preliminary psychometric evaluation of a self-rated version of the Family Accommodation Scale for Obsessive-Compulsive Disorder. *Journal of Obsessive-Compulsive and Related Disorders*, *2*(4), 457–465. http://doi.org/10.1016/j.jocrd.2012.06.001

Power, T. G. (2004). Stress and coping in childhood: The parents' role. *Parenting*, *4*(4), 271–317. http://doi.org/10.1207/s15327922par0404_1

Rapee, R. M., & Heimberg, R. G. (1997). A cognitive-behavioral model of anxiety in social phobia. *Behaviour Research and Therapy*, *35*(8), 741–756. http://doi.org/10.1016/S0005-7967(97)00022-3

Roger, D., Jarvis, G., & Najarian, B. (1993). Detachment and coping: The construction and validation of a new scale for measuring coping strategies. *Personality and Individual Differences*, *15*(6), 619–626. http://doi.org/10.1016/0191-8869(93)90003-L

Rosenbaum, J. F., Biederman, J., Hirshfeld-Becker, D. R., Kagan, J., Snidman, N., Friedman, D., … Faraone, S. V. (2000). A controlled study of behavioral inhibition in children of parents with panic disorder and depression. *American Journal of Psychiatry*, *157*(12), 2002–2010. http://doi.org/10.1176/appi.ajp.157.12.2002

Rubin, K. H., Burgess, K. B., & Hastings, P. D. (2002). Stability and social–behavioral consequences of toddlers' inhibited temperament and parenting behaviors. *Child Development*, *73*(2), 483–495. http://doi.org/10.1111/1467-8624.00419

Rubin, K. H., LeMare, L. J., & Lollis, S. (1990). Social withdrawal in childhood: Developmental pathways to peer rejection. In S. R. Asher & J. D. Coie (Eds.), *Peer Rejection in Childhood* (pp. 217–249). Cambridge, England: Cambridge University Press.

Ruscio, A. M., Brown, T. A., Chiu, W. T., Sareen, J., Stein, M. B., & Kessler, R. C. (2008). Social fears and social phobia in the USA: results from the National Comorbidity Survey Replication. *Psychological Medicine*, *38*(1), 15–28. http://doi.org/10.1017/S0033291707001699

Schneier, F. R., Johnson, J., Hornig, C. D., Liebowitz, M. R., & Weissman, M. M. (1992). Social phobia: Comorbidity and morbidity in an epidemiologic sample. *Archives of General Psychiatry*, *49*(4), 282–288. http://doi.org/10.1001/archpsyc.1992.01820040034004

Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: A review and critique of category systems for classifying ways of coping. *Psychological Bulletin*, *129*(2), 216–269. http://doi.org/10.1037/0033-2909.129.2.216

Solyom, L., Ledwidge, B., & Solyom, C. (1986). Delineating social phobia. *The British Journal of Psychiatry*, *149*(4), 464–470. http://doi.org/10.1192/bjp.149.4.464

Spence, S. H., Donovan, C., & Brechman-Toussaint, M. (1999). Social skills, social outcomes, and cognitive features of childhood social phobia. *Journal of Abnormal Psychology*, *108*(2), 211–221. http://doi.org/10.1037/0021-843X.108.2.211

Storch, E. A., Geffken, G. R., Merlo, L. J., Jacob, M. L., Murphy, T. K., Goodman, W. K., … Grabill, K. (2007). Family Accommodation in Pediatric Obsessive–Compulsive Disorder. *Journal of Clinical Child & Adolescent Psychology*, *36*(2), 207–216. http://doi.org/10.1080/15374410701277929

Storch, E. A., Salloum, A., Johnco, C., Dane, B. F., Crawford, E. A., King, M. A., … Lewin, A. B. (2015). Phenomenology and clinical correlates of family accommodation in pediatric anxiety disorders. *Journal of Anxiety Disorders*, *35*, 75–81. http://doi.org/10.1016/j.janxdis.2015.09.001

Tobin, D. L., Holroyd, K. A., & Reynolds, R. (1982). *The assessment of coping: Psychometric development of the Coping Strategies Inventory*. Presented at the Advancement of Behavior Therapy, Los Angeles.

Tobin, D. L., Holroyd, K. A., Reynolds, R. V., & Wigal, J. K. (1989). The hierarchical factor structure of the coping strategies inventory. *Cognitive Therapy and Research*, *13*(4), 343–361. http://doi.org/10.1007/BF01173478

Vernberg, E. M., Abwender, D. A., Ewell, K. K., & Beery, S. H. (1992). Social anxiety and peer relationships in early adolescence: A prospective analysis. *Journal of Clinical Child Psychology*, *21*(2), 189.

Warren, S. L., Huston, L., Egeland, B., & Sroufe, L. A. (1997). Child and adolescent anxiety disorders and early attachment. *Journal of the American Academy of*

Child & Adolescent Psychiatry, *36*(5), 637–644. http://doi.org/10.1097/00004583-199705000-00014