2014

Everything is Alright: Parental Positive Impression Management in Assessment of Anxious Youth

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EVERYTHING IS ALRIGHT: PARENTAL POSITIVE IMPRESSION MANAGEMENT IN ASSESSMENT OF ANXIOUS YOUTH

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Master of Arts

in

The Department of Psychology

by
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B.S., University of New Orleans, 2009
May 2015

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ABSTRACT

Lifetime prevalence rates of anxiety disorders in youth are substantial and range from 6-15%. Valid evidence-based assessments are therefore of critical importance in screening pediatric clients. Assessment of childhood disorders requires multi-informant data (e.g., parents, teachers, child); however, this presents a host of obstacles not found in adult assessment. No single source represents the gold standard and it is therefore up to the judgment of the clinician to integrate often conflicting information. Parents' reports of their children's symptomology may be marred by their own anxious or depressive symptoms as well as conflict due to differing motivations, values, and goals. This conflict may be exacerbated by parental attempts to ingratiate themselves to the interviewer through a process known as positive impression management. Positive impression management by parents may yield a conflicting report of symptomology and serve to distort the diagnostic picture. In order to investigate these problems, 150 parent-child dyads (children are between the ages of 5-16) from an existing database were analyzed. Parents whose responses indicated defensiveness on a measure of parental stress were compared to both stressed parents and controls in order to determine differences in their ratings of their child's anxious symptomology. In summary, there was an overall effect of stress on ratings ($M=37.46$), $F(2,148)=11.520$, $p<.001$. Planned contrasts revealed that changes in stress were associated with parental anxiety ratings compared to controls, $t(149)=3.71$, $p<.01$ (1-tailed), and that defensive responding dyads exhibited significantly lower ratings compared to stressed dyads $t(149)=2.91$, $p<.01$. This research should inform future evidence based assessments and serve to identify potential problematic areas in certain populations.

INTRODUCTION

Fear as a neoevolutionary concept is nearly universally present across race, culture, and species and it can be found at every stage of development throughout the lifespan. Fear is part of a multifaceted fight/flight/freeze response system that prepares an individual for conflict (Barlow, 2002; Gray & McNaughton, 2000; Mathews, 1990). While fear prepares an individual for the decision to stand and fight or flee to fight another day, anxiety is seen as a much more complex interplay of higher order brain mechanisms. Fear is an immediate emotional response to specific stimuli and anxiety is seen as a more "general, enduring, and vague feeling of unease and stress" (VanBockstaele et al., 2013, p. 5). Anxiety consists of a host of highly complex cognitive, physiological, behavioral, and affective components which combine to produce a particular response (Lang, 1977). Anxiety is not inherently a negative trait. Manageable amounts of anxiety push mankind to higher levels of performance (e.g., Yerkes-Dodson law). For instance, a twinge of anxiety can help motivate the student to study or drive an athlete to push a little harder, knowing the big competition is fast approaching. Anxiety can also serve as a protective factor in potentially dangerous situations.

While there exists a strong consensus among scientific professionals as to what constitutes anxiety there still remains much debate as to the delineation of anxiety and dysfunction. Which combination of higher order brain mechanisms produces a response that can be seen as beyond the realm of normal? The debate spawns from a theoretical conceptualization of how one accurately assesses and classifies anxiety in all its forms. This debate is particularly important when assessing children who may not be seen as reliable reporters of their own symptomology. Reliance on outside observers (e.g., parents and teachers) may be seen as a possible alternative; however, the reliability of these observers requires further analysis.

Proper classification of mental health categories allows for communication among professionals as well as reliability and consistency in the diagnosis and treatment of psychological dysfunction. The two most common forms of mental health classification systems used by professionals worldwide are the *International Classification of Diseases* (ICD) and the *Diagnostic and Statistical Manual of Mental Disorders* (DSM).

Anxiety disorders are the most common group of emotional disorders found worldwide with pediatric prevalence rates ranging from 3-24% (Cartwright-Hatton, McNicol, & Doubleday, 2006). Lifetime prevalence rates of anxiety disorders in youth are substantial and range from 6-15% in epidemiological studies (e.g., Anderson, 1994; Bernstein & Borchardt, 1991; Fergusson, Horwood, & Hynskey, 1993; Silverman & Ginsburg, 1998). The *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition, test revision (*DSM-IV-TR*) expanded the definition of anxiety and took a categorical approach in defining nine anxiety disorders that range from the more trait-based anxieties to the more state-based anxieties. There is also research showing that anxiety appears dimensionally across age ranges in youth with younger children expressing more concrete anxieties and older children developing more generalized and social forms of anxiety (Chorpita, Yim, Moffitt, Umemoto, & Francis, 2000; Ollendick, King, & Frary, 1989; Ollendick, Matson, & Helsel, 1985; Weems et al., 1998;). Specific phobias lie at the far end of the concrete dimension and are characterized by extreme and unreasonable fears of a specific object or situation (e.g., storms, dogs, costumed characters). Panic disorder is characterized by sudden and repeated attacks of fear and anxiety that can last for up to 10 minutes. Separation anxiety disorder (SAD) is characterized by excessive anxiety related to separation from the home or individuals to which the child has a strong emotional attachment (parents, grandparents, siblings). Obsessive-compulsive disorder (OCD) is characterized by obsessions (e.g., thoughts, images, ideas) or compulsions (e.g., hand washing, checking, mental acts) that are time

consuming and cause interference and distress. Located at the other end of the spectrum, the anxiety disorders are characterized by more persistent and generalized fears and worries. Post-traumatic stress disorder (PTSD) can occur after a traumatic event and includes symptoms of hyperarousal, re-experiencing, and avoidance related to the event. Acute stress disorder is similar to PTSD in that it occurs in response to a traumatic event but may occur sooner after the event. Generalized anxiety disorder (GAD) is characterized by uncontrollable and excessive worry about a number of events or activities that the individual finds difficult to control and interferes with normal functioning. Social anxiety disorder is characterized by extreme and unreasonable fear in social situations where the individual may by embarrassed or humiliated. Agoraphobia commonly represents the furthest end of the spectrum and is characterized by fear or anxiety of situations where the individual believes they will not be able to escape or get help (*DSM-IV-TR*; American Psychiatric Association, 2000).

The new *DSM-5*, the current version of the diagnostic criteria used worldwide by professionals for screening mental health disorders, continues the categorical description of anxiety and reduced to 7 anxiety disorders. The *DSM-5* retains many of the *DSM-IV-TR* disorders and now includes *other specified anxiety disorder* and *unspecified anxiety disorder*. OCD and PTSD have been removed from the anxiety disorders categorization in the *DSM-5* and have been placed in Obsessive-Compulsive and Related Disorders and Trauma/Stressor and Related Disorders, respectively (*DSM-5*; American Psychiatric Association [APA], 2013).

Assessment of Childhood Anxiety

Longitudinal research has shown an increased risk for children with anxiety to develop an anxiety disorder as an adult (Pine et al., 1998). This means that effective assessment and treatment of childhood anxiety is essential. Assessment of childhood disorders requires multi-informant data (e.g., parents, teachers, and children) with parents serving as the most common

informant of their child's symptomology (De Los Reyes & Kazdin, 2005). This presents a host of benefits and obstacles not found in adult assessment. For instance, one benefit of multi-informant data is that it allows for assessment of symptomology and behavior across different settings and situations, which are often impossible with adult populations. However, in clinical assessment, the clinician must be able to wade through a host of often conflicting information from informants in order to determine the correct diagnosis and inform treatment. Yet, no single source represents the ultimate standard and it is therefore up to the judgment of the clinician to integrate the information (Achenbach et al., 1987). Theory-based approaches are needed in order to incorporate the conflicting information generated through the use of multiple informants (Los Reyes & Kazdin, 2005).

One of the most common forms of evidence based assessment is the structured interview. Structured diagnostic interviews are designed to increase the reliability of responses and eliminate biases, allowing for the collection of information based on clinical judgment (Angold, 2002). Interviews allow for a comprehensive evaluation of a child's functioning; in the past there has been heavy reliance on parent interviews due to a belief in the limited cognitive abilities of children (Edelbrock & Costello, 1990; Herjanic, Herjanic, Brown, & Wheatt, 1975). However, informant discordance remains high and inconsistencies in reporting have been observed across a wide range of interview procedures, (e.g., length, site differences, experience, motivation) leading to the idea that no one source should be relied upon as the maximal informant (Grills-Taquechel & Ollendick, 2002, 2007). De Los Reyes and Kazdin go so far as to consider informant discrepancy to be a clinical reality (2005). Parental interviews require insight from the caregiver into externally expressed symptom expression (e.g., irritability, inattention, hyperactivity), as well as internal symptoms (e.g., headaches, sadness, anxiety). This insight into their child's symptomology may be difficult for some parents, especially in regards to internal

characteristics. Parents have limited accessibility to the cognitive symptoms of their children and can only rely on the observable traits and inferior expression of internal problems. A number of studies have focused on parent-child agreement in structured interviews and found rates of agreement for anxiety disorders to be low (e.g., Edelbrock et al., 1986; Grills & Ollendick, 2002, 2003). Since no universal equation exists to reconcile this parent-child discrepancy in diagnostic assessment there are high levels of variability in determining which interview to weigh more highly in the clinical decision making process (Safford et al., 2005). In a randomized treatment protocol conducted by Kendal et al. (1997), they deferred to the parental interview ratings when a discrepancy existed in agreement. Edelbrock et al. (1986) argued the contrary position and relied on child reports when a discrepancy was met.

Child age has been implicated in some of the discrepancy found in the reporting of anxious behaviors but study results have been mixed. For instance, some researchers indicate higher levels of agreement in older children (Edelbrock et al., 1986; Grills & Ollendick, 2003) while others found no consistent relationship between age and parent-child agreements (Boyle et al., 1993; Choudhury, Pimentel, & Kendall, 2003). Jensen et al. (1999) found adolescents to report lower levels of anxious behaviors when compared to their parents and hypothesized that higher levels of social influence may play a role in the their responses.

Parental ratings of children's symptomology may be affected by a number of factors including motivation, carelessness, candor, past experience, values, and goals (Achenbach & Rescorla, 2001). Also, researchers indicate that a parent's report of their child's symptomology may be marred by their own anxiety symptoms (De Los Reyes & Kazdin, 2005; Phares, Compas, & Howell, 1989) as well as depressive symptoms (Friedlander, Weiss, & Traylor, 1986). Further studies show that anxious parents reported not only higher ratings of anxiety but significantly more diagnoses (Safford et al., 2005).

Recent studies have indicated a *top-down* model of anxiety disorder expression and findings indicate that 60% of anxious children have anxious parents (Silverman et al., 1988). In contrast, *bottom-up* research indicates 80% of anxious children have anxious parents (Berg et al., 1974; Kashani et al., 1990; Rosenbaum et al., 1992). Either way, the assessment process can be strongly influenced by parental anxiety and some authors have gone so far as to postulate that any interview process that does not account for anxiety or depressive symptoms in parental reporters would fail in its duty and risk mislabeling children at a critical point in their lives (Schaughtency & Lahey, 1985).

Further researchers have investigated which parental factors may be implicated in the formation of childhood anxiety. Warren et al. (1997) conducted a longitudinal study examining the link between ambivalent attachment patterns by mothers to their infants and resulting anxiety after 16 years. The study followed 172 parent-child dyads from 12 months to 17.5 years of age and confirmed a significant prediction pattern of insecure attachment and adolescent anxiety disorders (Warren et al., 1997). Parental overcontrol is an intrusive and constraining behavior that prohibits the development of autonomy in the child and has also been associated with the development of childhood anxiety (Dumas et al., 1995; Fristrad & Crayton, 1991; Leib et al., 2000; McClure et al., 2001; Siqueland et al., 1996). Kortlander and colleagues conducted a study on negative maternal expectations and found that mothers of anxious children were less likely to believe their child could cope with difficult tasks (1997).

There is significant support for the idea that parental modeling of anxious behaviors may contribute to the development and maintenance of anxiety disorders in children (Barrett et al., 1996; Camras & Sachs, 1991; Chorpita et al., 1996; Dadds et al., 1996; Gerull & Rappee, 2002; Muris et al., 1996). In the study by Dadds and colleagues, children were given a number of ambiguous situations and asked to interpret and plan a reaction to each. Children then sought

parental approval of their interpretation. The researchers found that avoidance strategies and catastrophic thinking were more likely to be reinforced by parents of anxious children when compared to their non-anxious counterparts (1996).

Researchers also believe that informants distort the reported behavior of others in order to match their own internal stereotype of that behavior (Snyder & Uranowitz, 1978). Thus a child exhibiting mild compulsive behaviors (e.g., hand washing, hoarding) would be seen by the parent as fitting the stereotypic description of Obsessive-Compulsive Disorder and would present answers to confirm that diagnosis despite the lack of any other symptomology or interference. Therefore, it is in the best interest of the clinician to take into account a host of interpersonal and situational factors that may distort the assessment procedure. The more information that can be gathered to inform the assessment process, the more accurate the diagnostic picture.

Conflicting research also exists as to which parent is the better informant. Mothers are more often seen in clinical and research settings, making studies of cross informant differences difficult; however, there are studies showing that mothers are better raters of emotional problems (Achenback, 1991; Loeber et al., 1990), as well as conflicting reports showing that mothers and fathers show no differences in number of emotional problems (Stanger & Lewis, 1993). Further evidence has shown a difference in ratings, not between parents, but between internalizing and externalizing behavior reports. Higher agreement has been shown in externalizing behaviors (e.g., those behaviors associated with disorders like attention-deficit/hyperactivity disorder) as opposed to internalizing behaviors (e.g., those associated with anxiety disorders) and has been attributed to the more highly observable nature of externalizing behaviors (Silverman et al., 2008). In similar studies, mothers were seen as the more reliable informant of the child's conduct and oppositional behaviors when compared to teachers or peers (Leober et al., 1990). Despite the fact that parents may not be the ideal informants of a child's internalizing

symptomology, they are still the most widely used informants due to the perceived unreliability of child reports (De Los Reyes & Kazdin, 2005). In general, mothers, fathers, and teachers are more accurate informants of adaptive behaviors in children (Phares, 1997). While internalizing symptoms may be more difficult to observe from the parental perspective, parental reporting of internalizing symptoms is still widely utilized because asking a child to reflect upon developmentally inappropriate cognitive symptoms necessary for the assessment and diagnosis of anxiety disorders is considered futile in many instances.

Parenting Stress

Parenting stress is felt by all parents in some form (Deater-Deckard, & Scarr, 1996). Parental stress occurs when the demands placed upon the parent exceed their social, financial, and emotional resources available to cope with their role as parents (Abidin, 1990; Cooper, McLanahan, Meadows, & Brooks-Gunn, 2009). There is a large body of research that shows increases in parental stress are associated with a host of psychological and medical concerns, including anxiety (Rodriguez, 2011), attention-deficit/hyperactivity disorder (Fischer, 1990), autism spectrum disorders (e.g., Dumas, Wolf, Fisman, & Culligan, 1991; Estes et al., 2009; Griffith et al., 2010; Hamlyn-Wright et al., 2007; Kasari & Sigman, 1997) and chronic illness (Hauenstein, 1990). These difficulties increase the strain on parental resources across multiple domains and more research into how to help parents cope with the increased demands of parenting a difficult child is needed.

In parents of anxious children, increases in stress can also be attributed to the additional demands placed upon the parent (Williford et al., 2007). A child who has a phobia of darkness may need additional coaxing at bedtime, increasing the hassles of the nightly routine. A child with separation anxiety disorder may increase parental stress by decreasing the parent's ability to seek distraction outside the home. Parents may stop spending quality time with their significant

others, stop leaving the house to exercise, and even reduce outside contact with friends and family, all to avoid the increased stress and hassle associated with the moment of separation. Higher reported parental stress has also been shown to reduce confidence in parental abilities (Gelfand, Teti, & Fox, 1992). Scores on the Parenting Stress Index- Short Form (see measures section) have been strongly associated with parent reported anxiety difficulties in children (Costa et al., 2006; Hart & Kelley, 2006; Mesman & Koot, 2000). These studies highlight the potential concern of source bias in the assessment of parental stress and internalizing difficulties.

While the increased effects of stress on parental resources has been well documented, less research has evaluated the potential bi-directional relationship between parental stress and childhood psychopathology. No study to date has shown that parental stress causes childhood disorders; in fact, difficulties of childhood have been shown to exacerbate parental stress (Williford et al., 2007). Childhood experiences of stress may increase the potential for learned helplessness, which has been shown to foster a sense of uncontrollability in relation to the child's role in control over events in their lives (Brown and Siegel, 1998). Greater parenting stress has also been associated with the development of a maladaptive attributional style in children (Rodriguez, 2011). These children attributed the causes of positive events to unstable and external phenomena, which relates to internalizing problems (2011). Furthermore, parental frustration and distress has been found to lead to poorer treatment outcomes following CBT treatment (Crawford & Manassis, 2001). These findings highlight the importance of developing better assessment and treatment mechanisms to address families experiencing significant stress.

Positive Impression Management

Despite dramatic changes in the mental health field in the last 50 years, mental illness still carries a negative stigma (Corrigan, 2004). According to Corrigan, fear of receiving the label of mental illness causes individuals to avoid mental health services. These concerns also

increase the rate of drop out for those individuals willing to seek services initially. Parents who overcome this stigma to seek psychological help for their children may still feel the social pressure to put forth a positive impression of them, even at the cost of providing adequate information about their child's symptomology. The concept of defensive responding gained popularity as a social psychological concept in the 1960's, with research showing that individuals tend to respond in a socially desirable way independent of specific test content (Hanley, 1967; Nunally, 1970; Pervin, 1970; Taylor, 1961). This concept was first evaluated using responses on personality inventories where the individual was seen as "faking good" in order to represent themselves in a more socially desirable light to the observer (Strickland, 1977). This tendency of individuals to respond in a manner contrary to the truth is a major obstacle in psychological assessment. Individuals seeking to ingratiate themselves with the observer may minimize statements about their own psychopathology or interference, thus reducing the likelihood of receiving adequate services. In clinical settings, financial gain, improved living conditions, a desire to prolong/reduce treatment duration, and medication seeking, have all been found to serve as potential motivators for intentional misrepresentation on self-report measures (Rogers, Sewell, Morey, & Ustad, 1996). These response patterns may lead to clinicians making inaccurate decisions regarding treatment, therefore highlighting the importance of accurate detection of defensive responding, especially in situations with the potential for significant personal gain.

Besides the desire to deceive others, individuals who respond defensively on measures of psychopathology may have other motivations. Extensive research has found that self-deception and limited insight may represent a significant proportion of those individuals found to respond defensively on personality inventories (Paulhus, 1984; Sackheim & Gur, 1978). Self-deception on the Personality Assessment Inventory (PAI), suggests an attempt convince oneself of freedom

from the common problems that plague others and a lack of insight (Morey, 1991). Defensive responding therefore, may serve as a protective factor in an internal desire to deny any significant difficulties.

According to Penney and Skilling (2011) this desire to misrepresent oneself does not extend solely to one's self but to the family unit as well. The authors postulate that precautions should be taken when using data from parents whose reliability is in question. When attempting to make diagnostic decisions, the conflicting information provided by multiple informants on self-report measures brings into question their adequacy in making symptom decisions (Penney & Skilling, 2011). Also, when disagreement exists they suggest weighting the information based on the purpose of the assessment (i.e., treatment, risk assessment, comprehensive evaluations) and the setting.

On self-report measures of anxiety, children often fail to respond accurately based on their desire to represent themselves in a socially desirable manner (Kendall & Ingram, 1989). Anxious children may also be motivated by a desire for reassurance on self-report measures. Concerns about expectations can lead to over endorsement of anxious symptoms in the clinical setting (Kendall & Flannery-Schroeder, 1998). Because of this research, which shows that self-report measures can be influenced by defensiveness and motivational factors, structured interviews have been viewed as the more reliable measure of psychopathology. In fact, interviews are seen as the solution to corroboration of self-report findings in the clinical and research settings (Howard, Millham, Slaten, & O'Donnell, 1981). However to date, the influence of defensive responding has not been measured against the interview process to see if the same relationship between defensive responding and anxiety exists. Further, there has been no research to date testing if parental defensive responding affects the parent's ratings of their child's psychopathology in a structured interview.

PURPOSE

Due to the lack of a gold standard in the assessment of childhood anxiety disorders (Silverman & Ollendick, 2005), it is of critical importance to use reliable and valid measures in psychological evaluations. The purpose of this study is to provide research into a critical gap in the literature. Since children are often seen as unreliable reporters, even of their own symptomology, there is heavy reliance upon parents to serve as key informants in psychological assessment. Despite past research, which has shown parents are often influenced by their own symptomology as well as external factors, they are still one of the primary informants for childhood psychopathology. The aim of the current investigation is to determine if there is a difference in childhood anxiety ratings from those parents who score high in defensive responding (i.e., responding in such a way as to ingratiate themselves with the interviewer) compared to distressed parents or controls with no significant stressed or defensive response ratings. Results of this study should inform future assessment and diagnosis of children with symptoms of internalizing disorders. Further, because parental ratings of anxiety are crucial to the multi-informant data that clinicians examine when assessing children, the validity of their ratings is critical. The current investigation is important, as potentially many children who may experience anxiety symptoms may not receive the services they require due to underreporting by parents. Due to the nature of anxiety and the research showing long term effects of untreated symptomology, early detection is of the utmost importance.

HYPOTHESES

Hypothesis 1: Based on the findings of Williford et al., (2007), it was hypothesized that greater Parental Stress would be associated with higher ratings of child anxiety on the Anxiety Disorders Interview Schedule for DSM-IV: Parent Version.

Hypothesis 2: Parents who score in the significant range for defensive responding on the Parenting Stress Index/Short Form would report lower severity ratings of child anxiety on the ADIS:P compared to stressed and not stressed groups: 3 groups—stressed, not stressed, defensive responders.

Hypothesis 3: Age of child would serve as a covariate in the differences between groups. Previous research has shown mixed results in parental reporting of internalizing disorders in younger versus older children.

Hypothesis 4: Marital status would serve as a covariate in the differences between groups. It is expected that individuals in single family or divorced homes would exhibit greater levels of parental stress impacting their responses.

If the hypothesis was supported that parents who responded defensively on a measure of parental stress were also reporting lower levels of anxiety, then these results would indicate a major problem for current practices in childhood psychological assessments. The identification of these individuals would be a necessary part of future psychological assessments in order to ensure proper treatment practices for all individuals.

METHODS

Participants

This study made use of an existing and ongoing sample of families seeking psychoeducational assessments and/or treatment at the Psychological Services Center on Louisiana State University's main campus. The sample includes 150 parent-child dyads. Of the 150 youth (ages 5-16; *M*= 10.37 years; *SD*= 2.6), 84 (56.0%) were male and 66 (44.0%) were female (see table 1 for demographics). The ethnic composition of the dyads were 131 (87.3%) Caucasian, 15 (10.0%) African American, 1 (0.7%) Hispanic, 1 (0.7%) Asian, and 2 (1.3%) were of other ethnic backgrounds. Mothers were between the ages of 25-57 years with a median age of 39.00 years. Fathers were between the ages of 26-74 years with a median age of 42.24 years. All participants were either self-referred in response to clinic publicity or referred by school psychologists/guidance counselors and other mental health or community professionals. Parent-child dyads were pairs who completed the ADIS: C/P and the PSI/SF (see measures section) as well as a number of other research and clinical measures not examined in this study. For a full list of measures see Appendix A. Individuals were drawn from a larger existing database of 317 participants and included only those individuals who had completed the ADIS: P and the PSI/SF.

The sample was divided into three groups (see Table 3): those individuals who responded in the clinically significant range for parental distress on the PSI/SF, those who responded in the significant range for defensive responding on the PSI/SF, and a control group consisting of parents who did not score in the significant range for distress or defensive responding. The PSI/SF (see measures section) was used to determine group eligibility. The control group of 96 individuals was reduced to meet the homogeneity of variance assumption for data analysis.

Table 1: Demographic Information of Participants

	Total Sample
	N = 150
Age in years of child	
Mean (SD)	10.37 (2.6)
Range	5-16
Gender	
Male	84 (56.0%)
Female	66 (44.0%)
Ethnicity	
Caucasian	131 (87.3%)
African American	15 (10.0%)
Hispanic	1 (0.7%)
Asian	1 (0.7%)
Other	2 (1.3%)

Test Administration

Administration of all test assessment materials was conducted by doctoral students in clinical psychology under licensed supervision at Louisiana State Universities Psychological Services Center. Evaluations typically were conducted in three 3-hour blocks. The first block consisted of the consent process, collection of demographic information, and administration of the ADIS: P and C. The second block was usually conducted in the morning and consisted of the intellectual ability testing (e.g., Wechsler Intelligence Scale for Children- Fourth Edition) and various research measures. Finally, the final assessment block consisted of administration of an achievement test (e.g., Woodcock Johnson-III) and the remaining research measures. All students were trained on all of the administered measures.

Table 2: Demographic Information of Groups

	Stressed	Defensive Response	Controls
	N=55	*N=37*	*N=58*
Age in years of child			
Mean (SD)	10.09 (2.6)	10.92 (2.8)	10.29 (2.6)
Range	6-15	6-16	5-16
Gender			
Male	31 (56.3%)	19 (51.3%)	34 (58.6%)
Female	24 (43.6%)	18 (48.6%)	24 (41.3%)
Ethnicity			
Caucasian	49 (89%)	31 (83.7%)	51 (87.9%)
African American	4 (7.2%)	5 (13.5%)	6 (10.3%)
Hispanic	1 (1.8%)	0 (0.0%)	0 (0.0%)
Asian	0 (0.0%)	1 (2.7%)	0 (0.0%)
Other	1 (1.8%	0 (0.0%)	1 (1.7%)

Measures

The Parenting Stress Index/Short Form (PSI/SF; Abidin, 1990) is a 36-item self-report measure designed to target families in need of assistance due to stress in the parent-child relationship. The measure takes approximately 10 minutes to administer. Responses provide information on three factors: Parental Distress, Parent-Child Dysfunctional Interaction, and Difficult Child (Castaldi, 1990; Hauenstein et al., 1987). All items are answered by circling one of 5 options: SA (strongly agree), A (agree), NS (not sure), D (disagree), and SD (strongly disagree), except for Items 22, 32, and 33. Item 22 asks, "I feel that I am," and requires the subject to circle an option from choices 1 to 5: 1 (not very good at being a parent), 2 (a person who has some trouble being a parent), 3 (an average parent), 4 (a better than average parent), and 5 (a very good parent). Item 32 also requires the participant to circle an option from choices 1 to 5 and asks, "I have found that getting my child to do something or stop doing something is:" 1

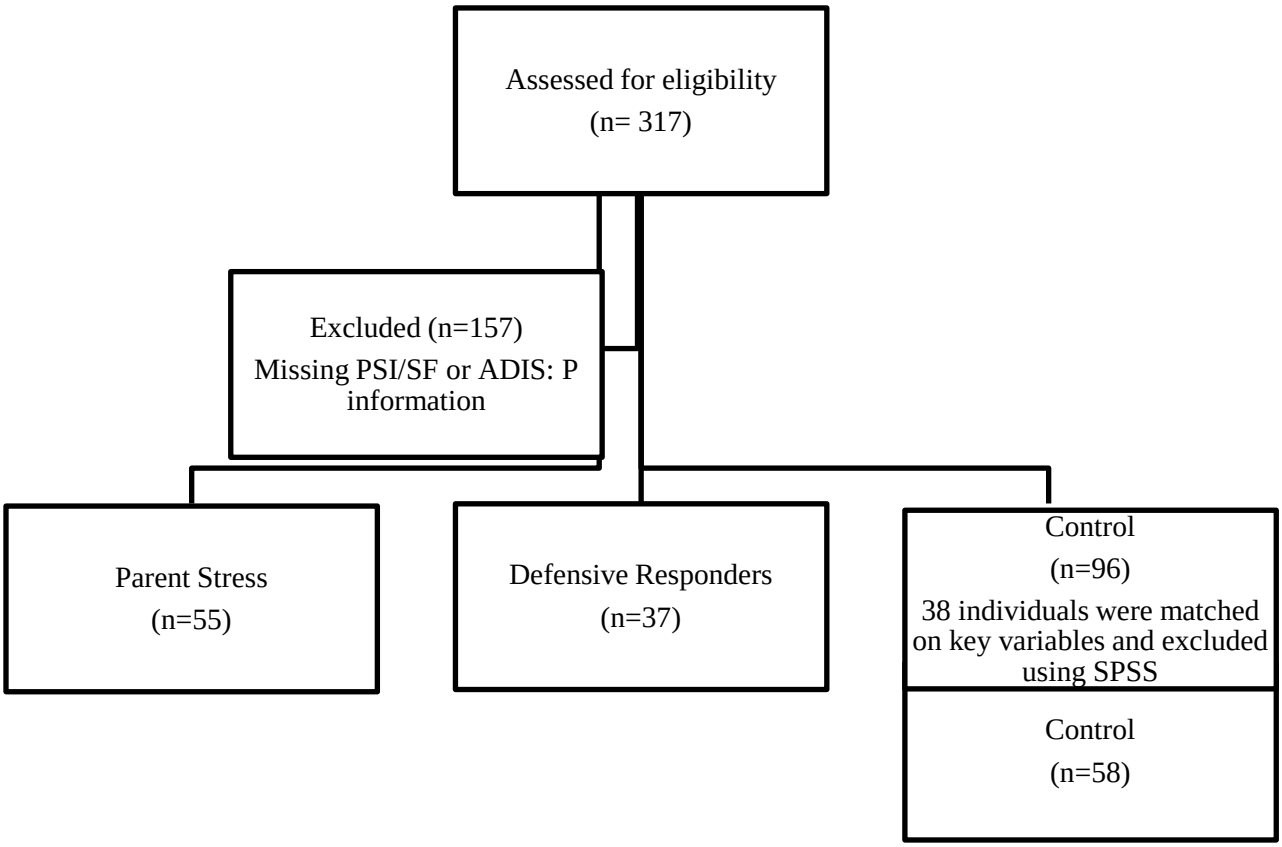
(much harder than I expected), 2 (somewhat harder than I expected), 3 (about as hard as I expected), 4 (somewhat easier than I expected), and 5(much easier than I expected). Item 33 asks respondents to "think carefully and count the number of things which your child does that bother you" (e.g., dawdles, refuses to listen, overactive, cries, interrupts, fights, whines) and has options (10+, 8-9, 6-7, 4-5, or 1-3). Included in the PSI/SF is a measure of defensive responding which was designed to assess the bias where parents attempt to present themselves in a more favorable light to the clinician (Castaldi, 1988; Lafiosca & Loyd, 1986).

The Anxiety Disorders Interview Schedule for DSM-IV: Child and Parent Versions (ADIS-IV: C/P; Silverman & Albano, 1996) is a semi-structured diagnostic interview that allows for the diagnosis of anxiety disorders as well as a number of other developmental and externalizing disorders of childhood (e.g., enuresis, dysthymia, conduct disorder). It was administered separately to the referred dyads by student clinicians under the supervision of licensed clinical supervisors at the Psychological Services Center at LSU. Scores are assigned by clinicians administering the interview (Clinician Severity Ratings; CSR) and range from 0 (Not at all) to 8 (Very, very much) with scores of 4 and above considered clinically significant psychopathology. CSRs on the ADIS:C/P have been shown to correlate with scores found on parent and child rating scales and have been used in both clinical and research settings (e.g., Rabian, Ginsburg, & Silverman, 1994). Interrater reliability has been found to be satisfactory for the ADIS: C/P (Silverman & Nelles, 1988). In order to determine the presence of a clinically significant anxiety disorder, CSR diagnoses of parent and child reports are evaluated and integrated during a consensus process by a licensed clinical supervisor with 14 years of clinical experience.

Procedure

Participants were recruited through the Psychological Services Center at LSU. Primary caregivers and children served as informants for the study. Parental informed consent and child assent were obtained and the parent-child dyads were given a full psychoeducational examination (see Appendix A). The examination included the ADIS: C/P and the PSI/SF. IRB approval for the database was renewed until April 8, 2014 (see Appendix B).

Table 3: Participant Inclusion Flow Chart



STATISTICAL ANALYSES

Power

In order to determine the necessary sample size for adequate power, an a priori G*Power analysis was conducted. According to Field (2005) a power of .80 can be utilized to detect a difference where one exists. In order to determine the minimum number of participants for this study, alpha was set to .05, power was set to .80, and the effect size was set at .40 (large). Previous research methodology has shown a large effect size for childhood symptomology in the prediction of parental stress (e.g. Dougherty et al., 2013; Harrison & Sofronoff, 2002). The power analyses for the ANCOVA, ANOVAs, and planned post hoc analyses recommended a total sample size of 69 in order to detect a large size. The current sample size of 150 exceeds this amount therefore the study has adequate power. All statistical analyses were conducted using SPSS 22 under the procedures put forth by Field (2009).

Preliminary Analyses

A simple one-way ANOVA was initially conducted to determine whether mean age of the child portion of the dyads was significantly different between the three groups. Levene's test revealed that the homogeneity of variance assumption was met. There was no statistically significant difference of mean age among the three groups $F(2,149) = 1.11$, $p > .05$. Separate chi-square analyses were then conducted in order to determine whether a significant association existed between gender and ethnicity of the three groups. There was no significant association between gender and the diagnostic groups, $x^2(22) = (27.42)$, $p > .05$. Also, no significant association was found between ethnicity and diagnostic groups, $x^2(8) = (6.38)$, $p > .05$.

Primary Analyses

For the analyses, differences in ADIS-IV:P severity scores (0 to 8) were considered in order to determine the full range of variability. Overall, four statistical analyses were conducted.

In order to determine differences in anxiety severity between the Defensive Group, Stressed Group, and Non-Stressed Group as proposed in Hypotheses 1 and 2, a one-way simple ANOVA was conducted. In summary, there was an overall effect of stress on ratings (M=37.46), $F(2,148) = 11.520$, $p<.001$. Planned contrasts revealed that changes in stress were associated with ADIS:P ratings compared to controls, $t(149) = 3.71$, $p<.01$ (1-tailed), and that defensive responding dyads exhibited significantly lower ratings compared to stressed dyads $t(149) = 2.91$, $p<.01$. Following these analyses, two ANCOVAs were conducted as proposed in Hypothesis 3 and 4. Both age of the child and marital status were included as covariates. The covariate, child's age, was not significantly related to the diagnosis, $F(1, 149) = .363$, $p > .05$. The covariate, marital status, was not significantly related to the diagnosis, $F(1, 149) = 1.919$, $p > .05$.

DISCUSSION

Pediatric prevalence rates for anxiety disorders range from 3-24% and represent the most common form of emotional disturbance for this group worldwide (Cartwright-Hatton, McNicol, & Doubleday, 2006). Proper classification and assessment of this population requires multi-informant data, with parents serving as the most common informants (De Los Reyes & Kazdin, 2005). However, parental reports of child symptomology may be influenced by a host of factors that may distort the diagnostic picture. This study sought to demonstrate the influence of parental stress and defensive responding on reports of childhood anxiety.

As hypothesized, analyses conducted showed that greater parental stress led to higher anxiety symptomology in children. This pattern is consistent with previous findings showing that parents who report higher levels of distress have patterns of chaos in their daily lives that lead to patterns of uncertainty and inconsistency in parenting practices. While these analyses have confirmed previous findings, they are also restricted by the same limitations as they are unable to show the directionality of the correlation. Parents of more highly anxious children may be reporting higher levels of distress due to the increased demands placed upon them, or more externally stressed parents may be fostering an environment that generates more highly anxious children.

Further research is needed in order to determine directionality of these findings. Also, future research should analyze whether there is a trend toward specific anxiety disorder patterns leading to greater reported parental stress. For example, would a parent whose child experiences anxiety during separation experience the same levels of stress as a parent whose child is experiencing more generalized worries? This information could be utilized in making clinical determinations as to whether the parent is over-reporting the child's anxious symptomology or is simply experiencing greater levels of stress due to the increased level of interference.

Regardless, determination of parental and familial stress remains an important factor in childhood anxiety disorders due to its potential influence on symptom presentation and maintenance and its detrimental effects on treatment outcomes.

Second, as hypothesized, analyses conducted showed that parents who responded defensively on a measure of parental stress underreported their children's anxiety symptoms. The results show on average almost two full points discrepancy on the ADIS:P between the defensive responders (M= 4.0) and the stressed responders (M= 5.77) and almost a full point discrepancy between the defensive responders and the control group (4.77). CSR's on the ADIS:P require a rating of 4.0 for clinical significance in the diagnosis of childhood anxiety disorders (ADIS-IV: C/P; Silverman & Albano, 1996). The defensive responders had a mean which just met clinical level cutoff for diagnosis, placing many of the children at risk for not meeting criteria for an anxiety disorder. This discrepancy would potentially exclude these children from receiving accommodations or services at a critical point in their development. Research has shown that anxiety in children and adolescents can continue on into adulthood, therefore early detection and treatment is vital to prevention of future symptomology (Pine et. al, 1998). Also, research studies of anxiety disorders and their treatment requires strict inclusion guidelines which may exclude this population from analysis and therefore introduce a potentially confounding variable into studies of childhood anxiety disorders. Since evidence based assessment is crucial to psychological interventions, finding evidence of this trend should inform future researchers and clinicians of the dangers of weighing parental ratings too highly. This research aims to inform future development of guidelines for integration of multiple informant data in certain populations.

While this study was able to confirm the presence of a subset of parents engaging in impression management, it cannot provide information as the motivations behind this response

style. Past studies examining the influence of motivators for inaccurate responding have found greater discrepancies when there was potential for significant gain (Rogers, Sewell, Morey, & Ustad, 1996). For example, when individuals are involved in forensic evaluations or are attempting to gain access to specific medications there is higher probability for inaccurate response patterns. The results of this study therefore, appear counterintuitive. Since the population was seen at an outpatient mental health facility, the parental responders were mostly self-referred for evaluation, which would presume a desire for accurate assessment of their child's psychopathology. However, results confirmed the hypothesis that a subset of parents engaged in a response style that would serve to minimize their child's dysfunction. Future research should examine the potential motivations behind parents desire to respond in a defensive manner. Since the external motivations seem minimal in this setting, future study should focus on whether the responders are attempting to ingratiate themselves with the interviewer or are engaging in self-deception in an attempt to convince themselves that the problems are less severe or interfering.

While research shows that all parents experience some form of stress with regard to their roles as parents, there have been a number of findings that show increases in parental stress based on household composition due to the increased demands for external factors to exceed their social, financial, and emotional resources available to cope with their role as parents (Abidin, 1990; Cooper, McLanahan, Meadows, & Brooks-Gunn, 2009). The findings of the current study; however, did not show that either age of the child or marital status served as covariates in the analyses. The current study analyzed 94 dyads with biological parents, 23 dyads from a divorced home, 25 dyads with a single biological mother, and 8 dyads from an adopted home. Past findings suggested that single parent households or households with adopted children place increased demands on parental resources and therefore, increase parental stress. In

this study, there may simply not have been a large enough sample size to show diversity among the various categories. Despite previous research indicating greater conflict and stress among certain households, results of this analysis did not show greater stress.

Due to the lack of a gold standard in the assessment of childhood anxiety disorders (Silverman & Ollendick, 2005), these analyses are of critical importance in order to provide evidence for the potential unreliability of parental reports of childhood internalizing symptoms. Reliable and valid measures of psychological symptoms are necessary to combat the unreliability of parental reports in clinical settings. Past research has shown that parents are unreliable, even of their own symptomology, and the heavy reliance on parents as reporters for their children has been called into question. This research further questions the heavy use of parental reports in cases of stress or defensive responding. Results of this study should inform future assessment and diagnosis of children with internalizing symptoms.

Future research on this topic should include a greater sample of individuals from differently composed households in order to determine its impact on stress levels and defensive responding. Also, indicators of parental stress and impression management should be included in more measures of their child's symptomology in order to detect the effects of these response patterns. Ideally, an algorithm would be created to account for the changes in response type based on the parental responses. This algorithm would help to alleviate some of the damaging effects that these response styles can have on research and treatment for children with internalizing disorders. Parents who respond defensively on measures of their child's internalizing symptoms may be depriving them of the needed diagnostic label due to under reporting. Also, parents who respond in a manner consistent with the stressed response style may be over-pathologizing their child which can also lead to a number of negative future events. Furthermore, future research should examine the defensive and stressed response patterns of the

child themselves in order to determine if the same pattern exists amongst self-ratings. If the same pattern exists, then this information could lead to more highly sensitive assessment procedures.

With the recent research trend toward more comprehensive and less disorder specific analyses, information into the assessment patterns and response styles of parents could strongly influence the way future psychologists conduct psychological assessments. Future research should transcend the specific anxiety application conducted in this study and explore other realms of childhood psychopathology. For example, these response patterns should be analyzed in parents of hyperactive, oppositional, and other neurodevelopmental disorders to see if there is evidence of defensive responding.

REFERENCES

Abidin, R. R. (1990). *Parenting Stress Index (PSI)*. Pediatric Psychology Press.

Achenbach, T.M., McConaughy, S.H., & Howell, C.T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin*, 101, 213-232.

Achenbach, T.M., and Rescorla, L.A. (2001). *Manual for the ASEBA School-Age Forms and Profiles*. Burlington, VT; University of Vermont. Research Center for Children, Youth, and Families.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Washington, DC: Author.

Anderson, J.C. (1994). Epidemiology. In T.H. Ollendick, N.J. King, & W. Yule (Eds.), *International handbook of phobic and anxiety disorders in children and adolescents* (pp. 293-315). New York: Plenum Press.

Angold, A. (2002). Diagnostic interviews with parents and children. In M. Rutter & E. Taylor (Eds.), *Child and adolescent psychiatry: Modern approaches* (4th ed., 32-51). Oxford, UK: Blackwell.

Barlow, D.H. (2002). *Anxiety and its disorders: The nature and treatment of anxiety and panic* (2nd ed.). New York, NY: Guilford Press.

Barrett, P.M., Rapee, R.M., Dadds, M.M & Ryan, S.M. (1996). Family enhancement of cognitive style in anxious and aggressive children: threat bias and the FEAR effect. *Journal of Abnormal Child Psychology, 24*, 187-203.

Beidel, D.C. & Turner, S.M. (1997). At risk for anxiety: I. Psychopathology in the offspring of anxious parents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36, 918-924.

Berg, I., Butler, A. & Pritchard, J. (1974). Psychiatric illness in the mothers of school phobic adolescents. *British Journal of Psychiatry*, *125*, 466-467.

Bernstein, G. A., & Borchardt, C. M. (1991). Anxiety disorders of childhood and adolescence: A critical review. *Journal of the American Academy of Child and Adolescent Psychiatry, 30*, 519-532.

Boyle, M. H., Offord, D. R., Racine, T., Sanford, M., Szatmari, P., Fleming, J. E., et al. (1993). Evaluation of the diagnostic interview for children and adolescents for use in general population samples. *Journal of Abnormal Child Psychology, 21*, 663-681.

Brown, J. D., & Siegel, J. M. (1988). Attributions for negative life events and depression: The role of perceived control. Journal of Personality and Social Psychology, 54, 316-322.

Camras L.A. & Sachs, V.B. (1991). Social referencing and caretaker expression in a day care setting. *Infant Behavioral Development 14,* 27-36.

Cartwright-Hatton, S., McNicol, K., & Doubleday, E. (2006). Anxiety in a neglected population: Prevalence of anxiety disorders in pre-adolescent children. *Clinical Psychology Review*, 26, 817-833.

Castaldi, J. (1988). *The relationship of maternal defensiveness to reported levels of parenting stress* (Doctoral dissertation).

Chorpita, B.F., Albano, A.M & Barlow, D.H. (1996). Cognitive processing in children: relation to anxiety and family influences. *Journal of Clinical Child Psychology, 25(2),* 170-176.

Chorpita, B. F., Yim, L., Moffitt, C., Umemoto, L. A., & Francis, S. E. (2000). Assessment of symptoms of DSM-IV anxiety and depression in children: A revised child anxiety and depression scale. *Behaviour Research and Therapy, 38,* 835-855.

Choudhury, M. S., Pimentel, S. S., & Kendall, P. C. (2003). Childhood Anxiety Disorders: Parent–Child (Dis) Agreement Using a Structured Interview for the< i> DSM-IV</i>. *Journal of the American Academy of Child & Adolescent Psychiatry*, *42*(8), 957-964.

Connell, A.M., & Goodman, S.H. (2002). The association between psychopathology in fathers versus mothers and children's internalizing and externalizing behavior problems. A meta-analysis. *Psychological Bulletin*, 128, 746-773.

Cooper, C., McHanahan, S., Meadows, S., & Brooks-Gunn, J. (2009). Family structure transitions and maternal parenting stress. *Journal of Marriage and the Family*, *71*, 558-267.

Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist, 59*(7), 614.

Costa, N. M., Weems, C. F., Pellerin, K., & Dalton, R. (2006). Parenting stress and childhood psychopathology: An examination of specificity to internalizing and externalizing symptoms. *Journal of Psychopathology and Behavioral Assessment, 28*, 113-122.

Dadds, M.R., Barrett, P.M., Rapee, R.M. & Ryan, S. (1996). Family process and child anxiety and aggression: an observational analysis. *Journal of Abnormal Child Psychology, 24,* 715-734.

Deater-Deckard, K., & Scarr, S. (1996). Parenting stress among dual-earner mothers and fathers: Are there gender differences?. *Journal of Family Psychology*, *10*(1), 45.

De Los Reyes, A., & Kazdin, A. (2005). Informant discrepancies in the assessment of childhood psychopathology: A critical review, theoretical framework, and recommendations for further study. *Psychological Bulletin, 131*, 483-509.

Dougherty, L. R., Tolep, M.R., Bufferd, S. J., Olino, T.M., Dyson, M., Traditi, J., & …Klein, D. N. (2013). Preschool anxiety disorders: Comprehensive assessment of clinical, demographic, temperamental, familial, and life stress correlates. *Journal of Clinical Child and Adolescent Psychology, 42(5),* 577-589.

Duhig, A. M., Renk, K., Epstein, M. K., & Phares, V. (2000). Interparental agreement on internalizing, externalizing and total behavior problems: A meta-analysis. *Clinical Psychology: Science and Practice,* 7, 435-453.

Dumas, J., Lafreniere, P.J. & Serketich, W. (1995). 'Balance of power': transactional analysis of control in mother-child dyads involving socially competent, aggressive, and anxious children. *Journal of Abnormal Psychology, 104 (1),* 104-113.

Dumas, J. E., Wolf, L. C., Fisman, S. N., & Culligan, A. (1991). Parenting stress, child behavior problems, and dysphoria in parents of children with autism, Down syndrome, behavior disorders, and normal development. *Exceptionality, 2* (2), 97-110.

Edelbrock, C., & Costello, A. J. (1990) Structured interviews for children and adolescents. In G. Goldstein & M. Hersen (Eds.*), Handbook of psychological assessment. Pergamon general psychology series* (Vol. 131, pp. 308-323). New York: Pergamon Press.

Edelbrock, E., Costello, A.J., Dulcan, M.K., Conover, N., & Kalas, R. (1986). Parent-child agreement on child psychiatric symptoms assessed via structured interview. *Journal of Child Psychology and Psychiatr, 27,* 181-190.

Estes, A., Munson, J., Dawson, G., Koehler, E., Zhou, X., & Abbott, R. (2009). Parenting stress and psychological functioning among mothers of preschool children with autism and developmental delay. *Autism, 13,* 375-387.

Fergusson, D.M., Horwood, L.J., & Lynskey, M.T. (1993) Prevalence and comorbidity of DSM-III_R diagnoses in a birth cohort of 15 year olds. *Journal of the American Academy of Child and Adolescent Psychiatry, 32,* 1127-1134.

Field, A. (2005). *Discovering statistics using SPSS*. London: Sage Publications.

Friedlander, S., Weiss, D.S., & Traylor, J (1986). Assessing the influence of maternal depression on the validity of the Child Behavior Checklist. *Journal of Abnormal Child Psychology, 14,* 123-133.

Fristrad, M. A. & Crayton, T. L. (1991). Family dysfunction and family psychopathology in child psychiatry outpatients. *Journal of Family Psychology, 5 (1),* 46-59.

Gerull, F.C. & Rapee, R.M. (2002). Mother knows best: effects of maternal modelling on the acquisition of fear and avoidance behavior in toddlers. *Behavioral Response Therapy, 40*, 279-287.

Gray, J. A., & McNaughton, N. (2000). *The neuropsychology of anxiety* (2nd ed.). New York, NY: Oxford University Press.

Griffith, G. M., Hastings, R. P., Nash, S., & Hil, C. (2010). Using matched groups to explore child behavior problems and maternal well-being in children with Down syndrome and autism. *Journal of Autism and Developmental Disorders, 40*, 610-619.

Grills-Taquechel, A.E., & Ollendick, T.H. (2007). Diagnostic interviewing. In M. Hersen and A.M. Gross (Eds.), *Handbook of clinical psychology (Volume 2): Children and adolescents*. New York: John Wiley and Sons.

Grills, A. E., & Ollendick, T.H. (2002). Issues in parent-child agreement: The case of structured diagnostic interviews. *Clinical Child and Family Psychology Review, 5*, 57-83.

Grills, A.E., & Ollendick, T.H. (2003). Multiple informant agreement and the Anxiety Disorders Interview Schedule for Parents and Children. *Journal of the American Academy of Child and Adolescent Psychiatry, 42*, 30-40.

Hamlyn-Wright, S., Draghi-Lorenz, R., & Ellis, J. (2007). Locus of control fails to mediate between stress and anxiety and depression in parents of children with a developmental disorder. *Autism, 11*, 489-501.

Hanley, C. (1967). Individual responses and social desirability. *Journal of Applied Psychology, 51*, 167-169.

Harrison, C., & Sofronoff, K. (2002). ADHD and parental psychological distress: Role of demographics, child behavioral characteristics, and parental cognitions. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*, 703-711.

Hart, M. S., & Kelley, M. L. (2006). Fathers' and mothers' work and family issues as related to internalizing and externalizing behavior of children attending day care. *Journal of Family Issues, 27*, 252-270.

Hauenstein, E. J. (1990). The experience of distress in parents of chronically ill children: potential or likely outcome? *Journal of Clinical Child Psychology*, *19* (4), 356-364.

Herjanic, B., Herjanic, M., Brown, F., & Wheatt, T. (1975). Are children reliable reporters? *Journal of Abnormal Child Psychology, 3*, 41-48.

Howard, G., Millham, J., Slaten, S., & O'Donnell, L. (1981). Influence of subject response style effects of retrospective measurement. *Applied Psychological Measurement, 5*, 89-100.

Jablensky, A. (1985). Approaches to the definition and classification of anxiety and related disorders in European psychiatry. In A.H. Tuma & J.D. Maser (Eds.), *Anxiety and the anxiety disorders*. Hillsdale, NJ: Erlbaum.

Jensen, P., Rubio-Stipec, M., Canino, G., Bird, H.R., Dulcan, M. K., Schwab-Stone, M. E., & Lahey, B. B. (1999). Parent and child contributions to diagnosis of mental disorder: Are both informants always necessary? *Journal of the American Academy of Child and Adolescent Psychiatry, 38,* 1569-1579.

Kasari, C., & Sigman, M. (1997). Linking parental perceptions to interactions in young children with autism. *Journal of Autism and Developmental Disorders, 27*(1), 39-57.

Kashani, J. H., Vaidya, A. F., Soltys, S. M., Dandoy, A. C., Katz, L. M. & Reid, J. C. (1990). Correlates of anxiety in psychiatrically hospitalized children and their parents. *American Journal of Psychiatry, 147*, 319-323.

Kendall, P. C., Flannery-Schroeder, E., Panichelli-Mindel, S. M., Southam-Gerow, M., Henin, A., & Warman, M. (1997). Therapy for youths with anxiety disorders: A second randomized clincal trial. *Journal of consulting and clinical psychology, 65*(3), 366.

Kendall, P.C., & Ingram, R.E. (1989). Cognitive-behavioral perspectives: Theory and research on depression and anxiety. In P.C. Kendall & D. Watson (Eds.), *Anxiety and depression: Distinctive and overlapping features* (pp. 27-53). San Diego, CA: Academic Press

Kortlander, E., Kendall, P. C. & Panichelli-Mindel, S. M. (1997). Maternal expectations and attributions about coping in anxious children. *Journal of Anxiety Disorders, 11 (3)*, 297-315.

Krain, A.L., & Kendall, P.C. (2000). The role of parental emotional distress in parent report of child anxiety. *Journal of Clinical Child Psychology*, 29, 328-335.

LaFiosca, T. (1981). *The relationship of parental stress to anxiety, approval motivation, and children's behavior problems* (Doctoral dissertation, University of Virginia).

LaFiosca, T., & Loyd, B. H. (1986). Defensiveness and the assessment of parental stress and anxiety. *Journal of Clinical Child Psychology, 15*(3), 254-259.

Lang, P.J. (1977). Imagery in therapy: An information processing analysis of fear. *Behavior Therapy, 8,* 862-886.

Leib, R., Wittchen, H., Hofler, M., Fuetsch, M., Stein, M. & Merikangas, K. (2000). Parental psychopathology, parenting styles, and the risk of social phobia in offspring: a prospective longitudinal community study. *Archives of General Psychiatry, 57,* 859-866.

Loeber, R. M., & Lerner, J. V. (1997). Effects of age, sex, and physical attractiveness on child-peer relations, academic performance, and elementary school adjustment. *Developmental Psychology, 13*, 585-590.

Los Reyes, A., & Kazdin, A.E. (2005). Informant discrepancies in the assessment of childhood psychopathology: a critical review, theoretical framework, and recommendations for further study. *Psychological Bulletin, 131 (4),* 507-19.

Mathews, A. (1990). Why worry? The cognitive function of anxiety. *Behaviour Research and Therapy,* 28, 455-468.

McClure, E. B., Brennan, P., Hammen, C. & LeBrocque, R. M. (2001). Parental anxiety disorders, child anxiety disorders, and the perceived parent-child relationship in an Australian high-risk sample. *Journal of Abnormal Child Psychology, 29 (1),* 1-10.

Mesman, J., & Koot, H. M. (2000). Common and specific correlates of preadolescent internalizing and externalizing psychopathology. *Journal of Abnormal Psychology, 109,* 428-437.

Morey, L.C. (1991). *The Personality Assessment Inventory professional manual*. Odessa, FL: Psychological Assessment Resources.

Muris, P., Steernman, P., Merckelbach, H. & Meester, C. (1996). The role of parental fearfulness and modeling in children's fear. *Behavior Research Therapy, 34 (3),* 265-268.

Nunally, J. M. (1970) *Introduction to psychological measurement*. New York: McGraw-Hill.

Ollendick, T. H., King, N. J., & Frary, R. B. (1989). Fears in children and adolescents: Reliability and generalizability across gender, age, and nationality. *Behaviour Research and Therapy, 27,* 19-26.

Ollendick, T. H., Matson, J. L., & Helsel, W.J. (1985). Fears in children and adolescents: Normative data. *Behaviour Research and Therapy, 23,* 465-467.

Paulhus, D. L. (1984). Two-component models of socially desirable responding. *Journal of Personality and Social Psychology, 46(3),* 598-609.

Pervin, L. (1970). *Personality: Theory, assessment and research*, New York: Wiley.

Phares, V. (1997). Accuracy of informants: Do parents think that mother knows best? *Journal of Abnormal Child Psychology,* 25, 165-171.

Phares, V., Compas, B.E., & Howell, D.C. (1989). Perspectives on child behavior problems: Comparisons of children's self-reports with parent and teacher reports. *Psychological Assessment,* 1, 68-71.

Rodriguez, C. M. (2011). Association between independent reports of maternal parenting stress and children's internalizing symptomatology. *Journal of Child and Family Studies, 20(5),* 631-639.

Rogers, R., Sewell, K. W., Morey, L.C., & Ustad, K. L. (1996). Detection of feigned mental disorders on the Personality Assessment Inventory: A discriminant analysis. *Journal of Personality Assessment,* 67, 629-640.

Rosenbaum, J. F., Biederman, J., Bolduc, E. A., Hirshfeld, D. R., Faraone, S. V. & Kagan, J. (1992). Comorbidity of parental anxiety disorders as risk for childhood-onset anxiety in inhibited children. *American Journal Psychiatry, 149*, 475-481.

Sackheim, H.A., & Gur, R. (1978). Self-deception, self-confrontation, and consciousness. In G.E. Schwartz & D. Shapiro (Eds.*), Consciousness and self-regulation: Advances in research* (Vol. 2, pp. 139-197). New York: Plenum Press.

Safford, S. M., Kendall, P. C., Flannery-Schroeder, E., Webb, A., & Sommer, H. (2005). A longitudinal look at parent–child diagnostic agreement in youth treated for anxiety disorders. *Journal of Clinical Child and Adolescent Psychology*, *34*(4), 747-757.

Schaughency, E.A., & Lahey, B.B. (1985). Mothers' and fathers perceptions of child deviance: Roles of child behavior, parental depression, and marital satisfaction. *Journal of Consulting and Clinical Psychology, 53*, 718-7233.

Silverman, W.K., & Albano, A.M. (1996). *The Anxiety Disorders Interview Schedule for Children for* DSM-IV: (*Child and Parent Versions*). San Antonio, TX: Psychological Corporation.

Silverman, W.K., & Ginsburg, G.S. (1998). Anxiety disorders. In T.H. Ollendick & M. Hersen (Eds.), *Handbook of child psychopathology* (pp 239-268). New York: Plenum Press.

Silverman, W. K., & Nelles, W. B. (1988). The Anxiety Disorders Interview Schedule for Children. *Journal of the American Academy and Child and Adolescent Psychiatry, 27*, 772-778.

Siqueland, L., Kendall, P. C. & Steinberg, L. (1996). Anxiety in children: perceived family environments and observed family interaction. *Journal of Child Clinical Psychology*, *25*, 225-237.

Snyder, M., & Uranowitz, S.W. (1978). Reconstructing the past: Some cognitive consequences of person perception. *Journal of Personality and Social Psychology, 36*, 941-950.

Strickland, B. (1977). Approval motivation. In T. Blass (Ed.), *Personality variables in social behavior* (pp. 315-356). New York: Wiley.

Taylor, J. (1961). What do attitude scales measure? The problem of social desirability. *Journal of Abnormal and Social Psychology, 62*, 386-390.

Van Bockstaele, B., Verschuere, B., Tibboel, H., De Houwer, J., Crombez, G., & Koster, E. H. (2013). A Review of Current Evidence for the Causal Impact of Attentional Bias on Fear and Anxiety.

Warren, S. L., Huston, L., Egeland, B., & Srouge, L. A. (1997). Child and adolescent anxiety disorders and early attachment. *Journal of the American Academy of Child and Adolescent Psychiatry, 36,* 637-644.

Weems, C. F., Hammond-Laurence, K., Silverman, W., K., & Ginsburg, G. S. (1998). Testing the utility of the anxiety sensitivity construct in children and adolescents referred for anxiety disorders. *Journal of Clinical Child Psychology, 27*, 69-77.

Williford, A., Calkins, S. D., & Keane, S. P. (2007). Predicting change in parenting stress across early childhood: Child and maternal factors. *Journal of Abnormal Child Psychology, 35*, 251-263.

APPENDIX A: LIST OF MEASURES ADMINISTERED TO PARTICIPANTS

Respondent	Measure	Age
Parent	PSC Consent	All
Parent	Fee Schedule	All
Parent/Child	Anxiety Research/Tx Consent	All
Parent	Consent to obtain/release for school	All
Parent	Childhood History Form mail-out	All
Parent	Parent Interview	All
Child	Child Interview	3+
Parent	ADIS-Parent	6-18
Child	ADIS-Child	7-18
Parent	Child/Adolescent Psychosocial	All
Both Parents	CBCL	6-18
Both Parents	Conners' Parent	3-17
Parent	PSI-SF	1-12
Both Parents	SCL-90	All
Both Parents	How am I parenting	All
Child	YSR	11-18
Child	CDI-child	7-17
Child	MASC	8-19
Child	Conners-Wells Self Report	12-17
Teacher	Conners-Teacher	6-18
Teacher	TRF	6-18
Child	WISC-IV record and response forms	6-16
Child	VMI	3-18
Child	SCARED-C	9-18
Child	FSSC-R	7-18
Child	RCMAS-2	6-19
Child	CASI	6-17
Parent	MotiF	6-17
Parent	SCARED-P	9-18
Parent	FES	All
Child	WJ-III record and response forms	4-85
Child	BATIE	All
Child	CATS	7-16
Child	AMP	All
Child	NAASQ	7-15
Child	BIS/BAS	All

APPENDIX B: LSU IRB APPROVAL

Project Report and Continuation Application

(Complete and return to IRB, 131 David Boyd Hall.
Direct questions to IRB Chairman Robert Mathews 578-8692.)

Institutional Review Board
Dr. Robert Mathews, Chair
131 David Boyd Hall
Baton Rouge, LA 70803
P: 225.578.8692
F: 225.578.5983
irb@lsu.edu | lsu.edu/irb

Date Sent: 3/4/2013

IRB#: 2637 **Your Current Approval Expires On:** 5/31/2013

Review type: Expedited **Risk Factor:** Minimal

PI: Thompson Davis **Dept:** Psychology **Phone:** (225) 578-1500

Student/Co-Investigator: Marie Nebel-Schwalm

Project Title: Anxiety Disorders Clinic: Assessment

Number of Subjects Authorized: 200

Please read the entire application. Missing information will delay approval!

I. PROJECT FUNDED BY: LSU proposal #: 0

II. PROJECT STATUS: Check the appropriate blank(s); and complete the following:

- ✓ 1. **Active**, subject **enrollment continuing**; # subjects enrolled: 232
- ___ 2. **Active**, subject **enrollment complete**; # subjects enrolled: ___
- ___ 3. **Active**, subject **enrollment complete**; work with subjects continues.
- ___ 4. **Active, work with subjects complete**; data analysis in progress.
- ___ 5. Project **start postponed**
- ___ 6. **Project complete;** end date __/__/__
- ___ 7. **Project cancelled**: no human subjects used.

III. PROTOCOL: (Check one).

- ✓ Protocol continues as previously approved
- ___ Changes are requested*
  - *List (on separate sheet) any changes to approved protocol.*

IV. UNEXPECTED PROBLEMS: (did anything occur that increased risks to participants):

- State number of events since study inception: N/A since last report: 0
- If such events occurred, describe them and how they affect risks in your study, in an attached report.
- Have there been any **previously unreported** events? Y/N N ?
  (if YES, attach report describing event and any corrective action).

V. CONSENT FORM AND RISK/BENEFIT RATIO:

Does new knowledge or adverse events change the risk/benefit ratio? Y/N N:
Is a corresponding change in the consent form needed? Y/N N

VI. ATTACH A BRIEF, FACTUAL SUMMARY of project progress/results to show continued participation of subjects is justified; or to provide a final report on project findings.

VII. ATTACH CURRENT CONSENT FORM (only if subject enrollment is continuing); and check the appropriate blank:

- ✓ 1. Form is unchanged since last approved
- ___ 2. Approval of revision requested herewith: (identify changes)

Signature of Principal Investigator: _____ **Date:** 4/3/13

IRB Action:
- ✓ Continuation approved; **Approval Expires:** 4/8/14
- ___ Disapproved
- ___ File closed

Signed _____ Date: 4/9/13

PARENTAL CONSENT FORM

Project Title: Anxiety Disorders Clinic: Assessment of Children and Adolescents

Performance Site: Physical Address: Psychological Services Center, LSU, 31 Johnston Hall, Baton Rouge,
LA 70803. Mailing Address: Psychological Services Center, 236 Audubon Hall, Baton Rouge, LA 70803

Investigator: The following investigator is available for questions Monday-Friday, 9:00 a.m.- 4:30 p.m.
Dr. Thompson Davis, III
Psychology Department, LSU
(225) 578-1500

Purpose of the Study: The purpose of this research project is to assess and diagnose children and adolescents who are experiencing various difficulties, such as academic problems, difficulties paying attention, mood-related difficulties, and/or worries and fears.

Inclusion Criteria: Children and adolescents 2-17 years of age.

Exclusion Criteria: Children who do not meet the age requirements; non-English speakers; and/or children who have a comorbid condition that would severely limit their ability to complete an assessment.

Maximum Number of Subjects: The maximum number of subjects will be 400.

Study Procedures/Description of the Study: Participants will be asked to complete questionnaires and interviews with the investigators.

Benefits: The benefit will be the thorough assessment and diagnosis of problems affecting the child or adolescent. The participants understand that the examiners cannot guarantee the presence or absence of psychopathology. Further, the final report will reflect the clinical opinions (based on the assessment data collected) of the primary investigator.

Risks/Discomforts: Some participants may not feel comfortable answering questions about their difficulties. The purpose of asking particular questions will be explained, however, participants will also be told that they may refuse to answer questions—though this may compromise portions of the final report.

Right to Refuse: Participation is voluntary and a child (or adolescent) will become part of the study only if both child and parent agree to the child's participation. At any time, either the subject or the parent may withdraw from the study without penalty or loss of any benefit to which they might otherwise be entitled.

Privacy: Records with identifying information will be kept in a locked facility. Electronic data will be entered without identifying information. Results of the study may be published, but no names or identifying information will be included for publication. Subject identity will remain confidential unless disclosure is required by law (e.g., suspected or reported ongoing child abuse or neglect). I understand that the investigators are required by law to report any reasonable suspicions.

Financial Information: The cost for participation in this study is the same cost as a psychoeducational evaluation at the PSC ($500.00). This includes the cost of administering achievement and intelligence tests, and assessing psychopathology via semi-structured interviews, school observations, and rating scales. Participants who withdraw will pay a pro-rated fee based on the assessments given and the time

involved. Participants wishing to withdraw after learning the outcome of their assessment forfeit their evaluation fee.

Withdrawal: Participants may withdraw from the research study at any time. Parents wishing to withdraw should contact the principal investigator or co-investigators in writing as soon as this decision has been made.

Removal: Participants may be removed from the study without consent if they are believed to be a danger to themselves or others. Removal may also occur if the investigators lose contact with a family after attempts to reach them or if the investigators believe removal and assessment else where would be in the best clinical interest of the participants.

Alternatives: Every effort will be made to use the most appropriate methods of assessment and diagnosis. Participants understand that clinical assessment and the tools used to that end are determined by the clinical judgment of the investigator. Participants desiring the use of specific assessment tools deemed unnecessary by the investigator will be referred out.

Unforeseeable Risks: There may be unforeseeable risks to participants of this study as a result of participating, however, steps are taken to minimize any potential foreseeable risks and discomfort.

Study-associated injury or illness: Though injuries are not anticipated, medical care will be summoned for participants sustaining injury or illness as a result of the study. Participants should understand that even with precautions in place, should any injuries occur either during or as a result of participation neither LSU nor the researchers will be able to provide any compensation or medical care.

Study-related illness or injury: In case of medical emergency and in case further psychological attention is needed, we have listed resources below:

Medical Services
911 (for emergencies)
Mental Health Services
911 (for emergencies)
Psychological Services Center (225) 578-1494

New Findings: Participants will be notified if newly published research pertaining to the assessment provided by this study become available.

Signatures:

The study has been discussed with me and all my questions have been answered. I may direct additional questions regarding study specifics to the investigators. If I have questions about subjects' rights or other concerns, I can contact Robert C. Mathews, Chairman, LSU Institutional Review Board, (225)578-8692. I agree to participate in the study described above and acknowledge the researchers' obligation to provide me with a copy of this consent form if signed by me.

_____ _____

Parent/guardian Signature Date

**Reader of the consent form, please sign the statement below if the consent form was read to the parent because he/she is unable to read:*

The parent/guardian has indicated to me that he/she is unable to read. I certify that I have read this consent form to the parent/guardian and explained that by completing the signature line above, he/she has agreed to participate and has given permission for the child to participate in the study.

Signature of Reader

Date

Study Approved By:
Dr. Robert C. Mathews, Chairman
Institutional Review Board
Louisiana State University
203 B-1 David Boyd Hall
225-578-8692 | www.lsu.edu/irb
Approval Expires: 4/8/2014

Child and Adolescent Assent Form

I, _____, agree to be in this study that looks at how I think and feel. I will be asked to answer questions about any fears, worries, emotions, or behaviors that I may have, as well as questions about how I get along with others (like my friends and family). I can decide to stop being in the study at any time without getting in trouble.

_____ _____ _____

Child/Adolescent Signature Date Age

_____ _____

Witness Signature* Date

(*Witness must be present for the assent process, not just the signature by the minor.)

Study Approved By:
Dr. Robert C. Mathews, Chairman
Institutional Review Board
Louisiana State University
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Approval Expires: 4/8/2014

VITA

Megan Elizabeth Kirkpatrick received her bachelor's degree at the University of New Orleans in 2009. After conducting research for two years at Tulane University's Child Trauma Center, she made the decision to enter a doctoral program in the Department of Psychology at Louisiana State University.