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Parental Psychological Control and Emotion Dysregulation Among Anxious Children: A Transactional Model

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PARENTAL PSYCHOLOGICAL CONTROL AND EMOTION DYSREGULATION AMONG ANXIOUS CHILDREN: A TRANSACTIONAL MODEL

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ABSTRACT

Existing research and theories have consistently highlighted the role of emotion regulation deficits and parental psychological control in the occurrence of childhood anxiety disorders. The aim of the present study was to continue to examine these relationships using observational methods amongst a clinically anxious sample. Additionally, the present study aimed to identify the direction of effects between parental psychological control and emotion dysregulation by examining whether there is a discernible sequence of parent and child behaviors forming a pattern of interaction between parents and their anxious children. This was completed using microanalytic coding methods to observe parental psychological control and child dysregulated emotion in moment-to-moment interactions between parents and their child. Time-window sequential analyses was used to identify whether parents were more likely to display psychological control in response to child dysregulated affect than at other times and whether children were more likely display dysregulated affect in response to parent psychological control than at other times. In a sample of 123 clinically anxious and 53 non-clinical children, ages 8 to 12 years, results indicated that anxious children were observed to display longer durations of dysregulated affect than non-clinical children, and parents of anxious children were observed to display longer durations of psychological control than parents of non-clinical children. Results from time-window sequential analyses indicated that children were more likely display dysregulated affect in response to parent psychological control than at other times. Anxiety disorder status did not moderate this relationship; however, race was found to moderate the relationship when examining a 4-second time-window. Findings support theories

highlighting the role of parental psychological control and emotion dysregulation deficits among children with anxiety disorders and further elucidate the nature of parent-child interactions with respect to parental psychological control and emotion dysregulation.

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CHAPTER 1

INTRODUCTION

Anxiety disorders are among the most prevalent psychiatric disorders in children and adolescents with a lifetime prevalence rate of approximately 15% to 20% (Beesdo, Knappe, & Pine, 2009; Gurley, Cohen, Pine, & Brook, 1996; Kashani, Orvaschel, Rosenberg, & Reid, 1989; Shaffer, Fisher, Dulkan, et al., 1995). Anxiety disorders are common among school-aged children and affect at least one child in every class of 30 (Cartwright-Hatton, McNicol, & Doubleday, 2006). Additionally, the median age of onset for adults with anxiety disorders is 11 years old, which appears to be much earlier than other psychiatric disorders (Kessler et al., 2005). Furthermore, children with anxiety disorders are at an increased risk for developing other psychiatric disorders (Pine, Cohen, Gurley, Brook & Ma, 1998) and impairments in school and social functioning (Albano & Detweiler, 2001; Bell-Dolan & Brazeal, 1993). With such high prevalence rates, early age of onset, and functional impairments caused by anxiety disorders, understanding the mechanisms involved in the maintenance of childhood anxiety is essential for prevention and treatment.

Leading etiological theories and research on child anxiety have consistently emphasized the role that parents play in the development and maintenance of excessive and maladaptive anxiety (e.g., Barlow, 2002; Chorpita & Barlow, 1998; Rapee, 2001; Rubin & Mills, 1991; van Brakel, Muris, Bogels, & Thomassen, 2006). Parents of children with anxiety disorders tend to be less warm and more controlling

than those of children without anxiety disorders (Ballash, Pemble, Usui, et al, 2006; Bogels & Brechman-Toussaint, 2006; Chorpita & Barlow, 1998; Gottman, Katz, & Hooven, 1997; McLeod, Wood, & Weisz, 2007; Pettit, Laird, Dodge, et al, 2001; Rapee, 1997; Wood, 2006; Wood, McLeod, Sigman, et al., 2003). Specifically, studies have suggested that parental psychological control is associated with childhood anxiety disorders, such that children with higher levels of anxiety tend to have parents who exhibit higher levels of psychological control (e.g., Ballash, Pemble, Usui, et al, 2006; Barber, Olson, & Shagle, 1994; Moore, Whaley, Sigman., 2004; Nanda, Kotchick, & Grover, 2012; Silk, Morris, Kanay, & Steinberg, 2003; Turner, Beidel, Roberson-Nay, & Tervo, 2003; Woodruff-Borden, Morrow, Bourland, & Cambron., 2002).

Existing research has also suggested that children with anxiety disorders have emotion regulation difficulties (e.g., Carthy, Horesh, Apter, & Gross, 2010; Suveg & Zeman, 2004; Suveg, Zeman, & Stegall, 2001; Zeman, Shipman, & Suveg, 2002; Barrett, Rapee, Dadds, & Ryan, 1996). Since parental psychological control influences affective experiences and intrudes upon the psychological and emotional development of children (Barber, 1996), understanding the reciprocal relationship between psychological control and displays of emotion dysregulation among anxious children is warranted.

Only few research studies have specifically investigated the relationship between parental psychological control and emotion dysregulation in children and adolescents (i.e., Luebbe, Bump, Fussner, & Rulon, 2014; Luebbe & Bell, 2014; Manzeske & Stright, 2009). Of those studies that have examined this relationship, they have relied

on self-report measures that assess behaviors globally or over a specified period of time. These types of measures do not give us insight into how such behaviors are manifested in real-time and reciprocally affect each other in moment-to-moment interactions. Furthermore, no studies have investigated the link between psychological control and emotion dysregulation in a clinically anxious population of children. Due to these gaps in the existing research, it is essential to investigate the relationship between psychological control and emotion dysregulation through observations of moment-to-moment interactions between parents and their anxious children. An examination of such transactions between parents and their children will give us insight into how the sequential nature of parental psychological control and displays of dysregulated affect in children contribute to the severity of anxiety, lend support to current etiological theories of child anxiety, and allow us to further identify potential targets in the treatment of child anxiety disorders.

CHAPTER 2

REVIEW OF LITERATURE

Anxiety Disorders in Childhood: Conceptualizations and Theoretical Models

Anxiety refers to a mood state marked by increased autonomic reactivity associated with worry, avoidance, and muscular tension. It is associated with memory, appraisal, and attentional thought biases that are characterized by a future-oriented cognitive style emphasizing potential feared events and stimuli (Barlow, 2002; Craske, Rauch, Ursano et al., 2009). Anxiety can be an adaptive emotional state, particularly when an individual is faced with real threats of danger. During such situations, an activation of the body's fight or flight response enables individuals to protect themselves from danger and impending threat. Additionally, appropriate activation of the body that is associated with anxiety can serve as an energizing function, allowing individuals to perform daily tasks and activities at an optimal level (Yerkes Dodson, 1908). Anxiety can also be a normal response to stress in order to enable an individual's body to appropriately respond to environmental demands; however, when anxiety becomes excessive and disabling, it may fall into the category of a diagnosable anxiety disorder.

Anxiety disorders are marked by similar features as state anxiety, but are experienced by individuals more intensely where such symptoms cause clinically significant interference, functional impairment, and are experienced for at least six months, beyond developmentally appropriate periods. Individuals sometimes

recognize this anxiety as irrational and uncontrollable. According the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (American Psychiatric Association [APA], 2013), anxiety disorders can be categorized into Separation Anxiety Disorder, Selective Mutism, Specific Phobia, Social Anxiety Disorder, Panic Disorder, Agoraphobia, and Generalized Anxiety Disorder. These anxiety disorders differ based on the situation or object that induce the anxious distress and related behavioral disturbances.

The Cognitive-Behavioral Framework

Cognitive-Behavioral models of childhood anxiety predominate current conceptual understandings of childhood anxiety disorders with cognitive-behavioral frameworks guiding the forefront of leading research and treatments of childhood anxiety disorders. The Cognitive-Behavioral model identifies three inter-related components of anxiety: anxious cognitions, physiological arousal, and anxiety maintaining behaviors (Ollendick & Cerny, 1981). Children with anxiety disorders have anxious thoughts and beliefs about themselves and others, their experiences and environment, and their future. They engage in a number of common cognitive distortions with the principle distortions being the overestimation of threat and an underestimation of their own coping ability (Barrett, Rapee, Dadds, & Ryan, 1996; Bogels & Zigterman, 2000). Children with anxiety disorders engage in a number of information processing biases, such as attention, interpretation, and memory biases. Children with anxiety tend to selectively attend to threat-stimuli, interpret ambiguous or mildly negative cues in a catastrophic manner, and have an enhanced recall for

threat-relevant memories (Bar-Haim, Lamy, Pergamin, et al., 2007; Vasey & MacLoed, 2001; Weems & Watts, 2005).

Behaviorally, children with anxiety disorders engage in a number of common behaviors and actions associated with their experienced anxiety. Anxious children tend to engage in reassurance and information seeking behaviors, excessive checking, avoidance of anxiety provoking stimuli, and excessive worry and rumination. These behaviors are thought to maintain cognitive and physiological components of anxiety disorders since children are unable to fully experience mastery and success over his or her own anxiety (Roblek & Piacentini, 2005).

While definitive pathophysiological mechanisms have not yet been determined, anxiety disorders are associated with an over-reactive fight-or-flight response (Hoehn-Saric & McLeod, 1988). Children with anxiety disorders tend to experience heightened sympathetic nervous system arousal in the face of anxiety provoking stimuli, thus, experiencing symptoms associated with such arousal (e.g., sweating, increased heart rate and blood pressure, rapid breathing, nausea, dizziness, and muscle tenseness, restlessness; Kagan, Reznick & Snidman, 1987). This heightened arousal is often maintained and associated with the aforementioned cognitive and behavioral components of anxiety.

Since the cognitive-behavioral framework identifies anxious thoughts, feelings, and behaviors at the core of anxiety disorders in children, Cognitive-Behavioral treatments target each component in order to reduced anxiety symptomology. Examples of strategies used in Cognitive-Behavioral Therapy include challenging children's anxious thoughts through behavioral experiments and cognitive

restructuring, teaching children to engage in non-avoidance behavior through exposure therapy and skill building exercises (e.g., problem-solving and assertiveness skills), and engaging in physiological and body relaxation strategies (Seligman & Ollendick, 2011).

The Emotion Regulation Framework

Another theoretical framework for understanding anxiety disorders that has been gaining more recent attention is an Emotion Regulation Framework (Mennin, Heimberg, Turk, & Fresco, 2005). Emotion regulation refers to an individual's ability to monitor, evaluate, and adaptively modify one's emotional reactions (Thompson, 1994). Adaptive emotion regulation allows children to appropriately and flexibly respond to their environment (Cole, Michel, & Teti, 1994). Based on research with adults who have anxiety disorders, anxiety disorders are characterized by significant deficits in emotional experience and regulation. Specifically, individuals with anxiety disorders experience 1). heightened intensity of emotion, 2). poorer understanding of emotion, 3). negative cognitive reactivity to emotions, and 4). maladaptive emotion management (Mennin, Heimberg, Turk, & Fresco, 2005; Mennin, McLaughlin, & Flanagan, 2009).

Based on this framework (Mennin, Heimberg, Turk, & Fresco, 2002), individuals with anxiety disorders have difficulties understanding their emotional experience and do not have the skills necessary to modulate their emotions adaptively. Individuals with anxiety disorders experience their emotions aversively and use worry and maladaptive behaviors, such as behavioral avoidance, in order to control, avoid, or dampen emotional experiences. By avoiding attention to emotions and emotional

stimuli, individuals with anxiety disorders are able to avoid their experience of intense emotions. However, this avoidance of heightened emotional intensity contributes to a decrease in emotion processing, and therefore, individuals continue to focus on anxiety-provoking stimuli without utilizing emotion information. Because of this over-focus on anxiety-provoking stimuli paired with anxious individuals' inability to understand and process emotional information because of its overwhelming nature, problem-solving becomes inflexible, leading to excessive worry, rumination, and/or behavioral avoidance. Due to these inflexible problem-solving strategies used by anxious individuals, the emotions that were avoided become more intense. This increase in emotions leads to greater attempts to control, avoid, or dampen the emotional experiences, thus continuing this cycle of heightened intensity of emotion, attempts to control, avoid, or dampen the emotional experiences, maladaptive emotion processing, and inflexible and maladaptive emotion management.

Since emotion regulation frameworks identify emotion regulation deficits at the core of anxiety disorders, such treatments focus on helping anxious individuals become more comfortable with intense emotional experiences, adaptively access and utilize emotional information to aide in flexible and adaptive problem-solving, and appropriately modulate emotional experience and expression (Mennin, Heimberg, Turk, & Fresco, 2002).

Emotion Regulation and Childhood Anxiety

While an emotion regulation framework is only in the beginning stages of being applied to the conceptualization and treatment of children with anxiety disorders, multiple studies have suggested that children with anxiety have emotion regulation

difficulties (e.g., Carthy, Horesh, Apter, & Gross, 2010; Suveg & Zeman, 2004; Suveg, Zeman, & Stegall, 2001; Zeman, Shipman, & Suveg, 2002; Barrett, Rapee, Dadds, & Ryan, 1996). Southam-Gerow and Kendall (2002) found that children with anxiety disorders have lower levels of emotional understanding than non-anxious controls. In a study of children with diagnosed anxiety disorders, Carthy and colleagues (2010) found that when presented with ambiguous scenarios, relative to a non-clinical control group, anxious children were observed to have greater negative emotional responses, poorer ability to reappraise negative emotional situations, and greater likelihood to use emotion regulation strategies that increase functional impairment, negative emotions, and emotion regulation self-efficacy. In another study using self-report measures by anxious children, Suveg and Zeman (2004) found that children with anxiety disorders had difficulty managing emotional experience. They suggested that this may be due to their self-report of experiencing heightened intensity of emotions and low confidence in their ability to regulated those emotions. Suveg and colleagues (2008) found similar results using observational methods where children and their parents discussed prior anxiety provoking situations. Muris, Meesters, & Rompelberg (2007) found that moving one's attention from one stimulus to another, which is an important component in emotion regulation, is associated with symptoms of anxiety in children.

Based on the aforementioned research on child emotional regulation and anxiety, we can see that children with anxiety have emotion regulation difficulties contributing to displays of dysregulated affect, emotion and behavioral avoidance, and worry. Consistent with emotion regulation frameworks applied to anxious adults, anxious

children also appear to experience a heightened intensity of emotions, poorer understanding of emotions, negative cognitive reactivity to emotions, and maladaptive emotion management.

Parents and Emotion Regulation in Children

Thompson and Meyer (2007) suggest that parents play a large role in the development of emotion regulation skills in children. Thompson and Meyer (2007) highlight five ways that parents and families influence the development of emotion regulation in children. They suggest that parents 1). directly manage their children's emotion, 2). provide evaluations of their children's emotions, 3). create an emotional climate within the family, 4). help children develop emotion representations, and 5). the quality of the parent-child relationship itself can have an influence on the development of emotion regulation in children.

From birth, parents intervene directly to manage their child's emotions. When infants display distress when feeling hungry, fatigued, or uncomfortable, parents attempt to soothe this distress. Gekoski, Rovee-Coller, and Carulli-Rabinowitz (1983) demonstrated that at six months of age, distressed infants can anticipate the arrival of their mothers and begin to quiet when they hear footsteps. Another way that parents directly attempt to manage their children's emotion is through face-to-face play. Mothers respond animatedly to maintain their infant's positive emotional state by mirroring the child's positive emotional expressions and ignoring their negative expressions. Malatesta, Culver, Tesman, & Shepard (1989) showed that this type of modeling accounted for gradually increased rates of infant happiness and interest in the first year. Other ways that parents directly intervene in managing their children's

emotions is by distracting their attention from potentially fearful or distressing situations and by suggesting adaptive ways of responding (Kopp, 1989) as well as by assisting in problem-solving, suggesting alternatives to maladaptive behavior, and helping them express their feelings more constructively (Thompson & Meyer, 2007). Parents also structure their children's experiences in a way that make emotional demands on children more manageable and predictable. They provide obvious emotional signals through their facial expressions and vocal tone to assist children with developing their own emotions (Klinnert, Campos, Sorce, Emde, & Svejda, 1983). Calkins and Johnson (1998) found that infants who were more distressed during difficult tasks had mothers who interfered more when interacting with their children. In contrast, children who used problem-solving and distraction strategies during the difficult task had mothers who were more supportive and offered suggestions and encouragement. Saarni (1999) added that parents indirectly socialize their child's emotion regulation by providing contingencies for their child's behavior, modeling emotional behavior, and discussing emotional topics. Saarni suggested that through these socialization mechanisms, children learn adaptive ways to experience and express emotions in social contexts.

Parents' evaluations of their children's emotion also play an important role in the development of emotion regulation. Gilliom and colleagues (2002) found that children whose mothers were more positive, warm, and approving were observed to manage their negative emotions more constructively at age three and a half than children of mothers who did not exhibit similar parenting behaviors. Eisenberg, Fabes, and Murphy (1996) found that mothers' problem-solving responses to their children's

negative emotions were associated with their children's constructive coping, while mothers' punitive responses were associated with avoidant coping. It has also been suggested that parents who consider emotional expressions as an occasion to validate their child's feelings and to teach them about emotions, expression, and coping are more attentive to their own emotions as well as those of their children. Gottman, Katz, and Hooven (1996) found that children of these types of parents were rated as having better emotion and physiological regulation when compared to children of parents who ignore or dismiss their own and their children's emotions. Ramsden and Hubbard (2002) found that lower levels of child aggression was predicted by mother's acceptance of her child's negative emotions and low amounts of negative emotional expressiveness.

The emotional climate of the family also influences the development of emotion regulation in children. Frequent or severe negative emotion within families can overwhelm children's capacities for emotion management. Eisenberg and colleagues (2001; 2003) found that families characterized by moderate to high amounts of positive emotion are associated with adaptive emotion regulation. They suggested that children learn adaptive skills and emotion regulation by modeling appropriate conduct, emotion, and regulation by their families. Accordingly, Davies and Forman (2002) demonstrate the consequences of marital conflict on the development of emotion regulation in children. They found that children who experienced the most intense marital conflict in their family put forth greater efforts to avoid conflict and had more internalizing symptoms than children with less marital conflict within their families.

Conversations between parents and their children also influence the development of emotion regulation. Dunn, Brown, and Beardsall (1991) found that the frequency and complexity of emotion related conversations between mothers and their 3-year-olds predicted the child's emotion understanding at age 6. They concluded that such conversations offer children insight into underlying psychological processes associated with feelings and how they can be evoked. Thompson and Meyer (2007) suggest that parent-child conversations about emotions and emotion regulation give children a conceptual foundation for their own understanding of emotion and its regulation.

The quality of the parent-child relationship has also been shown to have an influence on the development of emotion and its regulation in children. Much of the research in this area has looked at the effects of parent-child attachment on the development of emotion regulation. In general, findings suggest that children who have secure relationships with their mothers become more self-aware, have greater emotion understanding, and are able to be flexible in their use of emotion regulation strategies. Cassidy (1994) and Thompson (1994) suggest that this is because the mothers in these types of attachment relationships are more sensitive and accepting of their child's emotions and are more willing to talk about difficult emotions. In a 2001 study, Kochanska found that children who were insecurely attached exhibited greater fear and anger, and less happiness when compared to children who were securely attached. Gilliom and colleagues (2002) found that one and a half year old boys who were securely attached used more constructive anger-management strategies at age three and a half.

Based on the aforementioned findings, Thompson and Meyer (2007) suggest that critical parental reactions to children's emotions may undermine the development of emotion regulation in children. Additionally, they suggest that sympathetic or constructive reactions by parents in response to their child's emotions confirm that their child's feelings are justified. Similarly, they suggest that critical or punitive responses elicited by their child's affective displays convey messages that invalidate their child's emotions and the appropriateness of his or her feelings or expressions. These critical responses can arouse further negative emotion in the child, making it even more difficult for the child to learn how to appropriately manage his or her own emotions.

Parental Psychological Control and Child Anxiety

Based on the extant research on the role of parenting behaviors in response to children's affective displays and their role on emotion regulation development, one can see that parents play an important part in teaching their children adaptive emotional regulation strategies through these elicited responses. Many of the parenting behaviors described in the literature that have been theorized to interfere with the development of adaptive emotion regulation skills in children are consistent with the parenting construct of psychological control.

Parental psychological control refers to parents' attempts to control their children's thoughts and feelings through speech, affect, or behavior that conveys that the parents' acceptance of their child is contingent upon the child's thoughts, speech, affect, and/or behavior (Barber, 1996; Silk, Morris, Kanaya, & Steinberg, 2003). It is a way that parents attempt to control their children's psychological world by using

coercive, and/or passive-aggressive strategies. It consists of parental behaviors that are intrusive or manipulative of children's thoughts, feelings, and attachments to parents. This is in contrast to behavioral control, which includes overt methods to control a child's behavior. Examples of psychological control include invalidation of emotions, guilt induction, intrusiveness, love or acceptance withdrawal, criticism, not being tolerant of child's opinion, input, or disagreement, and fostering dependency (Barber, 1996; Barber & Harmon 2002; Silk, Morris, Kanaya, & Steinberg, 2003). It has been conceptualized as control of the personal domain, strategic manipulation and pressure, conditional regard, coercion, and disrespect of the child (Barber & Xia, 2013). Research focusing on understanding reasons for using psychological control is limited; however, it has been suggested that parents may not always be aware of the use of such parenting behaviors and may engage in such behaviors in order to build relatedness with their children, foster achievement, or because of parent separation anxiety (Soenens, Vansteenkiste, Duriez, & Goossens, 2006; Soenens, Vansteenkiste, & Luyten, 2010).

Numerous studies have suggested that parental psychological control is associated with childhood anxiety disorders, such that children with higher levels of anxiety tend to have parents who exhibit higher levels of psychological control. The link between parental psychological control and child anxiety has been well established among children and adolescents, in clinical and community samples, and using child-report, parent-report, and observational methods (e.g., Ballash, Pemble, Usui, et al., 2006; Barber, Olson, & Shagle, 1994; Moore, Whaley, & Sigman, 2004; Nanda, Kotchick, & Grover, 2012; Silk, Morris, Kanay, & Steinberg, 2003; Turner, Beidel, Roberson-

Nay, & Tervo, 2003; Woodruff-Borden, Morrow, Bourland, Cambron, 2002). Studies using parent or child report to assess child anxiety and parental psychological control have found significant relationships between the two variables, such that higher levels of reported parental psychological control are related to higher levels of reported child anxiety symptoms. These studies have demonstrated that parents of children reporting higher levels of anxiety tend to be perceived as less supportive, less promoting of independence, and less democratic (e.g., Barber, Olsen, & Shagle, 1994; Loukas, Paulos, & Robinson, 2005; Luebbe & Bell, 2014; Messer & Beidel, 1994; McClure, Brennan, Hammen, & Le Brocque, 2001; McShane & Hastings, 2009; Nanda, Kotchick, & Grover, 2012; Pettit, Laird, Dodge, et al, 2001; Stark, Humphrey, Laurent, et al., 1993).

Observational studies have also found a significant relationship between behaviors consistent with parental psychological control and child anxiety symptoms. In a clinically anxious sample, Siqueland, Kendall, and Steinberg (1996) found that objective observers rated parents of anxious children as granting less autonomy (i.e., promoting less independence) than a non-anxious control group. In a community sample (Greco & Morris, 2002), fathers of socially anxious children were observed as more controlling than fathers of non-anxious children. When completing a challenging task together, fathers of socially anxious children tended to provide unsolicited assistance that involved interrupting their child and taking over the task. Hudson and Rapee (2001) observed parents of clinically anxious children as more intrusively involved (i.e., provided unsolicited help) during an interactional task than those of non-anxious children. In a community sample, Krohne and Hock (1991) observed that

mothers of girls with high anxiety were more intrusive upon their daughter's problem-solving behaviors than mothers of girls with low anxiety. Mothers of anxious daughters were more likely to intervene and control the problem-solving process. Dumas, LaFreniere, and Serketich (1995) observed that mothers of anxious children were more controlling, coercive, unresponsive, and demonstrated more aversive affect toward their children than mothers of aggressive or competent children.

It is possible that the use of parental psychological control plays an important role in the use of (or lack thereof) adaptive emotion regulation strategies among anxious children. Specifically, it may be the use of parental psychological control in direct response to such instances of dysregulated affect among anxious children that is related to maladaptive emotion regulation skills. The continuing use of this parenting strategy in response to child emotion dysregulation, in turn, may undermine further development of adaptive coping and emotion regulation strategies among children with anxiety and could, thus, further contribute to the severity of a child anxiety disorder.

Parental Psychological Control and Emotion Regulation Deficits

Studies have recently begun to examine the relationship between parental psychological control, emotion regulation, and anxiety among children. Luebbe, Bump, Fussner, and Rulon (2014) found that self-reported dysregulation of negative emotions among a community sample of sixth- and seventh-grade students partially mediated the relationship between perceived parental psychological control and anxiety symptoms. In a community sample of seventh- through ninth-grade students, Luebbe and Bell (2014) found that child and parent-reported maternal psychological

control and negative emotion expressiveness within the family significantly predicted increased anxiety and depression among adolescents, which was significantly mediated by experienced negative affect. Among a sample of college students and their mothers, Manzeske and Stright (2009) found that maternal psychological control was significantly related to poor emotion regulation among college students. They further found that mother-reported psychological control was a more effective predictor of poorer self-reported emotion regulation among college students than behavioral control. Although anxiety was not specifically measured in this study, results highlight the relationship between psychological control and emotion regulation deficits.

Because of the significant research findings relating parental psychological control, emotion regulation, and child anxiety, it is essential to further examine how this relationship functions within parent-child interactions. It is important to see how parental psychological control is being executed in real-time, parent-child interactions and understand moment-to-moment antecedents and consequences of such parental behavior. Since parental psychological control is a type of parenting behavior that operates in the realm of a child's emotional world, an examination of a child's emotions and ability to regulate them in such real-time interactions may give us insight into how parental psychological control operates and functions among children with anxiety disorders and its relationship to emotion dysregulation. A better understanding of such transactions will lend support to current etiological theories of child anxiety and allow us to identify potential targets for child anxiety treatment.

Transactional Models

Sameroff and Chandler (1975) proposed a transactional model of development that suggests that developmental outcomes are a product of a continuous, dynamic interplay between child behavior, caregiver's response to that behavior, and environmental variables that may influence both child and caregiver. In other words, parents and children contribute to the development of one another. In the case of child anxiety, it is possible that parental psychological control and dysregulated emotions reciprocally affect one another, such that parental psychological control influences the development of anxiety in the child and symptoms of child anxiety affect the way a parent manages the child. This repeating and continuing pattern of behavior influences the overall development of both the parent and child over time, thus, contributing to the maintenance of child anxiety (Rapee, 2001). This model (also referred to as a bi-directional or reciprocal model) stands in contrast to both parent and child effects models (Branje, Hale, & Meeus., 2008), where parent effects models suggest that parental behavior serves as the antecedent or risk factor to the development of childhood disorders. Conversely, child effects models suggest that child characteristics or behaviors elicit specific parenting behaviors.

There have been a limited number of studies that directly look at the transactional relationship between parental psychological control and emotion dysregulation among anxious children. However, a few studies have looked at similar constructs. Soenens and colleagues (2008) found that a reciprocal model best fit their data in a sample of college students. Specifically, perceived parental psychological control predicted increases in depressive symptoms over two years and depressive symptoms predicted

an increase in perceived parental control over one year. However, this finding was only significant for perceived paternal psychological control and adolescent depressive symptoms. A child effects model was a better fit for ratings of maternal psychological control and adolescent depressive symptoms. In a sample of Chinese adolescents, Shek (2007) found that perceived parental psychological control and adolescent well-being were bi-directional in nature. Students in this study completed self-report measures at two time points, separated by one year. Results indicated that perceived parental control at Time 1 predicted adolescent psychological well-being at Time 2 and that adolescent psychological well-being at Time 1 predicted perceived parental psychological control at Time 2. Dumas, LaFreniere, and Serketich (1995) also found that children and mothers influence each other reciprocally. In a laboratory setting, they observed that anxious children and their mothers actively influenced one another such that mothers controlled their children through coercion and unresponsiveness and that children attempted to manage their mothers' behaviors by being resistant and coercive.

Behavioral theory has also been used to explain parent-child behaviors using the ABC model (Skinner, 1938). The ABC model refers to the contingencies of Antecedents, Behaviors, and Consequences, such that one can understand why specific behaviors occur by examining what happened in the environment immediately before and after the occurrence of the behavior. By understanding the context of the behavior, one can understand what might be maintaining the target behavior. Patterson (1982) has applied such behavioral principles to parent-child interactions by describing a process referred to as the Parent-Child Coercive Cycle. This process describes a cycle

of parents' attempts to control their child's aggressive or problematic behaviors and their children's response to such attempts; however, through a cycle of escalating negative parenting and child behaviors, ineffective parenting and problematic child behaviors are maintained. Research using behavioral theory, the ABC model, and the Parent-Child Coercive Cycle has predominantly focused on externalizing behaviors in children (e.g., Eddy, Leve, & Fagot, 2001; Fagot, Pears, Capaldi, Crosby, & Leve, 1998; Forgatch & DeGarmo, 1999; Keenan & Shaw, 1995; Morrell & Murray, 2003; Strassberg & Treboux, 2000). However, it is likely that these models are applicable to anxious children and psychologically controlling behaviors by parents.

As one can see, research that has looked at parent-child interactions using a behavioral model has not focused on parental psychological control and tends to examine externalizing behaviors among children. Most of the current research exploring transactional relationships between parents and their children utilize self-report data within a community sample. This research methodology only provides information about children's perceptions and does not allow us to fully grasp the nature of the relationships or objectively identify the variables investigated. Additionally, few studies have specifically examined the role of emotional dysregulation or child anxiety; most of the existing studies have looked at internalizing symptoms in general (e.g., depression, child adjustment, etc.). Due to the differences in behaviors between anxious and depressed children, it is likely that anxious and depressed children elicit different parenting behaviors and responses. Therefore, it may be important to look at such child behaviors independently. Furthermore, much of the current research investigating the transactions between

parental psychological control and child behavior has only examined this in the general population and not in a clinically anxious sample. A clinical sample is essential to understand how parental psychological control may play a role in the phenomenology of child anxiety disorders. Also, all of the previous studies that have attempted to explain such transactional relationships have used macroanalytical approaches or global measures of behavior. Such measures are inadequate at assessing the specific interaction cycle between parents and their anxious child as they only focus on general ratings of behavior over periods of time. In order to identify specific, direct antecedents and consequences of parental psychological control and the role of child dysregulated emotion, it is essential to use microanalytical approaches that allow for observation of moment-to-moment sequences of interactions between parent and child. This will allow us to see how parental psychological control is executed in real-time and enable us to see the sequential relationship between parental psychological control and child emotion dysregulation.

Multicultural Considerations

When examining the interactions between parents and children, it is essential to address multicultural issues that may also be playing a role in the relationship. Gender differences and socialization, race and ethnicity, socioeconomic status, as well as parent marital status are all important diversity issues that have been found to play a role in parenting style or the display of anxious or internalizing symptoms. For example, multiple studies have found that females report greater internalizing issues than males (e.g., Burt, McGue, Krueger, & Iacono, 2005; Leadbetter, Kuperminc,

Blatt, & Hertzog, 1999). Keenan and Shaw (1997) speculate that these reporting differences between genders may be an artifact of socialization.

Numerous studies have demonstrated the influence that ethnicity has on parenting and development. For example, Garcia-Coll and colleagues (1996) and Gonzales and Kim (1997) suggest that African American and Hispanic adolescents depend on their parents for support to a larger degree than White adolescents. In a sample of immigrant Chinese and European-American mothers of pre-school children, Chao (1994) found that Asian parents tend to be more controlling and restrictive than parents from European-American cultures. Studies have also found that parental psychological control may serve as a protective factor for African American children rather than contributing to psychological or behavioral problems (Bean, Barber, & Crane, 2006; Mason, Cauce, Gonzales, & Hiraga, 1996). Cultural norms and differences in emotion display rules should also be considered when examining parent-child interactions. Matsumoto (1990) suggested a framework where cultural differences in individualism and collectivism, power distance, and in- and out- groups play a role in the display and perception of emotions. This could be relevant to the display and perception of parental psychological control and/or anxiety and should be considered in research on parenting and child anxiety.

Socioeconomic status (SES) has also been shown to be related to anxiety disorders. Results from Kessler's 1994 study has suggested that lower household income and less education are associated with a greater likelihood of the development of an anxiety disorder as well as a longer course of the disorder. Woodward and Fergusson (2001) found that adolescents with higher rates of anxiety disorders were

more likely to come from socially disadvantaged families (i.e., educational underachievement, lower SES, below average living standards). Multiple other studies have also found significant associations between lower SES and elevated anxiety symptoms (e.g., Cronk, Slutske, Madden, et al., 2004; McLaughlin, Breslau, Green, et al., 2011; Merikangas, 2005; Miech, Caaspi, Moffitt et al., 1999). These studies have suggested that stressors associated with economic hardships contribute to increasing unpredictability in day to day functioning and elevated levels of worry about obtaining resources necessary to sustain health, thus increasing risk for developing anxiety symptoms.

Parental marital status also appears to play a role in parent-child relationships. Family relationship quality tends to be poorer among single-parent or divorced families (e.g., Loeber, Drinkwater, Yin, et al., 2000) and children of single-parent families tend to report more behavioral problems than children of intact families. Due to the significant effects that multicultural issues may have on parenting and its relationship to child anxiety, it is essential to examine these variables as potential moderators and make multicultural considerations when interpreting research results.

The Present Study

As one can see from the review of the literature, most of the extant research and current theories of parental psychological control and child anxiety have conceptualized this relationship as unidirectional, have utilized child-reported indices that only provide information about children's perceptions, and use macroanalytical approaches that fail to identify what specific aspects of anxiety may interact with parental psychological control in moment-to-moment interactions. Since parental

psychological control primarily functions in the field of emotions, and since one of the most prominent displays of anxiety is dysregulated negative affect and behavior, the present study postulated that this display of emotion is transactionally related to parental psychologically controlling behaviors among anxious children. It is possible that the contingent use of parental psychological control in response to emotion dysregulation in anxious children may function as an attempt to assist anxious children in managing their emotions (Bogels & Brechman-Toussaint, 2006; Rapee, 2001). However, this parental strategy is likely to be counterproductive and maladaptive for the anxious child, thus, further contributing to the use of maladaptive emotion regulation skills and greater anxiety severity. This emotion dysregulation may further elicit psychologically controlling parental behaviors, thus, continuing a cycle of parental psychological control and emotion dysregulation among anxious children. It was the aim of the present study to examine the nature of this process in order to inform our understanding of the etiology and maintenance of child anxiety disorders and the development of targeted and effective treatment methods.

Hypotheses

The proposed study aimed to address the following questions:

1. Are there observed differences in displays of dysregulated affect between anxious and non-anxious children?
    - Hypothesis 1: Display of dysregulated affect is significantly related to anxiety status, such that children with anxiety disorders are more likely to exhibit emotion dysregulation than children without an anxiety disorder.
2. Are there observed differences in displays of psychological controlling behaviors

between parents of anxious and non-anxious children?

- Hypothesis 2: Parental psychological control is significantly related to anxiety status, such that parents of children with anxiety disorders are more likely to exhibit psychologically controlling behaviors than parents of children without an anxiety disorder.

3. To what extent is there a discernible sequence of parent and child behaviors that form a pattern of interaction between parents and their anxious children, with respect to parental psychological control and child dysregulated emotion?
    a. Are parents more likely to engage in psychological control in response to dysregulated emotion than they are at other times?
    b. What happens to the child's dysregulated emotion after an instance of parental psychological control?

- Hypothesis 3: There is a specific sequence of parent and child behaviors that forms a pattern of interaction between parents and their anxious children. This relationship is conditional, such that:
    - Parents are more likely to engage in psychological control within 4 seconds after a child's display of dysregulated emotion than they are at other times.
    - Children's dysregulated emotion changes (i.e., increases or decreases) 4 seconds after an instance of parental psychological control.

4. If a contingent relationship between parental psychological control and dysregulated emotion is discernible, to what extent is this relationship related to anxiety severity?

- Hypothesis 4: The contingency between parental psychological control and

emotion dysregulation is positively related to anxiety severity, such that children from families with high contingency between psychological control and dysregulated emotion are more anxious.

5. To what extent do multicultural factors (i.e., race/ethnicity, gender, socioeconomic status) play a role in the relationship between parental psychological control and dysregulated affect among anxious and non-anxious children?
    - Hypothesis 5: Girls will display higher levels of affect dysregulation and will be more likely to have an anxiety disorder than boys.
    - Exploratory analyses of a qualitative and descriptive nature will be conducted to examine the relationship between other multicultural factors and parental psychological control and dysregulated affect.

CHAPTER 3

METHODOLOGY

Participants

The final sample for the present study included 176 children, ages 8 to 12 years (M=9.74; SD=1.37). Anxious participants were recruited through the Pediatric Anxiety Research Clinic at the Bradley Hasbro Children's Research Center. Non-clinical children were recruited through local pediatricians' office and schools in Rhode Island. About 84% were White (n=147), 46% were girls (n=81), and 70% (n=123) had a primary anxiety diagnosis. See Table 1 for detailed demographic characteristics. About 6% of the sample considered themselves to be of Hispanic or Latino ethnicity (n=10), and approximately 70% (n = 123) of parents were married and/or living together. About 33% (n = 58) of families had an approximate household yearly income of greater than $100,000.

Measures

Demographics. A demographics questionnaire was used to assess child's age, race, sex, and parent information (i.e., parent marital status, occupation, education, and income).

Anxiety Diagnoses. The Anxiety Disorders Interview Schedule for Children (ADIS; Silverman & Albano, 1996) was used to identify the presence of an anxiety disorder among children. The ADIS is a semi-structured interview that yields DSM-IV diagnoses for all anxiety, mood, and externalizing disorders for children ages 7-17

years. Clinician severity ratings (CSR) from a combined child and parent interview about the child's symptoms were obtained, and diagnoses were made by combining parent and child scores using a formula specified by the authors of the instrument. Ratings ranged from 0 to 8, where 0 indicated no symptoms present for that diagnosis, and 8 indicated symptoms that cause significant impairment and interference across multiple settings. Ratings of 4 and above were considered clinically significant, thus, warranting a diagnosis of the disorder. Symptoms with less severe ratings (i.e., CSR = 3) were considered subclinical. CSRs of 2 and under were considered non-clinical. Diagnoses and CSR were used to determine group inclusion and exclusion in the present study.

Psychometric properties of the ADIS are well established (Silverman, Saavedra & Pina, 2001). Silverman and colleagues (2001) reported acceptable test-retest reliability over 7 to 14 days for symptom scale scores for Separation Anxiety Disorder, Social Phobia, Specific Phobia, and Generalized Anxiety disorder (kappa = .84, .82, .81, .80, respectively), deriving diagnoses for these disorders (r=.56, .81, ..78, .84, respectively) as well as clinician impairment ratings (r=.80, .84, .84, .82, respectively).

Anxiety Severity. The Multidimensional Anxiety Scale for Children (MASC; March, Parker, Sullivan, et al., 1997) was used to identify the severity of anxiety symptoms of among children. The MASC is a child self-report 39-item questionnaire assessing symptoms of anxiety. Children responded to questions (e.g., I get nervous if I have to perform in public) on a four point Likert scale (i.e., 0= *never true about me,* 1= *rarely true about me,* 2= *sometimes true about me,* 3= *often true about me*). There are four

scales: Physical Symptoms, Social Anxiety, Harm Avoidance, and Separation Anxiety. Scores for each scale are obtained by summing all items in each scale. A total anxiety score is obtained by summing all items on the questionnaire. Higher scores indicate higher levels of anxiety. For the present study, the total anxiety score was used to measure anxiety severity in participants.

March and colleagues (1997) examined the psychometric properties of the MASC in a clinical population. Analyses yielded acceptable convergent validity with the RCMAS (r= .633), acceptable test-retest reliability at 3-months (alpha=.874), and acceptable internal reliability (alpha= .9). Internal consistency for the present study was also acceptable for both the anxious (alpha=.871) and control (alpha= .824) groups.

Parent-Reported Emotion Regulation. The Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997) was used to validate the emotion regulation observational codes. The ERC is a 24-item questionnaire that measures parents' perceptions of how their child manages emotional experiences. Parents respond to items about their child (e.g., Is able to delay gratification.) on a 4-point Likert scale, where 1= *rarely/never like this child,* 2=*sometimes like this child,* 3=*often like this child,* 4=*almost always like this child*. The ERC yields two subscales: lability/negativity and emotion regulation. High scores on the lability/negativity subscale indicate inflexibility and dysregulated negative affect. High scores on the emotion regulation subscale indicate appropriate emotional expression and self-awareness. Subscale scores of the ERC were used to identify relationships with the observational codes for child dysregulated emotion for the present study.

Psychometric properties have been well established (Shields & Cicchetti, 1997) for the ERC. Internal consistency analyses revealed alpha coefficients of .89 for the total score, .96 for the lability/negativity subscale, and .83 for the emotion regulation subscale. Shields and Cicchetti also found positive correlations with observer ratings of child regulatory abilities. Internal consistency for the present study was also acceptable for both the anxious (alpha: lability/negativity= .875; emotion regulation= .664) and control (alpha: lability/negativity= .787; emotion regulation= .486) groups.

Child-Reported Emotion Regulation. The Children's Emotion Management Scales (CEMS; Zeman, Shipman, & Penza-Clyve, 2001) was used to validate the emotion regulation observational codes. The CEMS is a child self-report questionnaire that assesses children's emotion regulation in the context of feelings of anger, sadness, and worry. Each of the three scales (i.e., Anger, Sadness, and Worry Management) consists of 10 items, where children indicate the frequency they engage in a variety of emotion management strategies when feeling worried (e.g., I do things like cry and carry on when I'm worried) on a 3-point Likert scale (i.e., 1=*hardly ever,* 2=*sometimes,* 3=*often)*. Each scale consists of three subscales measuring the extent to which children use specific emotion management strategies (i.e., Inhibition, Coping, Dysregulation). Higher scores on a subscale indicate higher reliance on that corresponding emotion management method. Subscale scores of the CEMS were used to identify relationships with the observational codes for child dysregulated emotion for the present study.

Examination of the psychometric properties of the CEMS indicate moderate to strong internal reliability (r=.62 to .77) and moderate to strong test-retest reliability

(*r*=.61 to .80; Zeman, Shipman, Penza-Clyve, 2001). For the present study, internal consistency ranged from low to acceptable for both the anxious and control groups (see Table 2).

Maternal- and Child-Reported Parental Psychological Control. The Shortened Child's Report of Parenting Behavior Inventory (CRPBI; Schludermann & Schludermann, 1988) was used to validate the parental psychological control observational codes. The CRPBI is a parent and child self-report questionnaire assessing parenting behaviors across three domains (acceptance vs. rejection, psychological control vs. psychological autonomy, and firm vs. lax control). Children respond to questions about their mothers (e.g., "My mother says, if I really cared for her, I would not do things that causes her to worry") and mothers respond to questions about their own parenting (e.g., "I am a parent who will avoid looking at my child when I am disappointed in him or her") on separate questionnaires. Participants respond using a three-point Likert scale to rate the degree to which each statement describes the parent, where NL= *not like*, SL= *somewhat like*, and L= *a lot like*. Scores from each subscale are summed, where higher scores indicate higher perceived levels of that behavior exhibited by parents. Scores from the Psychological Control vs. Psychological Autonomy subscale were used to identify relationships with the observational codes for parental psychological control for the present study.

Safford, Alloy, and Pieracci (2007) examined the internal consistency (alpha = 0.87) of the CRPBI and the convergent validity (*r*=.56) of the CRPBI and the Parental Bonding Instrument (PBI). Their analyses yielded acceptable results. In the present study, internal consistency analyses were acceptable for both anxious (child report

alpha=.496; mother report alpha= .693) and control (child report alpha=.753; mother report alpha= .692) groups.

Observed Parental Psychological Control. Codes for parental psychological control were developed for the purpose of this study. Observed parental psychological control was derived from observational codes of discrete instances of parental psychological control during a video-taped, parent-child discussion task. Using Observer XT 11, frequency counts, time points, and total duration of parental psychological control were calculated for each observed parent-child interaction. Operational definitions were developed based on three sources: 1. pre-existing coding schemes that included similar constructs, 2. self-report questionnaires of similar constructs, and 3. definitions provided in the literature. For the current study, observed parental psychological control was generally defined as "parent speech, affect, or behavior that conveys that the parents' acceptance of their child is contingent upon the child's thoughts, speech, affect, and/or behavior. It is a way that parents attempt to control their children's thoughts, speech, affect, and/or behavior using coercive, passive-aggressive, and hostile strategies. It consists of parent behaviors that are intrusive or manipulative of children's thoughts, feelings, and attachments to parents. Parental psychological control may not be detectable in parent speech alone. Additionally, it is important to identify what parents are conveying through their behaviors, tone, affect, facial expressions, and posture." Specific examples of observed parental psychological control were also provided in a coding manual (e.g., pressuring the child to agree, asking why something bothers the child in a dismissive tone, eye-rolling). Data

regarding the frequency, duration, and exact time-points of such instances of psychological control were obtained for the main analyses of the present study.

Analyses to establish reliability and validity for the observed psychological control codes were conducted. Inter-rater reliability of the observational code from two coders was established prior to coding by examining Cohen's Kappa coefficient (Cohen, 1960). Twenty percent of the parent-child discussions were randomly selected from both the anxious and control groups. These discussions were double coded by an undergraduate psychology research assistant and the researcher. Results indicated Kappa coefficients in the substantial range (Landis & Koch, 1977): Psychological Control Code= .674 and No Psychological Control Code= .653.

Convergent validity of the observational codes was established by identifying correlations between observed psychological control scores (frequency and duration) and CRPBI scores (child and mother report). All correlations were significant, positive, and in the expected direction (see Table 3). The low to moderate strength of the correlations are consistent with previous studies examining convergent validity between observed and self-report measures (e.g., Chorney, Tan, Martin, et al., 2012; Hadley, Stewart, Hunter, et al., 2013; Conger, Conger, Elder, et al., 1992). This is a reflection of the biases (e.g., social desirability) of the different data collection methods (Hahlweg, K., Kaiser, A., Christensen, A., et al., 2000).

Observed Dysregulated Emotion in Children. Codes for child dysregulated emotion were developed for the purpose of this study. Observed child dysregulated emotion was derived from observational codes of discrete instances of dysregulated emotion during a video-taped, parent-child discussion task. Using Observer XT 11, frequency

counts, time points, and total duration of dysregulated were calculated for each observed parent-child interaction. Operational definitions were developed based on three sources: 1. pre-existing coding schemes that include similar constructs, 2. self-report questionnaires of similar constructs, and 3. definitions provided in literature. For the present study, observed dysregulated emotion in children was generally defined as "any display of negative emotion (e.g., anger, anxiety, etc.), either verbal or physical. Dysregulated affect may also appear as any emotional display that suggests feelings of discomfort by the individual. Negative affect can be described as being mild (1), moderate (2), or severe (3). Specific examples of mild, moderate, and severe dysregulation were also provided in the coding manual (e.g., whining, not engaging in the conversation, crying, reassurance seeking). Data regarding the frequency, duration, and exact time-points of such instances of dysregulated emotion were obtained for the main analyses of the present study.

Analyses to establish reliability and validity for the observed dysregulated emotion codes were conducted using the same methods as previously described for observed psychological control. Results of the inter-rater reliability analyses indicated Kappa coefficients in the moderate to substantial range (Landis & Koch, 1977): Dysregulated Emotion Code= .694 and Regulated Emotion Code = .745. Additional Kappa coefficients were obtained for the separate modifiers of the dysregulated emotion codes, all of which were in the substantial range: Mild = .661, Moderate= .694, Severe= .768, and Regulated= .736.

Convergent validity of observed dysregulated emotion was examined by identifying correlations between observed dysregulated emotion scores (duration and

frequency) and CEMS (child report) and ERC (mother report) scores (see Tables 4 and 5). Observed dysregulation was negatively associated with child-reported effective coping of anger, sadness, and worry. The direction of the association between observed dysregulation and child-reported inhibition and dysregulation varied by emotion (i.e., anger, sadness, or worry) and type of observation (i.e., duration vs. frequency). Observed dysregulation was positively associated with mother-reported child lability/negativity and negatively associated with mother-reported child emotion regulation. The low strength and varied directions of the correlations are consistent with previous studies examining convergent validity between observed and self-report measures (e.g., Chorney, Tan, Martin, et al., 2012; Hadley, Stewart, Hunter, et al., 2013; Conger, Conger, Elder, et al., 1992). The inconsistent findings are a reflection of the biases (e.g., social desirability and differences in parent and child perceptions) of the different data collection methods (Hahlweg, K., Kaiser, A., Christensen, A., et al., 2000).

Procedures

The present study utilized data that were collected as part of a larger study examining parent-child interactions among children with anxiety disorders at the Pediatric Anxiety Research Clinic (PARC) at the Bradley Hasbro Children's Research Center/Rhode Island Hospital. Both the University of Rhode Island and Rhode Island Hospital's Institutional Review Boards approved the data collection and analyses for the present study.

Participants were recruited through PARC (anxious group) as well as from the surrounding community and pediatricians' offices (control group) through

advertisements and postings. Parents who expressed interest in participating in the study were mailed a packet of questionnaires and measures to complete prior to their initial study appointment. Questionnaires used in the present study included a demographics form completed by the child's parents, a form asking parents to describe two general family problems involving the child and two child anxiety specific problems as well as measures of parental psychological control and other parenting behaviors, child anxiety, and child emotion regulation, all of which were completed by parents and/or their child.

As part of the larger study, participants took part in procedures over two visits. During the first visit, consent was obtained from parents and assent was obtained from the child. Also, a combined parent/child ADIS was administered by a trained clinician to both parent and child simultaneously to establish their eligibility for study inclusion and group placement. During the second visit, which occurred within 14 days of the first visit, families completed the videotaped parent-child discussion. The video-recorded, parent-child discussions observed in the present study were modeled after procedures used by Siqueland, Kendall, & Steinberg (1996) and Whaley, Pinto, & Sigman (1999). Prior to the discussion, the research assistant provided instructions for the discussions and gave the parent an index card detailing the topic of the family-problem conversation. The research assistant then left the room giving the parent and child five minutes to discuss this problem and generate solutions. After exactly five minutes, the research assistant returned to the room, indicating the end of the discussion. This process was repeated once more with a second issue about the child's anxiety. Both discussion topics were completed by anxiety and control participants.

Upon completion of study procedures, participants were debriefed and told of the general purposes of the study. The child was given a small reward for his or her efforts (e.g., toy, markers).

For the present study, participants were grouped into either an Anxiety Group or a Nonclinical Control Group. This was based on the child's diagnosis and Clinical Severity Rating (CSR) as determined by the structured clinician interview with the ADIS that was conducted as part of the larger study. For the present study, children with a primary anxiety diagnosis (i.e., Clinical Severity Rating (CSR) on the ADIS of 4 or higher) were placed in the Anxiety Group; children without any anxiety or other clinical diagnosis (i.e., CSR of 2 or lower) were placed in the Nonclinical Control Group; participants with sub-clinical anxiety (i.e., CSR=3) or whose anxiety diagnosis was secondary to another clinical diagnosis were excluded from the present study.

Two raters coded the video data for this study. A trained, advanced undergraduate psychology research assistant and the researcher observed each video-recorded parent-child discussion at least twice, with at least one viewing focused on coding parental psychological control and at least one other viewing focused on coding child dysregulation emotion. Coding as well as calculations of frequency, time points, and duration for psychological control and dysregulated emotion for each discussion was completed using Noldus Observer XT 11. Frequencies of behavioral contingencies between parental psychological control and child dysregulated emotion for each individual observation and for the overall sample (i.e., the number of times dysregulated emotion occurred within a specified time-window given the presence of

parental psychological control and vice versa) were also calculated using Noldus Observer XT 11.

Analyses Conducted

Tests of normality indicated that the duration and frequency of psychological control and the frequency of dysregulated emotion was positively skewed and the duration of dysregulated emotion was negatively skewed; therefore, non-parametric analyses were conducted accordingly.

Preliminary Analyses. Descriptive analyses of the frequency and duration of observed parental psychological control and dysregulated emotion, the contingencies between observed psychological control and dysregulated emotion (behavioral contingencies), and self-reported anxiety scores were conducted. Independent-Samples Mann-Whitney U Tests were conducted to evaluate whether the frequencies and durations of observed parental psychological control and dysregulated emotion differed by gender or ethnicity. T-tests were conducted to evaluate significant gender and ethnic differences among self-reported anxiety scores. Chi-square tests were conducted to identify whether gender or ethnic differences existed between families with children with an anxiety diagnosis and those with children without any clinical diagnosis. Independent-Samples Kruskal-Wallis Tests were conducted to identify whether the frequencies and durations of observed parental psychological control and dysregulated emotion differed by parent marital status, household income, or race. Analyses of Variance (ANOVA) were conducted to evaluate whether self-reported anxiety scores differed by parent marital status, household income, or race. Additional chi-squares and ANOVAs were conducted to further explore significant relationships.

Spearman's correlations were conducted to evaluate the relationships between age and the frequencies and durations of observed parental psychological control and dysregulated emotion. Related-Samples Wilcoxon Signed Rank Tests were conducted to identify differences in the frequencies and durations of observed parental psychological control and dysregulated emotion by the topic of discussion in which families were engaged (i.e., family or anxiety discussion).

Primary Analyses. Independent-Samples Mann-Whitney U Tests were conducted to identify whether differences between the clinically anxious group and the non-clinical control group existed in durations and frequencies of observed psychological control and dysregulated emotion. T-tests were conducted to identify differences in self-reported anxiety scores between the clinically anxious and non-clinical groups. ANOVAs were conducted to identify whether demographic variables were moderators of the relationships between anxiety diagnostic status and frequencies and durations of the observed variables. Spearman's correlations were conducted to evaluate the bivariate relationships among the frequencies and durations of observed parental psychological control and dysregulated emotion. Multiple regression analyses were conducted to further explore the bivariate relationships among the frequencies and durations of observed parental psychological control and dysregulated emotion, demographic variables that were significantly related to the outcome variable in the analyses were controlled for during the respective analyses. Multiple regression analyses were conducted to evaluate potential moderators of the relationship between the duration of observed psychological control and observed dysregulated emotion.

Variables were mean-centered to reduce effects of multicollinearity (Aiken & West, 1991).

Time-Window Sequential Analyses. Time-window sequential analyses (see Chorney, Garcia, Berlin, et al., 2010) were conducted to examine whether the presence of parental psychological control increased the probability that child dysregulated emotion would occur within a 15-second time-window (and vice versa). Observations of videos and preliminary analyses of contingencies indicated that a 15-second time window was too long in duration to identify significant contingencies; therefore, 4- and 1- second time-windows were also explored (see Table 6 for illustration of time-windows).

To identify whether contingencies between parental psychological control and child dysregulated emotion were significant, Yule's Qs were calculated. Yule's Q is a statistic that provides a strength-of-association measure, ranging from -1 to +1 (McComas, Moore, Dahl, et al., 2009), where 0.2, 0.43, and 0.6 are considered small, moderate, and large associations, respectively (Rosenthal, 1996). Yule's Q is a transformed odds ratio that controls for overall base-rates and the probability of target events (Yoder & Fuerer, 2000). In other words, because Yule's Q does not incorporate marginal totals in its calculation, it is able to provide a viable index of sequential association for infrequent and unequal behaviors and targets. The formula for Yule's Q is (AD-BC)/(AD+BC). To identify whether the presence of parental psychological control increased the probability that child dysregulated emotion would occur within the given time window, A= the number of times dysregulated emotion occurred within the given time window (i.e., 1-, 4-, or 15-seconds) after an occurrence of

psychological control, B= the number of times regulated emotion occurred within the given time window after an occurrence of psychological control, C= the number of times dysregulated emotion occurred within the given time window after an occurrence of no psychological control, and D= the number of times regulated emotion occurred within the given time window after an occurrence of no psychological control. When examining the reciprocal relationship (i.e., whether the presence of child dysregulated emotion increased the probability that parental psychological control would occur with the given time window), A= the number of times psychological control occurred within the given time window after an occurrence of dysregulated emotion, B= the number of times no psychological control occurred within the given time window after an occurrence of dysregulated emotion, C= the number of times psychological control occurred within the given time window after an occurrence of regulated emotion, and D= the number of times no psychological control occurred within the given time window after an occurrence of regulated emotion. For the present study, Yule's Qs were calculated to identify contingencies between parental psychological control and child dysregulated emotion across the overall sample and for individual observations. An ANOVA was conducted to identify potential interactions between diagnostic group and demographic variables on the strength or direction of the behavioral contingency.

To identify the presence of a significant relationship between the contingencies of parental psychological control and emotion dysregulation and anxiety severity, Yule's Qs for individual observations were used. When calculating Yule's Qs for individual parent-child dyads, multiple participants had cells containing frequencies of

0. Since Yule's Q cannot be calculated if any cell contains a 0 value, corrective action was taken and 0.5 was added to all cells for all participants when calculating individual Yule's Q across participants (Deeks & Higgins, 2010; Pagano & Gauvreau, 2000). Yule's Q for individual observations were then coded into two groups such that parent-child dyads with Yule's Qs ranging from -0.42 to +0.42 (i.e., weak associations) were placed into the low contingency group and parent-child dyads with Yule's Qs ranging from -1 to -0.43 and +0.43 to +1 (i.e., moderate and strong associations) were placed into the high contingency group. T-tests were then conducted to identify whether children from families with high contingencies between psychological control and dysregulated emotion were more anxious.

CHAPTER 4

FINDINGS

Preliminary Analyses

Observational Data. Details on the duration and frequency of parental psychological control and child dysregulated emotion across the entire sample during the two discussions are summarized in Table 7. Parents displayed psychological control throughout the two conversations with their child for, on average, 194.9 seconds (*SD* = 109.2) over, on average, 11.74 distinct instances (*SD* = 4.5). Children displayed dysregulated emotion throughout the two conversations for an average total of 375.5 seconds (*SD* = 153.2) over an average of 14.5 distinct instances (*SD* = 7.5). The durations and frequencies of psychological control were positively skewed across both discussion types. The frequencies of dysregulated emotion were positively skewed; however, the durations of dysregulated emotion were negatively skewed, suggesting that a large number of children displayed high frequencies of dysregulated emotion that were brief in duration.

Behavioral Contingencies. Frequencies of behavioral contingencies between parental psychological control and child dysregulated emotion for each individual observation and for the overall sample (i.e., the number of times dysregulated emotion occurred within a specified time-window given the presence of parental psychological control and vice versa) were obtained for 15-seconds, 4-seconds, and 1-second time-windows. Results for the overall sample are displayed in Tables 8, 9, and 10, respectively, and

are detailed by discussion type. Summary statistics for the contingencies across individual observations for 4- and 1-second time-windows are displayed in Tables 11 and 12, respectively. In direct response to the onset of parental psychological control, children displayed, on average, 0.46 instances (*SD*=0.72) of dysregulated emotion within a 4-second window; while the entire sample displayed dysregulated emotion 162 times within a 4-second window of psychological control. In direct response to the onset of child dysregulated emotion, parents displayed, on average, 0.35 (*SD*=0.64) instances of psychological control within a 4-second window; while the entire sample displayed psychological control 125 times within a 4-second window.

Anxiety Severity. The average total anxiety score for the entire sample was 53.41 (*SD=16*.82). Total anxiety scores ranged from 12.36 to 95.55 with a median score of 52.53. Tests of normality indicated that the distribution of scores is normally distributed.

Gender. Independent-Samples Mann-Whitney U Tests did not identify significant gender differences among observed parental psychological control ($p>.05$), observed dysregulated emotion ($p>.05$), or parent-child behavioral contingencies ($p>.05$). T-tests did not indicate significant gender differences among self-reported anxiety scores ($t_{(155)}=-.331$, $p=.741$). Chi-square tests did not indicate significant gender differences across anxiety diagnostic status ($X^2_{(1)}=.281$, $p=.596$).

Ethnicity. Independent-Samples Mann-Whitney U Tests indicated that parents of children who were Hispanic (M=259.56, SD=96.27) were observed to display significantly longer durations of Psychological Control across the overall length of both discussion topics than parents of children who were not Hispanic (M=192.49,

SD=105.55; p=.044). No significant ethnic differences were identified among observed child dysregulation codes (p>.05) or parent-child behavioral contingencies (p>.05). T-tests did not indicate ethnic differences among self-reported anxiety scores ($t_{(155)}$=-.404, p=.687). Chi-square tests did not indicate significant ethnic differences across anxiety diagnostic status ($X^2_{(1)}$=.881, p=.348).

Parent Marital Status. Independent-Samples Kruskal-Wallis Tests indicated that children of parents who were married or living together (M= 379.67, SD=158.19) were observed to display significantly longer durations of dysregulation during the overall length of both discussions (p=.033) than children who had a deceased parent (M=145.24, SD=127.85). No significant differences were identified across observed parental psychological control scores (p>.05) or contingency scores between observed parent-child behaviors (p>.05). Results of an ANOVA indicated no significant differences among self-reported anxiety scores ($F_{(2,142)}$=1.670, p=.192). Results from a Chi-square analysis indicated a significant larger percentage of non-clinical children (n=3, 6.8%) had a parent who is deceased than children with an anxiety disorder (n=0, 0%). Results from an ANOVA indicated that diagnostic status did not moderate the relationship between parent marital status and observed dysregulation ($F_{(1,158)}$=.000, p=.987).

Household Income. Independent-Samples Kruskal-Wallis Tests did not indicate any significant differences among the observed parent-child scores or among significant contingencies by household income (p>.05). An ANOVA did not indicate any significant household income differences among self-reported anxiety scores ($F_{(3,128)}$=.912, p=.437). A Chi-square analysis did not indicate any significant

household income differences between children in the anxiety disorder group and those in the non-clinical control group ($X^2_{(3)}$=3.904, *p*=.272).

Race. Independent-Samples Kruskal-Wallis Tests did not indicate any significant racial differences among the observed parent-child scores (*p*>.05) or contingencies (*p*>.05) by race. An ANOVA did not indicate any significant racial differences among self-reported anxiety scores ($F_{(3,143)}$=.492, *p*=.688). A Chi-square analysis did not indicate any significant racial differences between children in the anxiety disorder group and those in the non-clinical control group ($X^2_{(3)}$=4.143, *p*=.246).

Age. Spearman's correlations indicated a significant, negative relationship between age and the frequency of dysregulated emotion across both discussion (r=-.162, *p*=.032), such that younger children exhibited dysregulation more frequently. Significant relationships between age and other observational codes (*p*>.05), self-reported anxiety scores (*p*>.05), behavioral contingencies (*p*>.05), or anxiety diagnostic status (*p*>.05) were not identified.

Discussion Type. Related-Samples Wilcoxon Signed Rank tests indicated that children were observed to be dysregulated for a significantly longer amount of time during the anxiety discussion topic than the family discussion topic (*p*=.000). Additionally, children were observed to become dysregulated a significantly greater number of times during the anxiety discussion topic than the family discussion topic (*p*=.002). Results also indicated a significant difference between the two discussion types regarding the strength of the contingency that children were likely to display dysregulated emotion within 4-seconds of the onset of parental psychological control (*p*=.020). Children were more likely to display dysregulated emotion within 4-seconds

of the onset of parental psychological control during the family discussion than during the anxiety discussion. Due to these differences in observed dysregulation and behavioral contingencies, data for each discussion type will be presented separately.

Primary Analyses

Anxiety Diagnostic Status. Independent-Samples Mann-Whitney U Tests indicated that anxious children were observed to display significantly longer durations (p=.041) of dysregulated emotion during the family discussion than non-clinical control children. Parents of anxious children were observed to display significantly longer durations (p=.001) and more frequent instances (p=.008) of psychological control than parents of non-clinical children over both discussions. Means and standard deviations can be seen in Table 13. Due to the significant relationship between age and the frequency of dysregulated emotion, age was controlled for when testing the relationship between anxiety diagnostic status and the frequency of dysregulated emotion. Results from a multiple regression analysis indicated that the presence of an anxiety disorder was a significant predictor for the frequency of dysregulated emotion across both discussion types (β= .284, $t(175)$=4.61, p=.00; R^2=*.086,* $F(2,173)$= 9.24, p=.00). Results indicated no significant differences between diagnostic groups across contingencies of psychological control and dysregulated emotion across 15-, 4- and 1-second time windows (p>.05). T-tests indicated that children with a diagnosed anxiety disorder (M=58.06, SD=16.65) reported significantly higher levels of anxiety symptoms compared to the non-clinical control group (M=43.02, SD=11.59; $t_{(155)}$=-5.633, p=.000).

Moderating Effects. Demographic variables were also assessed to identify potential interactions with anxiety diagnostic status on the frequencies and durations of the observed variables. Results from an ANOVA indicated that there was a significant interaction between household income and anxiety diagnostic status on their relationship with the frequency of parental psychological control ($F_{(3,136)}$=2.907, p=.037) and the frequency of child dysregulated emotion ($F_{(3,136)}$=3.239, p=.024) across both discussions. The relationship between anxiety diagnostic status and frequency of psychological control were different for parents and children with household incomes between $80,000 and $99,999, where parents of children in the non-clinical group displayed more frequent instances of psychological control than parents of anxious children, and non-clinical children displayed more frequent instances of dysregulated emotion than anxious children. Additionally, mean differences of the frequencies of parental psychological control between the anxiety and non-clinical groups for families with household incomes of less than $40,000 were larger compared to other groups of household income. Mean differences of the frequencies of child dysregulated emotion between the anxiety and non-clinical groups for families with household incomes of less than $40,000 were larger compared to families with incomes ranging from $40,000 to $79,999. These interactions are graphed in Figures 1 and 2. Mean differences are displayed in Tables 14 and 15.

Relationships among Observed Parent & Child Behaviors and Anxiety Severity. Spearman's correlations indicated significant, positive correlations between the frequency of psychological control and the frequency (r=.515, p<.01) and duration (r=.220, p<.01) of dysregulated emotion as well as the correlation between duration of

psychological control and the frequency (r=.401, p<.01) and duration (r=.316, p<.01) of dysregulated emotion. Correlations between parent and child behaviors by discussion type can be seen in Table 16.

Spearman correlations also indicated a significant, positive correlation between total anxiety scores and the total duration of psychological control (r= .184, p=.021) and the duration of psychological control during the family discussion (r = .161, p=.094).

A series of multiple regression analyses indicated that the duration of parental psychological control across both discussion types, while controlling for the effects of parent marital status, significantly predicted the duration of child dysregulated emotion (β= .365, t(175)=5.13, p=.00; R^2=*.147,* F(3,172)= 9.90, p=.00). The duration of child dysregulated emotion significantly predicted the duration of parental psychological control, while controlling for the effects of ethnicity (β= .346, t(175)=4.65, p=.00; R^2=*.143,* F(2,155)= 12.97, p=.00). The frequency of parental psychological control across both discussion types, while controlling for the effects of child age, significantly predicted the frequency of child dysregulated emotion (β= .512, t(175)=7.88, p=.00; R^2=*.276,* F(2,173)=32.93, p=.00). The frequency of child dysregulated emotion significantly predicted the frequency of parental psychological control (β= .362, t(175)=5.12, p=.00; R^2=*.131,* F(1,174)= 26.16, p=.00).

Moderating Effects. Due to the significant relationship between ethnicity and the duration of psychological control as well as the relationship between parent marital status and the duration of dysregulated emotion, a series of multiple regression analyses were conducted to identify whether ethnicity or parent marital status

moderated the relationship between observed psychological control and observed dysregulation. Results of these regression analyses did not indicate that ethnicity status (ΔR^2=.005, *p*=.324; β=-.077, t=.988, *p*=.324) or parent marital status (ΔR^2=.010, *p*=.379; β=-.077, t=-.807, *p*=.421) significantly moderated the relationship between observed psychological control and observed dysregulated emotion.

Sequential Relationship between Psychological Control and Dysregulated Emotion. The contingency that children were more likely to display dysregulated emotion within a 15-second time-window (see Table 8) of an occurrence of parental psychological control than at other times was small (Yule's Q= .17); however, when examining this contingency within a 4- and 1-second time-window (see Table 9 & 10, respectively), the contingency was moderate in strength for both time-windows (Yule's Q= .44 & .48, respectively). The reciprocal contingency that parents are more likely to engage in psychological control within a 15- or 4-, or 1-second time-window of an occurrence of child dysregulated emotion than at other times was small (Yule's Q=-.10, .02, .37, respectively).

Moderating Effects. Demographic variables and anxiety diagnostic status were also explored to identify potential interactions. Results from an ANOVA indicated that there was a significant interaction between race and anxiety diagnostic status on the strength of the contingency that children will display dysregulated emotion within 4-seconds of parental psychological control ($F_{(3,159)}$=5.64, *p*=.001) across both discussion types. Figure 3 displays the strength and direction of the interaction between race and anxiety diagnostic status on the contingency that children will display dysregulated emotions within 4-seconds of parental psychological control. The

strength of this contingency was stronger and more positive among families with anxious children than non-clinical children for Asian families (see Table 17). The strength of this contingency was about equal across the anxious and non-clinical groups for White families and those identifying as "other" racial category. The strength of this contingency was stronger, but became more negative among families with anxious children than non-clinical children for Black families. Additionally, mean differences in contingency scores between the anxiety and non-clinical group were larger for Asian and Black families compared to families from White and "other" racial backgrounds. In other words, *anxious* children identifying as Asian were more likely to display dysregulated affect within 4-seconds of parents displaying psychological control than at other times; this contingency did not exist for the non-clinical group. In Black families, *anxious* children were less likely to display dysregulated affect within 4-seconds of parents displaying psychological control than at other times; this contingency did not exist for the non-clinical group. The behavioral contingencies and differences between the anxious and non-clinical group were smaller for children identifying as White or "other" racial category. Results from ANOVAs indicated that there was no significant interaction between anxiety diagnostic status and the other demographic variables (i.e., parent marital status, household income, race, ethnicity, and gender; see Tables 18, 19, 20, 21, 22, respectively) on the strength and direction of the parent-child behavioral contingencies.

Relationship between Behavioral Contingencies and Anxiety Severity. T-tests did not reveal significant relationships between the contingencies of parental

psychological control and child dysregulated emotion and anxiety scores (see Table 23 for statistics).

CHAPTER 5

CONCLUSION

The present study aimed to further understand the relationship between parental psychological control and dysregulated emotion in a sample of anxious and non-clinical children. Specifically, it aimed to extend existing research by identifying whether parents of anxious children display more psychologically controlling behaviors than parents of non-clinical children and whether children with anxiety disorders display higher levels of emotion dysregulation than children without a diagnosed psychiatric disorder. Uniquely, the present study aimed to identify whether there is a contingency between parental psychological control and emotion dysregulation in children, such that parents are more likely to display psychological control in direct response to child emotion dysregulation than at other times and vice versa. The present study further aimed to identify whether these behavioral contingencies are related to anxiety symptom severity. Multicultural factors in the aforementioned relationships were also explored.

As hypothesized, anxious children displayed significantly longer durations of dysregulation than the non-clinical group of children. Parents of anxious children displayed significantly longer durations of psychological control than parents of non-clinical children. These findings are consistent with the extant literature that utilized both self-report and observational methods (e.g., Ballash, Pemble, Usui, et al., 2006; Barber, Olson, & Shagle, 1994; Moore, Whale, & Sigman, 2004; Nanda, Kotchick, &

Grover, 2012; Silk, Morris, Kanay, & Steinberg, 2003; Turner, Beidel, Roberson-Nay, & Tervo, 2003; Woodruff-Borden, Morrow, Bourland, & Cambron, 2002). These findings lend further support to etiological theories of anxiety disorders that highlight the role of parenting behaviors, specifically psychological control, in the presentation of child anxiety disorders. Furthermore, these findings support existing theories that suggest that emotion regulation deficits play a central role in the occurrence of child anxiety disorders (e.g., Barrett, Rapee, Dadds, & Ryan, 1996, Carthy, Horesh, Apter, & Gross, 2010; Suveg & Zeman, 2004; Suveg, Zeman, & Stegall, 2001; Zeman, Shipman, & Suveg, 2002)

However, when examining the *frequencies* of parental psychological control and child dysregulated emotions between the anxious and non-clinical group, these relationships appeared to be moderated by household income, such that the aforementioned results were reversed for one class of families. Parents and children in the non-clinical group with household incomes from $80,000 to $99,999 displayed more frequent instances of psychological control and dysregulated emotion, respectively, than parents and children from households with the same income in the anxiety disorder group.

No research to date has examined interactions between household income and anxiety diagnostic status on parental psychological control or emotion dysregulation. It is possible that due to financial resources, anxious children from households with $80,000 to $99,999 are more apt to seek psychoeducation about anxiety disorders or may have more regular conversations about anxiety and/or family problems, thus, contributing to lower levels of dysregulation and psychological control than their non-

clinical counterparts. Vice versa, parents of non-clinical children in this group may be less likely to use emotion-related language or have regular conversations about anxiety and/or family problems, thus, making the discussion task a novel situation contributing to higher levels of dysregulation compared to their anxious counterparts. It is also possible that non-clinical children and their parents with household incomes from $80,000 to $99,999 were more susceptible to influences of observer or social desirability effects compared to non-clinical children and their parents from other SES groups. Due to their unique position on the economic hierarchy, families from this social economic class may be social strivers on the cusp of wealth concerned about social appearance. This may have contributed to elevated frequencies of psychological control and dysregulated emotion during the video-taped discussions. Parents may have engaged in psychological control in an effort to make their children appear socially acceptable in front of the video-recording equipment, and children may have been more dysregulated in response to their parent's psychological control or in response to being videotaped. Additionally, non-clinical children in this social class may be more likely to have behavioral problems or become dysregulated as merely a result of being in this social class. More research is needed to understand characteristics of this class of families that may be related to the effects found in the present study.

Results also found that for families with household incomes less than $40,000, the differences between the anxious and non-clinical groups were greater compared to families with household incomes ranging from $40,000 to $79,999. This was the case when examining the frequency of psychological control between the anxious and non-

clinical group as well as the frequency of dysregulated emotion between the anxious and non-clinical group.

The larger difference between the anxiety and non-clinical group for families from household with incomes less than $40,000 when compared to families with household incomes ranging from $40,000 to $79,999 with regards to the frequencies of both psychological control and dysregulated emotion could be attributed to the possibility that the discussion tasks did not produce as much stress for non-clinical, lower-income children when compared to economic stressors experienced in their daily lives. Additionally, this finding is consistent with research that suggests anxious children from households with lower SES display more severe anxiety symptomology (e.g., Cronk, Slutske, Madden, et al., 2004; McLaughlin, Breslau, Green, et al., 2011; Merikangas, 2005; Miech, Caaspi, Moffitt et al., 1999). It is possible that anxious children from this group experienced more intense emotional reactivity in response to the observed discussion tasks. Parents of anxious children from households with lower incomes may also be more susceptible to influences of observer effects, thus, contributing to elevated frequencies of psychological control during the video-taped discussions.

These household income differences identified in the frequency (but not duration) of observed scores could be attributed to differences in the amount of time spent per instance of psychological control or dysregulated emotion, frequent changes in parent or child behaviors, or insufficient power to identify significant interactions when examining the duration of the observed scores. Future research is necessary to

further understand the interaction between the presence of an anxiety disorders and household income on psychological control and dysregulated emotion.

Results partially supported the hypothesis that parents are more likely to display psychological control in direct response to child emotion dysregulation than at other times and vice versa. While both of these contingencies were small when examining a 15-second time-window, moderate contingencies existed in one direction when examining 4- and 1-second time-windows. More specifically, children were more likely to display dysregulated emotion within 4- and 1-second after parents displayed an instance of psychological control. The reverse contingency was small for both 4- and 1-second time-windows. However, multiple regression analyses indicated that both psychological control and dysregulated emotion were significant predictors of each other. It is possible that even though dysregulated emotion was found to be a significant predictor of psychological control, it is not observable in moment-to-moment interactions, such that parents do not directly respond to instances of dysregulated emotion with psychological control. It is possible that dysregulated emotion may predict psychological control over longer periods of time. Longitudinal methods would help uncover the direction of this relationship. These findings are consistent with research and theories suggesting reciprocal relationships between parent and child behaviors (Sameroff & Chandler, 1975; Rapee, 2001); however, with regards to parental psychological control and dysregulated emotion, it seems that the reciprocal relationships may differ in temporal nature. Notably, moderate contingencies were not found during smaller time-windows. This highlights the immediacy of children's dysregulated responses to parental psychological control.

The contingency that children were more likely to display dysregulated emotion within 4-seconds than at other times was found to be moderated by race. For all racial groups the contingency was close to zero for the non-clinical group. However, for the anxiety group, the contingencies differed for each racial category, where the contingencies were positive and moderate for Asian families, negative and moderate for African-American families, and positive and small for White families and those identifying as "other" racial categories. In other words, the strength of the contingency that Asian children with an anxiety disorder were more likely to display dysregulated emotion within 4-seconds than at other times was moderate. The strength of the contingency that African-American children were *less likely* to display dysregulated emotion within 4-seconds than at other times was moderate. There was little to no contingency between parental psychological control and dysregulated emotion within a 4-second time-window for White and "other" families.

These significant interactions may be explained by cultural factors discussed in the existing literature. Since psychological control can serve as a protective factor for African-American children (Bean, Barber, & Crane, 2006; Mason, Cauce, Gonzales, & Hiraga, 1996), it is possible that psychological control may help anxious, African-American children regulate their emotions within 4-seconds of its onset. Existing research has demonstrated that Asian parents tend to be more controlling and restrictive than parents from European-American cultures (Chao, 1994, Chao & Aque, 2009) due to their collectivistic culture (Matsumoto, 1990; Wang, Pomerantz, Chen, 2007). It is possible that the more frequent and consistent use of psychological control by Asian parents may contribute to stronger, positive contingencies, whereas, anxious,

Asian children become more dysregulated in response to psychological control. It is unclear why race only moderated the contingencies when examining a 4-second time window and not a 1-second time window. There may not have been enough occurrences by race to detect a relationship. Further exploration is warranted.

Results did not support the hypothesis that the contingent relationships between parental psychological control and child dysregulated emotion would be related to anxiety symptom severity. This suggests that the greater likelihood that children display dysregulated emotion in direct response to parental psychological control than at other times (and vice versa) and the severity of their self-reported anxiety are unrelated. It is likely that it is child dysregulation and parental psychological control *in general* and not specifically their contingent relationship that are related to anxiety severity.

The hypotheses that girls would display higher levels of emotion dysregulation and would be more likely to have an anxiety disorder than boys were not supported. The findings of the present study are inconsistent with the literature suggesting that internalizing disorders, specifically anxiety disorders, are more prevalent among females (e.g., Burt, McGue, Krueger, & Iacono, 2005; Leadbetter, Kuperminc, Blatt, Hertzog, 1999). It is possible that significant gender differences in levels of emotion dysregulation were not found due to the observational methods used and the parent-child context. Deaux and Major's (1987) gender-in-context theory suggests that gender differences arise during situations in which gender roles and expectancies are salient. During the discussion task used in the present study, gender expectancies were not salient. Additionally, Chaplin and Aldao (2013) suggest that gender differences are

minimized in the presence of parents because children feel that the expectation to express their emotions according to societal guidelines is lower than when with strangers (Chaplin & Aldao, 2013). It is also possible that the observational methods used for the present study minimized these gender effects.

Another possibility is that gender differences were not identified between the anxious group and the non-clinical group due to the range of anxiety diagnoses in the present study's sample. For example, a literature review of gender differences in obsessive-compulsive disorder suggests that males are more likely than females to present an earlier onset of symptoms (de Mathis, Alvarenga, Funaro, et al., 2011). In contrast, Merikangas, He, Burstein, et al. (2010) found that among panic disorder, agoraphobia, social phobia, specific phobia, generalized anxiety disorder, posttraumatic stress disorder, and separation anxiety disorder, rates were more prevalent among females. It is possible that the inclusion of a broad range of anxiety disorders may have eliminated gender effects.

Exploratory analyses indicated significant relationships between demographic variables and parental psychological control and child dysregulated emotion. Parents of children who were Hispanic were observed to display longer durations of psychological control than parents of children who were not Hispanic. This is consistent with literature that suggests that Hispanic parents emphasize the control of emotions (e.g., Durrett, O'Bryant, & Pennebaker, 1975; Julian, McKenry & McKelvey, 1994). Qualitative research (Valdes, 1996) explains that Hispanic parents frequently engage in "consejos," which refer to lectures intended to shape children's attitudes and behaviors. Existing research suggests that Hispanic parents' use of such

psychologically controlling behaviors are motivated by child-center goals versus parental stress, such as promoting academic success (Grusec & Goodnow, 1994; Hastings & Grusec, 1998; Halgunseth, Ispa & Rudy, 2006; Lopez, 2001). Further research to explore the role of Hispanic culture in the relationships between psychological control, dysregulated emotion, and anxiety is warranted.

Children of parents who were married or living together displayed longer durations of dysregulation than those with a deceased parent; however, further analysis suggested that a significant larger percentage of non-clinical children had a parent who was deceased than children with an anxiety disorder. In other words, all of the children who had a parent who was deceased were in the non-clinical group. Additionally, the sample of children who had a deceased parent was very small. Further research is needed to understand whether these findings are a result of a sampling bias or whether children with a deceased parent are able to more effectively regulate their emotions than children whose parents are married or living together.

Limitations of the Present Study

Limitations of the present study should be noted. The present study used a fairly homogenous sample. The large majority of participants came from Caucasian, middle to upper-middle class, intact families. Therefore, the generalizability of the present study's findings to a larger population may be minimized. This is especially true regarding significant findings relating to cultural factors. It is possible that significant findings regarding race, ethnicity, household income, and parent marital status are only significant for the small number of participants endorsing those demographic characteristics in the present study and may not be relevant to a larger

population. Conversely, it is possible that due to these sample limitations and insufficient power, the present study was unable to identify additional cultural factors that may influence these relationships in the larger population. Future research that incorporates a larger diversity of participants is necessary.

Another limitation of the present study is the age range of participants. Since the present study only examined relationships among children in middle childhood, it is unclear whether results can be generalized to families with children in early childhood or older adolescence. Due to the differences among these age groups in development, dependence on parents, and quality of relationships with parents, it is possible that the findings of the present study are not generalizable to families with children in other stages of development. Similarly, the present study only examined relationships between children and their mothers, not fathers. Differences in interaction styles between children and their fathers could contribute to different findings if examining such relationships among father-child dyads.

The nature of the video-recorded discussion task used during the present study may also limit the generalizability of results. It is possible that parents and children interacted differently than usual during the discussion task due to the novel nature of the task and the inherent differences in the discussion task compared to daily interactions between parents and their children. Additionally, the presence of video-recording equipment throughout the discussion could have affected present anxiety and stress levels for the parents and children in the anxiety and non-clinical group differently thus affecting observed parent and child scores.

Implications of Study Findings

There are significant theoretical and clinical implications for the present findings. Significantly longer durations of observed dysregulated emotion and psychological control in the clinically anxious group compared to the non-clinical group support existing theories that highlight emotion regulation deficits in anxious children and psychologically controlling behaviors in their parents. These results are consistent with an emotion regulation framework for anxiety disorders that suggest that anxious adults utilize maladaptive emotion management strategies (Mennin, Heimberg, Turk, & Fresco, 2005; Mennin, McLaughlin, & Flannigan, 2009). Future research is needed to further apply this framework to children and to advance our understanding of the role of other emotion-related factors, such as heightened intensity of emotions, poorer understanding of emotions, and negative cognitive reactivity to emotions in child anxiety disorders.

These findings also support research that highlights psychological control as a specific parenting behavior that is related to emotion regulation deficits. The present findings suggest that parental psychological control immediately triggers dysregulated emotion in anxious children during moment-to-moment interactions. While underlying mechanisms of this relationship are unclear, Barber and Xia (2013) suggest that conceptualizing psychological control as parental intrusions of the personal domain that infringe on the autonomy of children (including their ability to independently understand and manage emotions) may help us further understand how psychological control is directly related to emotion dysregulation. This conceptualization may also help explain cultural differences that were observed, where similar parent behaviors

may not be perceived as personal intrusions, thus, affecting the nature of the relationship between psychological control and emotion dysregulation.

Interestingly, dysregulated emotion in children did not immediately trigger parental psychological control during observed moment-to-moment interactions. However, linear analyses did find that dysregulated emotion was a significant predictor of psychological control. It is possible that rather than triggering psychological control in the moment, dysregulated emotion may predict psychological control over time. Parents may develop such behaviors after becoming more familiar with their child's temperament. It is also possible that other variables are involved in the mechanisms of this relationship, such as parent anxiety, parent cognitions, or other variables. Future research is needed in order to better understand the mechanisms involved in the bidirectional relationship of psychological control and dysregulated emotion.

These results further highlight the necessity to target these parent and child behaviors in the treatment of anxious children, specifically in the context of moment-to-moment interactions. Firstly, it may be beneficial for treatments for child anxiety to broadly target emotion dysregulation by helping anxious children build more adaptive emotion identification, understanding, and specific, adaptive regulation strategies rather than exclusively focusing on these skills in the context of anxiety. Teaching anxious children to identify, understand, and regulate emotions in general may be beneficial in helping them utilize adaptive emotion regulation strategies when anxiety is elevated. Secondly, teaching parents alternative behaviors to psychological control, i.e., behaviors that foster autonomy and independence, such as emotion validation,

respect for child's opinions, and unconditional acceptance may help reduce emotion dysregulation in children. Finally, helping parents and children identify and practice effective interaction patterns may help reduce overall levels of dysregulation in children by mitigating the effects of parental psychological control. Future research is needed to identify the utility of implementing these strategies in a treatment setting. It is imperative to also consider cultural implications. Understanding the role of culture in the treatment setting is necessary to develop culturally-informed, evidence-based treatments for children.

Directions for Future Research

Based on the findings, limitations, and implications of the present study, it is essential for future research to continue to examine the relationships between parental psychological control, emotion regulation, and child anxiety disorders. Continued examination of moment-to-moment interactions between parents and their children is necessary, particularly within a culturally diverse sample. Longitudinal research is needed to enhance our understanding of the reciprocal relationship between child dysregulation and parental psychological control. A more thorough understanding of the roles of other child variables such as temperament, specific cognitions, and specific emotion regulation strategies used by anxious children as well as other parent variables may lend support to an emotion regulation framework for children with anxiety disorders. This will also help us better understand moderators and mechanisms of the relationship between parental psychological control and child dysregulation among anxious children.

Research focusing on the treatment of child anxiety disorders should begin to develop therapies that effectively target psychological control, parent-child interactions, or specific emotion regulation strategies and test whether focusing on such targets in treatment effectively reduces child dysregulation and/or anxiety levels.

Summary

In summary, the present study found that anxious children are observed to display higher levels of dysregulated emotion, and their parents are observed to display higher levels of psychological control than non-clinical children and their parents. Furthermore, psychological control and dysregulated emotion were found to be significant predictors of each other. When examining this relationship in real-time, moment-to-moment interactions, it appears that children are more likely to respond to psychological control with dysregulated affect than at other times. The reverse contingency was not true. This suggests that psychological control immediately triggers dyregulation among children. These findings support existing theories and research that highlight the roles of emotion regulation deficits and parental psychological control among child anxiety disorders and further our understanding of these factors roles within parent-child interactions. Racial, ethnic, socioeconomic status, and parent marital status differences in the displays of psychological control, dysregulated emotion, and their contingencies were also found. Further research is needed to continue to examine these relationships and to develop treatments that can effectively target such behaviors among anxious children and their parents.

TABLES

Table 1

Participant Characteristics

	Females n (%)	Males n (%)	Total n (%)
Race			
White	65 (80.2%)	82 (86.3%)	147 (83.5%)
Black	2 (2.5%)	1 (1.1%)	3 (1.7%)
Asian	2 (2.5%)	2 (2.1%)	4 (2.3%)
Other	3 (3.7%)	2 (2.1%)	5 (2.8%)
Not Reported	9 (11.1%)	8 (8.4%)	17 (9.7%)
Ethnicity			
Hispanic	4 (4.9%)	6 (6.3%)	10 (5.7%)
Non-Hispanic	68 (84.0%)	80 (84.2%)	148 (84.1%)
Not Reported	9 (11.1%)	9 (9.5%)	18 (10.2%)
Parent Marital Status			
Married or Living Together	60 (74.1%)	68 (71.6%)	128 (72.7%)
Separated, Divorced, or Not Living Together	13 (16.0%)	15 (15.8%)	28 (15.9%)
Mother or Father Deceased	1 (1.2%)	2 (2.1%)	3 (1.7%)
Not Reported	7 (8.6%)	10 (10.5%)	17 (9.7%)
Household Income			
Less than or equal to $39,999	8 (9.9%)	6 (6.3%)	14 (8.0%)
$40,000 to $79,999	18 (22.2%)	24 (25.3%)	42 (23.9%)
$80,000 to $99,999	10 (12.3%)	20 (21.1%)	30 (17.0%)
Greater than or equal to $100,000	30 (37.0%)	28 (29.5%)	58 (33.0%)
Not Reported	15 (18.5%)	17 (17.9%)	32 (18.2%)
Age			
Mean (Standard Deviation)	9.74 (1.31)	9.74 (1.43)	9.74 (1.37)

Note. There were no statistically significant differences between females and males on any participant characteristics ($p<.05$)

Table 2

Internal Consistency Reliability (Cronbach's Alpha) of CEMS Constructs

Subscale	Anger		Sadness		Worry	
Group	Anxious	Control	Anxious	Control	Anxious	Control
Inhibition	.708	.779	.776	.758	.791	.794
Dysregulation	.594	.484	.392	.582	.547	.379
Coping	.753	.691	.603	.415	.493	.167

Table 3

Spearman's Correlation Coefficients between Observed Psychological Control and CRPBI Scores

	Observed Psychological Control Frequency Scores	Observed Psychological Control Duration Scores
CRPBI Child Report	.225**	.277**
CRPBI Mother Report	.212**	.263**

**p<.01

Table 4

Spearman's Correlation Coefficients between Observed Dysregulation and CEMS Scores

	Anger			Sadness			Worry		
	1	2	3	1	2	3	1	2	3
Duration	.153	.089	-.120	-.038	.102	-.143	-.041	.130	-.187*
Frequency	.076	-.006	-.144	.089	-.040	-.084	.063	.138	-.266**

1.Inhibition, 2.Dysregulation, 3.Coping; *$p<.05$, **$p<.01$

Table 5

Spearman's Correlation Coefficients between Observed Dysregulation and ERC Scores

	Lability/ Negativity	Emotion Regulation
Duration	.143	-.048
Frequency	.205*	-.070

*$p<.05$

Table 6

Framework for Time-Window Analyses Conducted

Time-Point	:30	:31	:32	:33	:34	:35	:36	:37	:38	:39	:40	:41	:42	:43	:44	:45	:46	:47
Criterion Behavior	-	**X**	X	X	-	-	-	-	-	**X**	X	X	-	-	-	**X**	X	-
Exam-ination for presence of Target Behavior within specified time-window			1s															
			4s time-window															
			15 second time-window															

Table 7

Descriptive Statistics of Observed Parent and Child Scores

		Psychological Control			Dysregulated Emotion		
		Mean (SD)	Skew-ness (SE)	Kurt-osis (SE)	Mean (SD)	Skew-ness (SE)	Kurt-osis (SE)
Family Discussion	Frequency	6.02 (2.69)	.238 (.183)	-.015 (.364)	6.70 (4.35)	.890 (.183)	.745 (.364)
	Duration	97.88s (64.29)	.753 (.183)	.044 (.364)	168.12s (88.33)	-.335 (.183)	-1.108 (.364)
Anxiety Discussion	Frequency	5.72 (2.77)	.590 (.183)	1.233 (.364)	7.51 (4.24)	.602 (.183)	-.100 (.364)
	Duration	97.07s (63.43)	.691 (.183)	.101 (.364)	199.50s (91.21)	-.553 (.183)	-.650 (.364)
Total	Frequency	11.74 (4.49)	.416 (.183)	.991 (.364)	14.20 (7.65)	.556 (.183)	-.282 (.364)
	Duration	194.95s (109.23)	.676 (.183)	.290 (.364)	367.63s (160.03)	-.526 (.183)	-.722 (.364)

Table 8

Frequency Distributions of Parent-Child Contingencies And Yule's Q Calculations for Overall Sample for 15s Time-Window

	1	2	3	4	Yule's Q 1	5	6	7	8	Yule's Q 5
Family Discussion	227	151	152	159	0.22	187	203	176	151	-0.12
Anxiety Discussion	168	128	144	135	0.10	167	171	131	115	-0.08
Both Discussions	395	279	296	294	0.17	354	374	307	266	-0.10

1. Psychological Control (PC) followed by Dysregulation (DE), 2. PC followed by No Dysregulation (NoDE), 3. No Psychological Control (NoPC) followed by DE, 4. NoDE followed by NoPC, 5. DE followed by PC, 6. DE followed by NoPC, 7. NoDE followed by PC, 8. NoDE followed by NoPC

Table 9

Frequency Distributions of Parent-Child Contingencies And Yule's Q Calculations for Overall Sample for 4s Time-Window

	1	2	3	4	Yule's Q 1	5	6	7	8	Yule's Q 5
Family Discussion	98	33	49	61	0.57	66	69	53	55	-0.004
Anxiety Discussion	64	35	48	44	0.25	59	48	33	28	0.02
Both Discussion	162	68	97	105	0.44	125	117	86	83	0.02

1. Psychological Control (PC) followed by Dysregulation (DE), 2. PC followed by No Dysregulation (NoDE), 3. No Psychological Control (NoPC) followed by DE, 4. NoDE followed by NoPC, 5. DE followed by PC, 6. DE followed by NoPC, 7. NoDE followed by PC, 8. NoDE followed by NoPC

Table 10

Frequency Distributions of Parent-Child Contingencies And Yule's Q Calculations for Overall Sample for 1s Time-Window

	1	2	3	4	Yule's Q 1	5	6	7	8	Yule's Q 5
Family Discussion	9	4	11	17	0.55	13	13	8	20	0.43
Anxiety Discussion	9	5	11	14	0.39	6	9	4	10	0.25
Both Discussion	18	9	22	31	0.48	19	22	12	30	0.37

1. Psychological Control (PC) followed by Dysregulation (DE), 2. PC followed by No Dysregulation (NoDE), 3. No Psychological Control (NoPC) followed by DE, 4. NoDE followed by NoPC, 5. DE followed by PC, 6. DE followed by NoPC, 7. NoDE followed by PC, 8. NoDE followed by NoPC

Table 11

Means (Standard Deviations) of Parent-Child Contingencies and Yule's Q for Overall Sample for 4s Time-Window

	1	2	3	4	Yule's Q 1	5	6	7	8	Yule's Q 5
Family	.56	.19	.28	.35		.38	.39	.30	.31	
Discussion	(.80)	(.55)	(.54)	(.70)	.16 (.39)	(.66)	(.60)	(.56)	(.56)	-.01 (.43)
Anxiety	.36	.20	.27	.25		.34	.27	.19	.16	
Discussion	(.61)	(.49)	(.58)	(.53)	.06 (.37)	(.63)	(.56)	(.46)	(.44)	.01 (.36)
Both	.46	.19	.28	.03		.35	.33	.24	.24	
Discussion	(.72)	(.52)	(.56)	(.63)	.02 (.16)	(.64)	(.58)	(.51)	(.51)	-.02 (.18)

1. Psychological Control (PC) followed by Dysregulation (DE), 2. PC followed by No Dysregulation (NoDE), 3. No Psychological Control (NoPC) followed by DE, 4. NoDE followed by NoPC, 5. DE followed by PC, 6. DE followed by NoPC, 7. NoDE followed by PC, 8. NoDE followed by NoPC

Table 12

Means (Standard Deviations) of Parent-Child Contingencies and Yule's Q for Overall Sample for 1s Time-Window

	1	2	3	4	Yule's Q 1	5	6	7	8	Yule's Q 5
Family	.05	.02	.06	.10		.07	.07	.45	.11	
Discussion	(.22)	(.15)	(.24)	(.35)	.03 (.23)	(.26)	(.28)	(.21)	(.38)	.03 (.26)
Anxiety	.05	.03	.06	.08		.03	.05	.02	.06	
Discussion	(.22)	(.17)	(.31)	(.31)	.02 (.23)	(.18)	(.22)	(.15)	(.26)	.01 (.21)
Both	.05	.02	.06	.09		.05	.06	.03	.09	
Discussion	(.22)	(.16)	(.28)	(.33)	.05 (.029)	(.22)	(.25)	(.18)	(.33)	.03 (.32)

1. Psychological Control (PC) followed by Dysregulation (DE), 2. PC followed by No Dysregulation (NoDE), 3. No Psychological Control (NoPC) followed by DE, 4. NoDE followed by NoPC, 5. DE followed by PC, 6. DE followed by NoPC, 7. NoDE followed by PC, 8. NoDE followed by NoPC

Table 13

Mann Whitney U Test Group Means (SD) for Observed Parent and Child Scores

		Non-Clinical Group	Anxiety Disorder Group	*p*
Psychological Control	Frequency	154.45 (104.64)	212.40 (106.91)	.001*
	Duration	10.34s (4.83s)	12.35s (4.22s)	.008*
Dysregulated Emotion	Frequency	325.24(181.42)	385.89 (146.93)	.062
	Duration	10.98s (6.91s)	15.59s (7.56s)	.000*

*$p<.01$

Table 14

Means (SE) of Psychological Control Frequency by Anxiety Diagnosis Status and Household Income

Household Income	Anxiety	Non-Clinical
<$40,000	14.27 (1.32)	8.33 (2.53)
$40,000 - $79,999	12.59 (.814)	10.54 (1.22)
$80,000 - $99,999	11.77 (.860)	15.75 (2.19)
>= $100,000	12.70 (.693)	9.94 (1.03)

Table 15

Means (SE) of Dysregulated Emotion Frequency by Anxiety Diagnosis Status and Household Income

Household Income	Anxiety	Non-Clinical
<$40,000	18.36 (2.15)	7.00 (4.12)
$40,000 - $79,999	13.97 (1.33)	11.92 (1.98)
$80,000 - $99,999	16.00 (1.40)	19.00 (3.57)
>= $100,000	17.28 (1.13)	9.44 (1.68)

Table 16

Spearman's Correlation Coefficients between Parent and Child Observed Behaviors

		Dysregulated Emotion Frequency			Dysregulated Emotion Duration		
		Family Discuss-ion	Anxiety Discuss-ion	Overall	Family Discuss-ion	Anxiety Discuss-ion	Overall
Psychological Control Frequency	Family Discussion	.446**	.264**	.401**	.102	.165*	.141
	Anxiety Discussion	.355**	.447**	.440**	.192*	.233**	.223**
	Overall	.491**	.435**	.515**	.167*	.250**	.220**
Psychological Control Duration	Family Discussion	.386**	.203**	.329**	.325**	.209**	.289**
	Anxiety Discussion	.471**	.430**	.310**	.184*	.311**	.277**
	Overall	.427**	.505**	.401**	.294**	.286**	.316**

*p<.05, **p<.01

Table 17

Means (SE) of 4-second Time-Window Yule's Q for Psychological Control to Dysregulated Emotion Contingency by Anxiety Diagnosis Status

Race	Anxiety	Non-Clinical
White	.021 (.014)	-.014 (.024)
Black	-.500(.148)	.000 (.105)
Asian	.437 (.105)	.000 (.105)
Other	.167 (.086)	.000 (.105)

Table 18

ANOVA Results Testing Interaction between Marital Status and Anxiety Diagnostic Status on Psychological Control and Dysregulated Emotion Behavioral Contingencies

	4s Time-Window	1s Time-Window
1.	$F_{(1,158)}$=.755, p=.386	$F_{(1,158)}$=1.12, p=.292
2.	$F_{(1,158)}$=.010, p=.921	$F_{(1,158)}$=.275, p=.601

1. Psychological Control (PC) followed by Dysregulation (DE), 2. DE followed by PC

Table 19

ANOVA Results Testing Interaction between Household Income and Anxiety Diagnostic Status on Psychological Control and Dysregulated Emotion Behavioral Contingencies

	4s Time-Window	1s Time-Window
1.	$F_{(3,143)}$=.038, p=.990	$F_{(3,143)}$=.712, p=.546
2.	$F_{(3,143)}$=.508, p=.677	$F_{(3,143)}$=.275, p=.843

1. Psychological Control (PC) followed by Dysregulation (DE), 2. DE followed by PC

Table 20

ANOVA Results Testing Interaction between Race and Anxiety Diagnostic Status on Psychological Control and Dysregulated Emotion Behavioral Contingencies

	4s Time-Window	1s Time-Window
1.	$F_{(3,158)}$=5.638, p=.001*	$F_{(3,158)}$=1.184, p=.318
2.	$F_{(3,158)}$=.020, p=.996	$F_{(3,158)}$=.365, p=.778

1. Psychological Control (PC) followed by Dysregulation (DE), 2. DE followed by PC

Table 21

ANOVA Results Testing Interaction between Ethnicity and Anxiety Diagnostic Status on Psychological Control and Dysregulated Emotion Behavioral Contingencies

	4s Time-Window	1s Time-Window
1.	$F_{(1,157)}$=3.706, p=.056	$F_{(1,157)}$=.739, p=.391
2.	$F_{(1,157)}$=.010, p=.921	$F_{(1,157)}$=.016, p=.900

1. Psychological Control (PC) followed by Dysregulation (DE), 2. DE followed by PC

Table 22

ANOVA Results Testing Interaction between Gender and Anxiety Diagnostic Status on Psychological Control and Dysregulated Emotion Behavioral Contingencies

	4s Time-Window	1s Time-Window
1.	$F_{(1,175)}$=.014, p=.907	$F_{(1,175)}$=1.134, p=.288
2.	$F_{(1,175)}$=.236, p=.627	$F_{(1,175)}$=.638, p=.425

1. Psychological Control (PC) followed by Dysregulation (DE), 2. DE followed by PC

Table 23

T-test Results Testing Relationship between Psychological Control and Dysregulated Emotion Behavioral Contingencies and Anxiety Severity

	4s Time-Window	1s Time-Window
1.	$t_{(155)}$=-.514, p=.608	$t_{(155)}$=-.192, p=.848
2.	$t_{(155)}$=-.680, p=.497	$t_{(155)}$=-.822, p=.413

1. Psychological Control (PC) followed by Dysregulation (DE), 2. DE followed by PC

FIGURES

Figure 1. Interaction of Anxiety Diagnostic Status and Household Income on the Frequency of Observed Parental Psychological Control

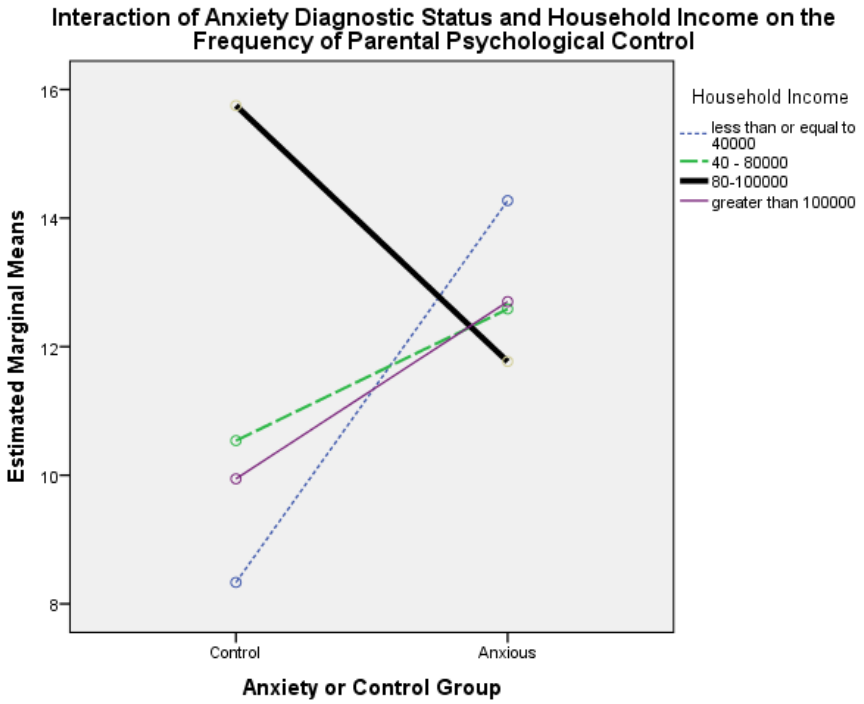


Figure 2. Interaction of Anxiety Diagnostic Status and Household Income on the Frequency of Observed Dysregulated Emotion

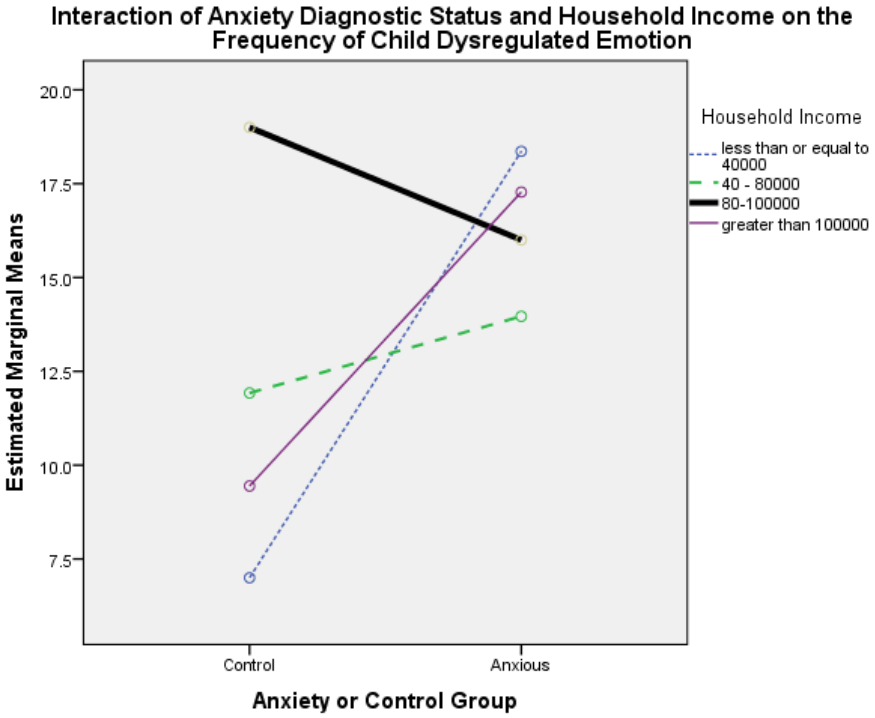
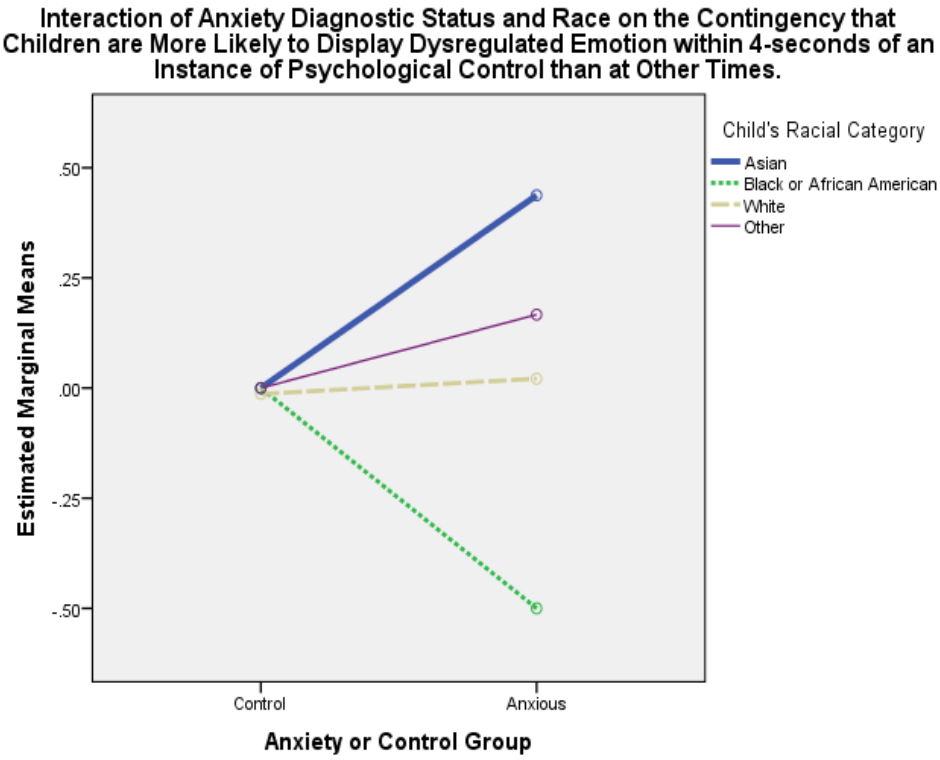


Figure 3. Interaction of Anxiety Diagnostic Status and Race on the Contingency that Children are More Likely to Display Dysregulated Emotion within 4-seconds of an Instance of Psychological Control than at Other Times.



Informed Consent Form

Rhode Island Hospital
IRB Approved
5-12-10
Expiration Date
10-13-10

Parent/Guardian Initials _____

Affiliate
☒ Rhode Island Hospital ☐ The Miriam Hospital
☐ Bradley Hospital ☐ Newport Hospital

Agreement to Participate in a Research Study
And Authorization for Use and Disclosure of Information

0005-05
Committee #

Name of Study volunteer

Differentiating Childhood Anxiety

Your child is being asked to take part in a research study. All research studies carried out at Lifespan institutions are covered by the rules of the Federal Government as well as rules of the State and each institution. Under these rules, the researcher will first explain the study and then ask you to allow your child to participate. You will be asked to sign an agreement which states that the study has been explained, that your questions have been answered, and that you agree to have your child participate.

The researcher will explain the purpose of the study. He or she will explain how the study will be carried out and what your child will be expected to do. The researcher will also explain the possible risks and possible benefits of being in the study. You should ask the researcher any questions you have about any of these things before you decide whether you wish to allow your child to take part in the study. This process is called informed consent.

This form also explains the research study. Please read the form and talk to the researcher about any questions you may have. Then, if you decide to allow your child to be in the study, please sign this form in front of the person who explained the study to you.

Federal and Lifespan institution rules require that if your child is 8 years or older, the "assent" (agreement) of your child be obtained by the researcher before your child may participate in this study. Your child must sign the consent form as well. You will be given a copy of the signed consent form to keep.

1. Nature and Purpose of the Study

Anxiety disorders are among the most common disorders of childhood. The purpose of this study is to learn more about childhood anxiety disorders by assessing children with several different types of anxiety disorders as well as children without anxiety disorders. We are interested in the similarities and differences in family processes and in child temperament among children with different anxiety disorders and children not affected by these disorders.

This research is sponsored by the National Institute of Mental Health (NIMH).

2. Explanation of Procedures

Study Day 1

After informed consent is obtained, families will participate in a diagnostic interview. This interview involves a series of questions about any symptoms your child may be experiencing. This information is used to determine whether your child has an anxiety disorder or not and whether s/he has any other diagnoses. The interview will be conducted by a member of the study team and will be reviewed by one of the study doctors. In general, interviews will be conducted with parent(s) and children together. However, if the family or the interviewer believes that it would be beneficial to conduct certain parts of the interview with parent(s) or children separately this may be done. This interview will be videotaped to ensure that the researchers are following study procedures accurately and to recheck the interview to be able to assign diagnoses. At this visit, the family will also be asked to return the packet that was sent to them in the mail before they came in for the appointment. This packet includes questionnaires for both parents and the child to fill out. The child questionnaires ask for information about children's feelings and family interactions. The parent questionnaires ask for information about the personal feelings of adults, the child's feelings, symptoms and behaviors, as well as about parenting behaviors and family interactions. If families prefer to complete some or all of the questionnaires at the visit rather than prior to it, time and assistance for doing this will be provided.

After the diagnostic interview, parent(s) will complete a questionnaire with the help of one of the study coordinators, either Catherine Riffle or Nancy Haff. This visit will take approximately 3 hours to complete. Breaks will be provided as needed.

Study Day 2

The information gathered from Study Day 1 will be evaluated. If your family meets study criteria, one parent and your child will be asked to come back for the second day. This visit will involve 3 different family observations that look at how families interact and respond to certain situations. Families will be given detailed instructions for each task by a member of the research staff. Before the first task, and between the other tasks, your child will be asked to relax by himherself in the room while the equipment for the next task is set up. For one of the observations tasks, you will be given a description of two situations (e.g., something that makes your child anxious) and you and your child will be asked to have conversations about these situations. The situations to be discussed will be selected from among those listed in a questionnaire that you and your child will be asked to complete on Study Day 1. For another one of the observation tasks, your child will be asked to put together some puzzles, with you

assisting as necessary. The other task will entail your child creating an ending to a story, with your assistance as necessary, and then your child will tell the story aloud in front of you and two other adults (members of the research team). At various points during the visit you and your child will be asked questions about your child's feelings and your reactions to those feelings.

While you and your child are participating in these observation tasks, we will also record your child's heart rate and breathing. This is done by placing 3 sensors on your child's chest which are connected to a machine that records heart activity. We will also place a loose fitting belt around your child's stomach area that will record when she is taking a breath. This will be connected to the same machine that records heart activity. We will give your child an opportunity to examine the sensors and belt for as long as necessary, so that s/he will be comfortable and at ease during the session.

These tasks will be videotaped so that members of the research team who have not already met your family can view them.

After the study procedures are completed, Dr. Garcia or one of the other psychologists will provide you with feedback as to whether or not your child has an anxiety disorder or any other psychiatric disorders. If your child has one of these disorders and is not currently receiving treatment, the study team will offer treatment referrals as needed.

This visit will last approximately 1.5-2 hours.

When we have completed all of the assessments with your family, we will give you a $25.00 gift card to indicate our thanks for your efforts. If your family completes some but not all of the study procedures that you are invited to participate in, a partial payment will be given to you. Parking vouchers will be provided for all study visits. At the end of each study visit, children will be given a small toy as a reward for their efforts that day.

If you have any questions about this study please contact Abbe Garcia, Ph.D., the principal investigator, at (401)444-2644, or one of the study coordinators, Catherine Riffin at (401)444-5001 or Nancy Huff at (401)444-2178.

3. Discomforts and Risks

There are no known risks of doing the procedures described above. Some questions asked during the interview may be of a sensitive nature and may be difficult to answer, causing brief discomfort. Generally, however, participants feel better after having the opportunity to discuss such matters openly. If any extreme distress is evident, the interviewers are child psychologists who can help you manage the distress in the moment and will provide appropriate treatment referrals as needed. There may also be some brief discomfort or minor skin irritation when the heart activity sensors are removed.

4. Benefits

While families may benefit from the comprehensive diagnostic evaluation, we cannot and do not guarantee any direct benefit from participation in this study.

As part of this study, your child will receive a comprehensive diagnostic interview. The results of this interview may be helpful for future treatment planning for your child. Through the process of participating in this study, a family member may become aware of mental health, marital, family, or parent-child difficulties that they were not aware of before. If appropriate, we will provide referrals. In addition, families will be contributing to knowledge about child anxiety disorders that may provide benefits to the population in general.

5. Alternative Therapies

This study does not provide treatment to participants; therefore, there are no alternative therapies. Referral for mental health treatment will be made as needed.

6. Refusal/Withdrawal

You decide whether or not you want your child to be in the study. Participation is voluntary. If you decide now to let your child participate, you can change your mind later and quit the study.

If you decide not to let your child participate, or if you quit the study, it will not affect the health care services that your child normally receives. If the researcher or your doctor feels it is in your child's best interest, they may choose to take your child out of the study at any time before your child completes the study.

As soon as it becomes available, the researcher will give you new information about the study that may or may not affect your decision to keep your child in the research study

7. Medical Treatment/Payment in Case of Injury

If your child experiences a research injury Lifespan, or the study doctor, will arrange for medical treatment at no cost to you. The cost of your child's treatment will be paid for as described below. A research injury is any physical injury or illness caused by your child's participation in the study. If your child is injured by a medical treatment or procedure that he/she would have received even if they were not in the study that is not a research injury. To help avoid injury, it is very important to follow all study directions.

We do not expect that your child will be hurt by taking part in this research study. However, if your child is hurt as a result of taking part in this study, Lifespan will provide without charge to you, what it feels is fair and proper treatment. Lifespan does not however, have any plan or money set aside to pay you (for "pain or suffering") if your child is hurt. Signing this agreement does not lessen or take away any of your lawful rights. For more facts about these terms, please contact Patricia E. Houser in the Office of Research Administration at 401-444-6246.

If your child suffers a research injury and he/she is covered by insurance, it is possible that some or all of the costs of treating his/her condition could appropriately be billed to your

insurance company. If such costs are not covered either by health insurance, Lifespan will pay for what it considers fair and proper treatment. Lifespan has no policy to cover payment for such things as lost wages, expenses other than medical care, or pain and suffering.

Signing this form does not lessen or take away any of your lawful rights. For more facts, please contact Patricia E. Houser in the Office of Research Administration at 401-444-6246.

8. Rights and Complaints

If you or your child have any complaints about your child's participation in this study, or would like more information about the rules for research studies, or the rights of people who take part in those studies, you may contact Patricia E. Houser, anonymously if you wish, in the Lifespan Office of Research Administration, telephone number (401) 444-6246

9. Confidentiality

The section at the end of this document called "Research Authorization for Use and Disclosure of Information" provides detailed information about how the information learned about your child during this study will be used and shared. More generally, all of your child's records from this study will be treated as private health care records. The records will be protected according to the rules of Lifespan. The Lifespan privacy practices and policies are based on the rules about protection of private health care information contained in Rhode Island law and in the Federal Health Insurance Portability and Accountability Act of 1996 and its regulations ("HIPAA"). The privacy practices of Lifespan and of the people who provide services at or with Lifespan are explained in more detail in the Lifespan Joint Privacy Notice (the "Privacy Notice") which will be given to you.

You should also know that there are times when the law might require or permit Lifespan to release your child's health information without your permission. The Privacy Notice explains when this might happen. To give you some examples, State law requires health care workers to report abuse or neglect of children to the Department of Children, Youth and Families (DCYF). State law also requires health care workers to report abuse or neglect of people age 60 and older to the Department of Elderly Affairs.

10. Research authorization for use and disclosure of information

The purpose of this section of the document is to provide you with some more information about how the information learned about your child during the study will be used and shared.

We understand that your child's medical information is very personal and we will work hard to keep it private. **If you sign this form you consent to allow your child to participate in this research study and are giving us permission to use and share your child's personal health information in the ways described in this form.**

Understandings and notifications

The main purpose of permitting the use and release of your child's information is to allow the research project to be conducted and to ensure that the information relating to that research is available to all parties who may need it for research purposes. Your child's information may also be used as necessary for your child's research-related treatment, to collect payment for your child's research-related treatment (when applicable), and to run the business operations of the hospital.

All health care providers are required to protect the privacy of your child's information. However, most persons or entities (i.e., businesses, organizations) that are not health care providers are not bound by law to protect the privacy of your child's information. You understand that if the person or entity that receives your child's information is not a health care provider bound to protect your child's privacy, such person or entity might re-release your child's health information.

You have the right to refuse to sign this form. If you do not sign this form, none of your child's health care outside the study, or the payment for your child's health care, or your child's health care benefits will be affected. However, if you do not sign this form, your child will not be able to enroll in the research study described in this form, and your child will not receive treatment as a study participant.

If you sign this consent form, you may withdraw your child from the study at any time. However, if you do not want the researchers to use or disclose any further information about your child in this study you must cancel permission in writing and may do so at any time. If you cancel your permission, your child will stop taking part in the study and no new information will be collected about your child. However, if you cancel your permission, it will not apply to actions already taken or information already collected about your child by the hospital or the researchers before you canceled your permission. This information or action may be needed to complete analysis and reports of this research. This permission will never expire unless you cancel it. To cancel this permission, please write to Abbe Garcia, Ph.D.; Coro West Building 2nd Fl.; 1 Hoppin St.; Providence, RI 02903.

If after you have signed this form you have any questions relating to your rights, please contact Patricia E. Houser, RN, MSJ in the Office of Research Administration, 401-444-6246.

Uses and releases covered by this authorization (permission)
Who will release, receive, and/or use your child's information? This form will allow the following person(s), class(es) of persons, and/or organization(s)* to release, use, and receive the information listed below in connection with this Study, or as required by law:

- ☒ Every research site for this study, including this hospital, and including each site's research staff and medical staff
- ☒ Health care providers who provide services to your child in connection with this study
- ☐ Laboratories and other individuals and organizations that analyze your child's health information in connection with this study, in accordance with the study's protocol
- ☐ The following research sponsors and the people and companies that they use to oversee, administer, or conduct the research: _____
- ☒ The United States Food and Drug Administration, Department of Health and Human Services, Office of Inspector General, Office of Civil Rights.

- [x] The members and staff of the Institutional Review Board(s) or Ethics Committee(s) that approves this study
- [x] Principal Investigator and other Investigators
- [x] Study Coordinator
- [x] Additional members of the Research Team
- [ ] The Patient Advocate or Research Volunteer Protector: _____
- [x] Members of the hospital's administrative staff responsible for administering clinical trials and other research activities
- [ ] Contract Research Organization (A contract research organization is an independent organization that agrees to oversee and make possible, various aspects of the clinical research process for the research sponsor.)
- [ ] Data and Safety Monitoring Boards and others that monitor the conduct of the Study, for example a Clinical Events Committee
- [ ] The members and staff of the hospitals affiliated Privacy Board (if such a board is used)
- [ ] Others (as described below)_____

* If, during the course of the research, one of the companies or institutions listed above merges with or is purchased by another company or institution, this permission to use or release protected health information in the research will extend to the new company or institution.

What personal health information will be used or released? The appropriate boxes should be checked below and the descriptions should be in enough detail so that you (or any organization that must release information to carry out this authorization) can understand what information may be used or released.

- [ ] The entire research record and any medical records held by the hospital may be used and released.

- [x] The following information:

The entire research record.

SIGNATURE

I HAVE READ THE ABOVE DESCRIPTION OF THIS STUDY. ALL OF MY QUESTIONS HAVE BEEN SATISFACTORILY ANSWERED, AND, AND I GIVE PERMISSION FOR MY CHILD TO PARTICIPATE IN THIS RESEARCH STUDY.

This informed consent document expires on 10-13-10.
DO NOT sign this document after this expiration date

_____ _____ _____
Signature of parent/guardian* Date and Time when signed

_____ _____ _____
Signature of parent/guardian* Date and Time when signed

I AGREE TO PARTICIPATE IN THIS STUDY

_____ _____
Signature of study volunteer (child)* Date

_____
Age of study volunteer (child)

I WAS PRESENT DURING THE CONSENT PROCESS AND SIGNING OF THIS AGREEMENT ABOVE BY THE PARENT/GUARDIAN OR AUTHORIZED REPRESENTATIVE

_____ _____
Signature of witness (required if consent is presented orally or at the request of the IRB) Date

IF STUDY VOLUNTEER IS UNABLE TO SIGN OR EXCEPTION TO ASSENT IS SOUGHT, PLEASE EXPLAIN:

_____

_____

Parent/Guardian Initials _____

I CERTIFY THAT I HAVE EXPLAINED FULLY TO THE ABOVE PARENTS AND STUDY VOLUNTEER, THE NATURE AND PURPOSE, PROCEDURES AND THE POSSIBLE RISK AND POTENTIAL BENEFITS OF THIS RESEARCH STUDY.

_____ _____ _____

Signature of researcher or designate Date and Time when signed

* If signed by agent other than parent and study volunteer, please explain below.

_____

_____

Documentation that a copy of this Informed Consent was given to the research participant is a Federal requirement. Prior to making a copy of the signed and dated Informed Consent please check appropriate box(es) as applicable to indicate copy provided to:

☐ Study Volunteer ☐ Medical Record ☐ Researcher ☐ Other (Specify)

Demographics Questionnaire

ID # _____

PARENT QUESTIONNAIRE

Child's name _____

Child's date of birth _____ Age:_____ Sex M___ F___

Address _____

_____

Phone _____

Father's name _____ Age: _____

Mother's name _____ Age: _____

Name of person completing this form _____

Relationship to child _____

Referred by _____

Address _____

_____

Phone _____

Child's Ethnic Category:

- ☐ Hispanic or Latino
- ☐ Not Hispanic or Latino

Child's Racial Category (check all that apply):

- ☐ American Indian/Alaska Native
- ☐ Asian
- ☐ Native Hawaiian or Pacific Islander
- ☐ Black or African American
- ☐ White
- ☐ This category does not apply to me

1. If you are bringing your child here for psychiatric evaluation, please describe the problem(s) for which you are seeking help.

When and how did the problem(s) begin?

What has been done so far to try and alleviate the problem(s)?

2. **Psychiatric History**

Has your child ever been hospitalized for psychiatric treatment?

Y___ N___ If yes, please specify:

Dates of hospitalization: from_____ to_____ Name of hospital:_____

Reason for hospitalization:

Was the hospital treatment helpful?

Dates of hospitalization: from_____ to_____ Name of hospital:_____

Reason for hospitalization:

Was the hospital treatment helpful?

Has your child received any outpatient psychiatric treatment or counseling, or has he/she taken any medication for the treatment of emotional, behavioral, or learning problems?

Y___ N___ If yes, please specify:

Dates of counseling: from_____ to _____ Name of therapist:_____

Was treatment helpful?

Dates of counseling: from_____ to_____ Name of therapist:_____

Was treatment helpful?

Dates of medication: from_____ to_____ Name of medication:_____

Dosage_____ Was treatment helpful?

Dates of medication: from_____ to_____ Name of medication:_____

Dosage:_____ Was treatment helpful?

ID # _____

If your child has received previous treatment, please bring with you to the first appointment the names and full addresses of the individuals, clinics, or hospitals where treatment has been provided.

Other comments regarding past psychiatric treatment:

3. Medical Information

If female, has your child started to have menstrual periods? Y__ N__ If yes, when?_____

Date of last physical examination:_____

Your child's doctor: _____

Address _____

_____

Phone _____

4. Medical History

Has your child suffered from any of the following medical problems?

__ head injuries (concussions, loss of consciousness)
__ seizures
__ recurrent headaches
__ bone fractures
__ asthma
__ other medical problems (describe)
__ allergic reactions to medications
__ other allergies
__ hospitalization for medical illness
__ hearing impairment
__ surgery

If yes to any of the above, please provide details:

Is your child currently taking any medication? (include over-the-counter medicine, such as cold or allergy preparations)

Name of medication:_____ Dosage_____ Taken since_____

Name of medication:_____ Dosage_____ Taken since_____

5. Pregnancy

While you were pregnant with this child, were you under a doctor's care?

☐ No ☐ Yes

Check any that apply for this pregnancy: Describe:

☐ Anemia _____

☐ Elevated Blood Pressure _____

☐ Toxemia _____

☐ Swollen ankles _____

☐ Kidney Disease _____

☐ Bleeding _____

☐ Measles _____

☐ German Measles _____

☐ Flu _____

☐ Strep Throat _____

☐ Other Virus _____

☐ Other Illness _____

☐ Nausea or Vomiting _____

☐ Injury _____

☐ Take Medication(s) _____

☐ Emotional Problems _____

☐ Threatened Miscarriage _____

☐ Premature Labor _____

☐ Severe Emotional Distress _____

☐ Smoked During Pregnancy _____

☐ Drank Alcohol During Pregnancy _____

ID # _____

6. Birth History

Mother's Age at Time of Birth: ___years Father's Age at Time of Birth: ___years

How many hours from first contraction to birth? _____ What did the baby weigh? ___lbs ___oz

Were you given medication? □ No □ Yes

Were you under anesthesia during childbirth? □ No □ Yes □ Don't Know

If yes: □ Local □ Spinal □ General

Was labor induced? □ No □ Yes Was induced labor planned? □ No □ Yes

Was this a breech (feet first) delivery? □ No □ Yes

Was the delivery unusual in any way? □ No □ Yes

How? _____

Did you have a Cesarean? □ No □ Yes

If yes, describe any complications: _____

_____

Did you have twins? □ No □ Yes

If yes, which twin was born first? _____

Did this baby have breathing problems? □ No □ Yes

Did this baby have a cord around the neck? □ No □ Yes

Was this baby's color normal? □ No □ Yes

If no, what color? □ Blue □ Yellow □ Don't Know

For how long? _____

Was oxygen used for the baby? □ No □ Yes

For how long? _____

Was the baby premature? □ No □ Yes

How much? _____

Did you take the baby home with you from the hospital? □ No □ Yes

If No, how long after? _____

Did you have problems with feeding? □ No □ Yes

If Yes, please describe: _____

Was the baby normally active? _____

7. **Developmental History:** (Answer as best as you can remember)

Motor Development (Sitting, Crawling, Walking)	☐ Normal	☐ Fast	☐ Slow
Speech and Language	☐ Normal	☐ Fast	☐ Slow
Handedness	☐ Normal	☐ Fast	☐ Slow
Self-Help Skills (dressing, brushing, toileting, hygiene)	☐ Average	☐ Slow	☐ Fast

8. **Temperament (Infancy, Toddlerhood, Pre-School):** Check any that apply

☐ Shy or Timid	☐ Underactive	☐ Easy to manage
☐ Stubborn	☐ Overactive	☐ Blank spells
☐ Affectionate	☐ More interested in things than in people	☐ Rocking
☐ Temper Outbursts		☐ Head banging
☐ Wanted to be left alone	☐ Poor eating	☐ Into everything
☐ Dare-devil	☐ Impulsive	☐ Slow to warm up
☐ Aggressive	☐ Poor sleep	☐ Happy
☐ Fearful	☐ Curious	☐ Falling spells
☐ Cautious	☐ Tore up toys more than normal	

Bowel trained:	☐ Average	☐ Early	☐ Late
Bladder trained:	☐ Average	☐ Early	☐ Late
Eating behavior:	☐ Picky	☐ Eats too much	☐ Overeats sugar/ carbohydrates

9. **Academic History**

In what grade in school is your child?_____

School name_____

Has your child ever been held back in school? Y__ N__ If yes, when and why?

Has he/she ever skipped a grade? Y__ N__ If yes, when and why?

ID #_____

Has he/she ever been in special education classes? Y__ N__

If yes, when, what type of class, which subjects?

What sort of grades does your child make in school?

Have teachers or others ever told you that he/she had a learning disability?

Y__ N__ If yes, when? What were you told?

Has your child ever had special educational or cognitive testing?

Y__ N__ If yes, please specify dates and results:

Has a teacher ever commented that your child is "hyperactive?"

Y__ N__ If yes, when? What were you told?

Has a teacher ever commented on other behavioral or emotional problems?

Y__ N__ If yes, when? What were you told?

10. Living Environment

Child's biological parents are:

__ married and living together
__ unmarried and living together
__ unmarried, not living together
__ divorced
__ separated
__ mother deceased
__ father deceased
__ both parents deceased
__ unknown

If biological parents are (or were) married, date married: _____

If biological parents are divorced, date divorced: _____

Child lives with:

__ biological father and mother
__ mother and step-father
__ father and step-mother
__ mother only
__ father only
__ adoptive parents

__ other_____

If child is adopted:

age at adoption_____

reason for adoption_____

does child know of adoption_____

Others in household

Sibling's first name_____ Age____ Sex M____ F____

Sibling's first name _____ Age____ Sex M____ F____

Sibling's first name _____ Age____ Sex M____ F____

Sibling's first name _____ Age____ Sex M____ F____

Sibling's first name _____ Age____ Sex M____ F____

First name _____ Age____ Relationship_____

First name _____ Age____ Relationship_____

First name_____ Age____ Relationship_____

Do any family/household members currently suffer from significant physical health problems?

Y__ N__ If yes, please describe:

Do any family/household members currently suffer from significant mental/emotional health problems?

Y__ N__ If yes, please describe:

Father's educational attainment (check highest level obtained):

__ did not graduate from high school
__ high school graduate
__ some college
__ college graduate
__ advanced college degree

Father's occupation_____

Mother's educational attainment (check highest level obtained):

__ did not graduate from high school
__ high school graduate
__ some college
__ college graduate
__ advanced college degree

Mother's occupation_____

Are there currently or have there been any significant marital problems?

Y__ N__ If yes, please describe:

Are there any other significant stresses currently affecting your family life (e.g. financial concerns, health problems) extended family concerns or conflicts, job problems, etc.)

Y__ N__

ID # _____

Approximate Household Yearly Income:

__ < $10,000 __ $10,000-20,000 __ $20,000-30,000
__ $30,000-40,000 __ $40,000-50,000 __ $50,000-60,000
__ $70,000-80,000 __ $80,000-90,000 __ $90,000-100,000 __ > $100,000

11. Family History

Has your child's biological family had any of the following problems?

	Child's Siblings	Child's Mother	Child's Father	Mother's Family	Father's Family
Depression *(w/ or w/o mania)*					
Anxiety Problems *(panic disorder/attacks, phobias, separation anxiety, etc.)*					
Obsessive-Compulsive Disorder Persistent unwanted thoughts which may be accompanied by the need to repeat certain habits or rituals					
Tic Disorders/ Tourette's Syndrome *Involuntary movements or sounds (excessive eye blinking, nose wrinkling, sniffling, throat clearing, etc.)*					
Schizophrenia					
Hospitalized for psychiatric problem					
Learning difficulties as a child					
Attentional Problems (ADD or ADHD or learning disorders)					
Mental Retardation					
Other Psychiatric Problem *(autism, suicide, attempted suicide, etc.)*					
Neurological Problems (seizures, memory problems, Alzheimer's, Parkinson's, stroke, Movement disorder, chorea, dystonia, myoclonus, migraines, etc.)					

	Child's Siblings	Child's Mother	Child's Father	Mother's Family	Father's Family
Sydenham's Chorea *Acute motor disorder which follows a streptococcal infection*					
Rheumatic Fever *A disorder in which heart tissue is damaged following a streptococcal infection.*					
Heart Problems *(valve replacements, Kawasaki's disorder, inflammation of the heart, arrhythmias, etc.)*					
Thyroid Problems *(hyperthyroidism, hypothyroidism, Hashimoto's thyroiditis)*					
Arthritis *Particularly rheumatoid- reddened, swollen joints; or childhood onset arthritis*					
Diabetes Particularly juvenile onset					
Allergies *(hayfever, asthma, sinusitis, etc.)*					
Other Autoimmune Problems *(lupis, multiple sclerosis, collagen vascular disease, B12 deficiency, Meig's disease, Sjogren's syndrome, scleroderma, atrophic gastritis, pernicious anemia, etc.)*					
Sleep Disorders *(narcolepsy, sleep apnea, excessive daytime sleepiness, sleepwalking, night terrors, nocturnal myoclonus, periodic limb movements, restless leg syndrome, teeth grinding, etc.)*					
Alcohol Abuse					
Drug Abuse					
Criminal Behavior					

10

Family Discussion Topic

Subject ID # OFIT Page 1

Family Interactions (to be completed by a parent)

General Family Problems:
Below is a list of things that parents and children talk about sometimes that can cause conflict. Choose two from the list that are a problem in your family, or choose two that you come up with on your own. Circle your choice below, or fill in the line next to "other" if you choose one of your own. After choosing the problems please explain them in more detail in the space provided on the following page and rate the magnitude of the problem from 0 to 8. An example is given for the first issue on the list below.

Watching television
Time to go to bed
Telephone calls
Cleaning up bedroom
Doing homework
Personal cleanliness (showering, teeth)
Neatness of appearance
Being too loud at home
Fighting with siblings
Using bad language
Picking movies or music
Allowance
Table manners
Turning off lights
Doing chores at home
Taking care of things (pet, car, clothes)
Being on time for school
Going to school
Grades at school
Behavior at school
Taking back to parents
Getting up in the morning
Messing up the house
Lying
What to eat
Being disrespectful
Other: _____
Other: _____

Example Issue: Please describe the problem and rate how much of a problem it is.

There is one main television set in the house. In the afternoon after school, John likes to have control over the remote so that he can watch his favorite programs. His younger brother likes watching different programs and he often steals the remote resulting in the two brothers getting into fights. This affects all of the family members because parents have to break up the fights, and the boys get upset and angry at each other.

Severity Rating:

Please circle the appropriate rating of the magnitude of the problem for the family.

0	1	2	3	4	5	6	7	8
Not at all a problem		A little bit of a problem		Somewhat of a problem		A lot of a problem		Very, very much a problem

Family Interactions (cont.)

Anxiety Discussion Topic

Subject ID # OFIT Page 3

Family Interactions (cont.)

Anxiety Specific Family Problems:
All kids have **worries, fears and anxieties**. Below is a list of some examples of a child's worries, fears and anxieties that may interfere with family functioning. Choose two from the list that are a problem in your family, or choose two that you come up with on your own. Circle your choice below, or fill the line next to "other" if you choose one of your own. After choosing the problems please explain them in more detail in the space provided below and on the next page and rate the magnitude of the problem from 0 to 8.

Fear of the dark
Fear of bad weather
Fear of heights
Fear of animals/bugs
Fear of monsters, etc.
Fear of separating from parents
Worries about going to school
Worries about performance in school
Fear of scary movies/TV shows
Fear of sleeping alone
Worries about what other people think
Other: _____
Other: _____

First Anxiety Issue: Please describe the problem related to worries, fears and/or anxiety and rate how much of a problem it is.

Severity Rating:

Please circle the appropriate rating of the magnitude of the problem for the family.

0	1	2	3	4	5	6	7	8
Not at all a problem		A little bit of a problem		Somewhat of a problem		A lot of a problem		Very, very much a problem

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