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# Parental Distress Responding to Adolescent Negative Emotionality: Influence on Anxiety and Depression Symptom Severity and Treatment Outcome

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PARENTAL DISTRESS RESPONDING TO ADOLESCENT NEGATIVE  
EMOTIONALITY: INFLUENCE ON ANXIETY AND DEPRESSION SYMPTOM  
SEVERITY AND TREATMENT OUTCOME

By

Cara Suzanne Remmes

A THESIS

Submitted to the Faculty  
of the University of Miami  
in partial fulfillment of the requirements for  
the degree of Master of Science

Coral Gables, Florida

August 2012

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Parental Distress Responding to Adolescent  
Negative Emotionality: Influence on Anxiety  
and Depression Symptom Severity and  
Treatment Outcome

Abstract of a thesis at the University of Miami

Thesis supervised by Associate Professor Jill Ehrenreich May  
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Anxiety and depressive disorders result from a complex interaction of genetic and environmental influences over time. Parental behavior in the context of a child's internalizing distress, although only one of many interacting factors, may be important to understanding the etiology of anxiety and depressive disorders. Specifically, how a parent responds to their child's emotions and youth attempts at emotion regulation may influence subsequent child emotion coping through both operant conditioning and observational learning. However, the impact of a parent's own emotion regulation strategies on youth anxiety and depression has not been well-examined nor has the influence of parent's emotion regulation strategies on youth treatment outcomes. The present investigation examined associations between parent emotion regulation strategies and supportive, minimizing, punitive, and distress-oriented responses when faced with youth negative affect in a sample of 76 adolescents (ages 12-18) referred to a University-based research clinic for anxiety and/or depressive disorders. Additionally, parental reactions to youth negative affect were examined in relation to adolescent pre-treatment symptom severity and treatment outcome in a randomized, controlled trial of a transdiagnostic cognitive behavioral protocol for anxiety and depression. Results indicate

a positive relationship between parental use of reappraisal as an emotion regulation strategy and supportive responses to youth negative affect, as well as a negative relationship between parental use of reappraisal and distress reactions. Additionally, parental distress reactions and minimization responses to youth negative affect were associated with adolescent internalizing symptom severity. Supportive parenting responses were also associated with better adolescent treatment outcomes in an emotion-focused treatment protocol for anxiety and depression. These results provide a novel framework from which to view parent behaviors in the context of youth internalizing symptoms. Additionally, this investigation suggests that parent directed treatment components addressing parental emotion regulation strategies and encouraging appropriately supportive parental responses to youth negative affect may be warranted.

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## CHAPTER 1: INTRODUCTION

Anxiety and depressive disorders are highly prevalent in children and adolescents (Bernstein, Borchardt, & Perwien, 1996; Costello & Angold, 1995; Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993; Kessler & Walters, 1998) and are associated with social impairment, academic difficulties, and low self-esteem (Essau, Condradt, & Petermann, 2000; Messer & Biedel, 1994; Strauss, Frame & Forehand, 1987).

Internalizing symptoms are believed to result from a combination of genetic and environmental factors (Gar, Hudson, & Rapee, 2005; Rosenbaum, Biederman, Hirshfeld, Bolduc, & Chaloff, 1991; Eley, 2001; Barlow, 2002). Given the related potential for prevention and early intervention, researchers often focus on identifying specific environmental factors associated with youth anxiety and depression. For example, various parenting and family factors have been implicated in the development of anxiety and mood disorders (see Wood, McLeod, Sigman, Hwang, & Chu, 2003; Ginsburg & Schlossberg, 2002; Gar, Hudson, & Rapee, 2005; Garber, 2005 for reviews).

Parenting behaviors have been theorized to influence the presence of youth internalizing symptoms through processes involved with parental socialization of child emotion regulation, including operant conditioning and observational learning (Suveg, Sood, Barmish, Tiwari, Hudson, & Kendall, 2008; Eisenberg, Cumberland, & Spinrad, 1998). For instance, parents who encourage their children to avoid anxiety-provoking situations may reinforce their children's anxiety by suggesting that these situations are in fact dangerous and should be avoided. Parents broadly influence the socialization of youth emotion regulation through their direct reactions to youth emotions, parents' own expression of emotions, and parental conversations with youth about emotions

(Eisenberg, Cumberland, & Spinrad, 1998). Therefore, parents are both primary agents in socialization of their child's emotion regulation and may also influence the development of youth internalizing symptoms. Moreover, the relationship between child internalizing symptoms and problematic parental behaviors appears to be cyclical; as such internalizing distress may also work to elicit inconsistent or ineffective parenting behaviors over time (Garber, 2005, Gar, Hudson, & Rapee, 2005; Hudson & Rapee, 2004; Sheeber, Hops, Andres, Alpert, & Davis, 1998). As a result, raising a child at-risk for anxiety or depression poses a unique challenge, and parents who experience difficulties regulating their own emotions may show even greater difficulty responding adaptively to the presence of youth negative affect. To date, the influence of parental emotion regulation strategies on subsequent parenting behaviors and on the course of youth anxiety and depression have not been well studied. Similarly, parents who display emotion regulation difficulties may have difficulty supporting their children with anxiety and/or depression to make positive changes in the course of evidence-based treatments; however, parental emotion regulation has not been examined in the context of youth treatment outcome.

The current investigation seeks to examine parental influences on youth emotion regulation by testing associations between parents' own emotion regulation strategies and supportive (i.e. problem-focused, emotion-focused, and expressive encouragement), minimization, punitive, and distress-oriented responses to youth negative affect. Additionally, these parental reactions to youth negative affect will be examined in the context of adolescent pre-treatment symptom severity and treatment outcome for adolescents participating in a randomized, controlled trial of a transdiagnostic cognitive

behavioral protocol for anxiety and depression (Ehrenreich, Buzzella, Trostler, Bennett, Wright, & Barlow, 2008).

### **Emotion Regulation**

While definitions of emotion regulation are often implied instead of directly stated, efforts have been made to clarify this construct (e.g. Thompson, 1994; Campos, Campos, & Barrett, 1989; Cole, Michel, & Teti, 1994; Kopp, 1989). Emotion regulation has been defined both so that emotion is viewed as a behavior regulator and as a regulated phenomenon (Southam-Gerow & Kendall, 2002). In this investigation, emotion regulation will be defined according to Gross and Thompson's (2007) model, referring to the processes through which emotions are controlled (Gross & Thompson, 2007). In this view, emotion regulation strategies may work to change or maintain the intensity of an emotion (Gross & Thompson, 2007). As such, this construct consists of both extrinsic and intrinsic processes responsible for monitoring, evaluating and modifying emotional reactions (Thompson, 1994). Emotion regulation strategies have recently been highlighted in new treatments for anxiety and depression, as individuals with differing internalizing disorders display similar challenges in coping with their emotions (Campbell-Sills & Barlow, 2007). These difficulties include impaired understanding of emotions, more negative reactions to emotional experiences, and increased difficulty repairing negative emotions (Mennin, Heimberg, Turk, & Fresco, 2005; Turk, Heimberg, Luterek, Mennin, & Fresco, 2005).

Individuals with anxiety and mood disorders have also been found to rely heavily on *suppression* as an emotion regulation strategy (Campbell-Sills, Barlow, Brown, & Hofmann, 2006a; Campbell-Sills, Barlow, Brown, & Hoffman, 2006b; Baker, Holloway,

Thomas, Thomas, & Owens, 2004; Levitt, Brown, Orsillo, & Barlow, 2004). Suppression refers to efforts to hide what one is feeling or to inhibit the emotional experience itself (Campbell-Sills & Barlow, 2007). While this strategy is effective at reducing expressive behaviors and reducing the subjective experience of positive affect, it has no impact on the subjective experience of negative affect (Gross, 1998; Gross & Levenson, 1997). Additionally, the use of suppression has been consistently associated with increased sympathetic arousal and has been related to subsequent increases in the experience of negative affect over time (Campbell-Sills & Barlow, 2007). Increased use of suppression has also been associated with anxiety and depressive symptoms in adults (see Aldao, Nolen-Hoeksema, & Schweizer, 2010). Conversely, *reappraisal*, a strategy in which one thinks about an emotional situation in a way that decreases emotional intensity, has been linked to reductions in both emotion expression and subjective experience of negative emotion without affecting sympathetic arousal (Gross, 1998; Gross & Levenson, 1997). As would be expected, the use of reappraisal has been associated with higher levels of positive affect, lower levels of negative affect, and higher levels of interpersonal functioning and well-being overall (Gross & John, 2003). Reappraisal has also been negatively associated with anxiety and depressive symptoms and general psychopathology (see Aldao, Nolen-Hoeksema, & Schweizer, 2010).

Given the increased risk for psychopathology in children who display poor understanding of emotions and difficulty regulating emotions (Cicchetti, Ackerman, & Izard, 1995; Cole, Michel, & O'Donnell-Teti, 1994; Zeman, Shipman, & Suveg, 2002), researchers have recently focused on the development of emotion regulation to better understand how and why youth depart from more regulated trajectories. From a

developmental perspective, emotion regulation is theorized to be influenced by a combination of factors, including temperament, significant relationships, and the child's growing understanding of emotion (Thompson & Meyer, 2007). Although the combination of these factors is likely responsible for the emergence of emotion regulation difficulties, given the purpose of this investigation, the focus of the review below is narrowed to the influence of the parenting relationship.

**Parental socialization of emotion regulation.** When children are young, the methods through which parents influence the development of emotion regulation are clear. A parent may normatively endeavor to soothe a distressed infant or overtly discourage display of negative emotions (e.g., anger, frustration, etc.) in early social interactions. However, as children age, the way children learn about emotion regulation becomes more complex. Older youth and adolescents may learn about emotion regulation through parental modeling of emotional reactions, conversations about emotions, and other parenting behaviors occurring in the context of emotionally-evocative situations. More specifically, Eisenberg, Cumberland and Spinrad (1998) identified *parental reactions to children's emotions, parental expression of emotion, and parent-child discussions of emotion* as three broad categories of emotion-related parenting practices important to the development of youth emotion regulation. Each of these mechanisms will now be considered in relation to socialization of youth emotion regulation.

*Parental reactions to children's emotions.* Direct interventions by parents to manage youth emotions include redirecting the child's attention away from distressing stimuli or events, structuring children's activities and other forms of "situation selection" and attempting to alter the interpretation of ambiguous experiences (Thompson & Meyer,

2007). Additionally, parents can engage in social referencing, in which they provide helpful emotional signals through facial expressions and vocal tone when children encounter ambiguous events (Klinnert, Campos, Sorce, Emde, & Svejda, 1983). Fabes and colleagues (Fabes, Leonard, Kupanoff, & Martin, 2001; Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002; Jones, Eisenberg, Fabes, & MacKinnon, 2002) examined the relationship between parental response to youth negative emotionality and socio-emotional functioning in the preschool setting. They found that parents who reported that they respond to their child's negative emotions by addressing the cause of the distress, by helping their child cope with the emotion, or by encouraging emotional expression had children with more positive socio-emotional functioning. Conversely, parents who reported that they respond by minimizing the child's experience, by punishing emotional expression or by becoming distressed themselves, had children with poorer socio-emotional functioning.

*Parental expression of emotions.* In regard to the impact of emotional expressivity, there has been much support for the notion that parental expressiveness (i.e. expressions of positive or negative affect), particularly positive expressiveness, is associated with children's emotional understanding and positive emotionality (Boyum & Parke, 1995; Bronstein et al., 1993; Cassidy, Parke, Butkovsky, & Braungart, 1992; Halberstadt, Crisp, Eaton, 1999). Additionally, it has been found that the relationship between children's social competence and parental expressivity is mediated by differences in children's self-regulatory behavior such that a family environment characterized by moderate to high amounts of positive emotion contributes to the growth of emotion regulation (Eisenberg et al., 2001; Cumberland-Li, Eisenberg, Champion,

Gershoff, & Fabes, 2003; Valiente, Fabes, Eisenberg, & Spinrad, 2004). However, there are mixed findings regarding the influence of parental expressions of negative emotion on the development of emotion regulation. While some studies have found a negative relationship between parental expressions of negative emotion and child self-regulation skills, others have found a positive association (Eisenberg et al., 2001; Cumberland-Li et al., 2003; Valiente et al., 2004). Thompson and Meyer (2007) argue that these conflicting results may be due to a lack of distinction between the types of negative emotions expressed (e.g. hostility versus sadness), whether the negative emotions are directed toward the child or to another, the frequency and intensity of the emotion, and the circumstances under which the emotion is expressed. These authors theorize that a child's emotion regulation skills may be enhanced by exposure to non-hostile negative emotions of moderate intensity, as the child learns that negative feelings can be safely expressed and managed.

*Parent-child discussions of emotions.* Socialization of emotion regulation can also occur through parent-child conversations about emotions. Emotion-related conversation can both convey support for dealing with emotions and also heighten the child's awareness of emotion-related states (Malatesta & Haviland, 1985). In fact, parental conversations about emotions have been linked to children's use of emotion language, and to their understanding and awareness of emotions (Denham, Cook, & Zoller, 1992; Denham, Zoller, & Couchoud, 1994; Dunn, Brown, Beardsall, 1991; Dunn, Brown, Slomkowski, Tesla, & Youngblade, 1991). Parent-child conversations are important to the socialization of emotion regulation as they provide parents with opportunities to influence youth emotion regulation by managing information the child receives about

stressful events, providing emotional scripts that provide the child with appropriate emotional responses, and encouraging a conceptual reassessment of the upsetting event (Thompson & Meyer, 2007).

### **Parental socialization of emotion regulation in youth with internalizing disorders**

While research on parental socialization of emotion regulation in typically developing youth has clarified the ways in which parents aid in the development of youth emotion regulation, investigators working with clinical populations have explored the ways in which specific parenting behaviors are associated with the presence of youth internalizing symptoms. For example, Chorpita, Brown and Barlow (1998) hypothesized that an overcontrolling family environment fosters a limited sense of personal control, resulting in an increased likelihood of youth anxiety symptoms over time. Nolen-Hoeksema, Wolfson, Mumme and Guskin (1995) found similar results when looking at depression in youth. In addition to an overcontrolling parenting style, parenting behaviors related to youth anxiety include parental modeling of anxiety, rejection/criticism, and expression of negative expectations about the child (see Wood, McLeod, Sigman, Hwang, & Chu, 2003; Ginsburg & Schlossberg, 2002; Gar, Hudson, & Rapee, 2005; Garber, 2005 for reviews). For example, Whaley, Pinto, and Sigman (1999) found that mothers with clinical levels of anxiety were less warm and positive, less granting of authority, and more critical and catastrophizing during interactions with their children than non-clinically anxious mothers. Additionally, anxious parents have also been identified as being less engaged and more withdrawn during interactions with their children (Woodruff-Borden, Morrow, Bourland, & Cambron, 2003).

However, other investigations have failed to find an association between parental anxiety and specific parenting behaviors, even in the context of parental psychopathology. For example, Turner, Beidel, Roberson-Nay, and Tervo (2003) examined parental behaviors in parents with an anxiety disorder during a “risk-room” observational task. Parental behaviors were observed during a five-minute task in which children were allowed to play on seemingly risky playground equipment. Parental behaviors were coded by blind raters on a seven-point Likert scale. While results did not indicate any group differences in parental behaviors, parents with anxiety disorders reported higher levels of distress when their youth were engaged in such activities. The authors concluded that parents with anxiety are not uniformly critical or controlling, but may act in such a manner only when the situation provokes distress in the parent.

The influences of specific parenting factors on youth internalizing symptoms can also be examined within a framework that includes emotion regulation socialization. In this context, supportive and sympathetic responses to youth negative emotionality provide justification and assistance in dealing with one’s emotions, while punitive and dismissive responses may add further stress for a child with more significant emotional vulnerabilities (Thompson & Meyer, 2007). In a recent investigation, Suveg, Shaffer, Morelen and Thomassin (2011) examined the influence of maternal psychopathology, maternal responses to negative emotionality and youth emotion regulation on the presence of youth psychopathology among 7-12 year old children. These authors found that youth emotion regulation strategies mediated the relationship between maternal psychopathology and youth internalizing symptoms. Additionally, they found that parental punitive, minimizing, and distress reactions to youth negative emotionality

moderated the indirect effect of maternal psychopathology on child internalizing symptoms. These findings further support the notion that non-supportive parental reactions to youth negative affect may work to maintain or worsen such negative affect.

### **Personal Distress Responding**

Parental emotion regulation strategies may be expressed through the intensity and frequency of a parent's personal distress reactions to both their own negative emotions and also to youth negative affect. While personal distress may stem from empathy, it is often defined as a self-focused, egoistic reaction (Batson, 1991), which is argued to reflect empathic over-arousal (Eisenberg et al., 1994). Personal distress reactions predict self-focused behavior (Eisenberg, Cumberland, & Spinrad, 1998) and parents who experience higher levels of distress when faced with youth negative emotionality may focus on their own discomfort rather than on the emotional needs of their children (Fabes, Eisenberg, & Miller, 1990; Fabes et al., 2001). Fabes, Poulin, Eisenberg and Madden-Derdich (2002) argue that parents who experience personal distress in the face of youth negative emotionality are unlikely to support their children appropriately during a negative emotional experience and are more likely to punish or minimize their children's negative emotional expression. Parental reactions to negative emotions may then socialize children to suppress emotions, which can lead to further difficulties with emotion regulation.

While very little research has been done in this area, Fabes, Leonard, Kupanoff, and Martin (2001) examined parental behaviors and parental distress responses to youth negative emotionality in 57 preschoolers. Parental behaviors and distress response were measured by parent responses on the Coping with Children's Negative Emotions Scale

(CCNES; Fabes, Eisenberg, & Bernzweig, 1990). Youth emotional responding was coded by blind raters during interactions with others at free-play and snack time. Fabes and colleagues (2001) found a relationship between harsh parental coping strategies (e.g. minimization and punitive responses) and children's emotional responding that was moderated by parental distress. Given the role of parents in the development of youth emotion regulation, it may be important to further examine this relationship between parental personal distress, parental behaviors and child socio-emotional functioning, especially in clinical populations of children who are known to experience more significant difficulties with emotion regulation.

Although mechanisms of parental distress responding have not been clearly indicated, some researchers have suggested that experiential avoidance (EA) may play a role in parental distress-related responding to youth with anxiety disorders (Cheron, Ehrenreich, & Pincus, 2009; Tiwari, Podell, Martin, Mychailyszyn, Furr, & Kendall, 2008). EA is the attempt to alter the form, frequency, or experience of negative private events, even when doing so may cause behavioral difficulties or personal harm (Hayes, Wilson, Gifford, Follette & Strosahl, 1996). It has been hypothesized that youth displays of anxiety, sadness, or anger may invoke parental distress, and parents with elevated EA may engage in certain behaviors in order to suppress or reduce their own distress. Such research related to parental EA and distress responding is in early stages of development and further studies are needed to better understand the interactions between parent distress responding, high levels of parental EA and other factors, such as parental psychopathology and the actual behaviors displayed by a parent in the face of youth negative emotions, particularly in the context of youth internalizing disorders.

## **Family Factors and Treatment Outcome**

In addition to influencing youth emotion regulation and internalizing distress, parental behaviors may also influence child and adolescent anxiety and depression-related treatment outcomes. While cognitive-behavioral treatments (CBT) are effective at reducing anxiety symptoms in many youth, some children show only limited response to this intervention (Kendall, 1994; Mendlowitz, Manassis, Bradley, Scapillato, Miezitis, & Shaw, 1999; Southam-Gerow, Kendall, & Weersing, 2001). Many factors have been examined in relation to such treatment outcomes, and while some studies provide contradictory results, findings generally support the notion that high severity of pre-treatment psychopathology (Liber et al., 2010) increased diagnostic comorbidity (Liber et al., 2010; Berman, Weems, Silverman, & Kurtines, 2000; Kendall, Brady, & Vurduin, 2001; Rapee, 2000; Rapee, 2003;) and poor therapeutic alliance (Chu, McLeod, Har, & Wood, 2009; Chu & Kendall, 2004; Hughes & Kendall, 2007) are associated with poor treatment outcomes.

The influence of family factors, such as parental psychopathology and family dysfunction, have also been examined relative to treatment outcome following CBT (Cobham, Dadds, & Spence, 1998; Southam-Gerow, Kendall, & Weersing, 2001; Crawford & Manassis, 2001; Victor, Bernat, Bernstein, & Layne, 2007; Creswell, Willetts, Murray, Singhal, & Cooper, 2008). While family dysfunction consistently emerges as a variable that interferes with treatment progress, findings regarding parental behaviors and psychopathology are mixed. For example, Creswell and colleagues (2008) studied the relationship between maternal psychopathology, maternal behaviors and treatment outcome among children receiving CBT for anxiety. They found that maternal

overinvolvement, anxiety, and expression of fear were associated with poor youth treatment response. Similarly, Kendall, Hudson, Gosch, Flannery-Schroeder and Suveg (2008) compared treatment outcome in youth cognitive-behavioral therapy for anxiety in children (aged 7-14) with parents who had an anxiety disorder and youth whose parents were not diagnosed with an anxiety disorder. These authors found that children whose parents did not have an anxiety disorder were more likely to be symptom free at follow-up than youth whose parents were diagnosed with an anxiety disorder. However, Crawford and Manassis (2001) did not find any relationship between parental psychopathology and treatment outcome among similarly-aged children receiving cognitive-behavioral therapy for anxiety. While methodological variability in parent assessment, particularly, may contribute to inconsistent findings over time, the lack of consistent associations may also indicate that parental psychopathology may influence treatment outcome through more complex pathways. Therefore, it is important to examine specific factors related to parental psychopathology that may interfere with youth treatment.

CBT for youth anxiety and depression (e.g. *Coping Cat*, Kendall, Kane, Howard, & Siqueland, 1990; *Primary and Secondary Control Enhancing Training*, [PASCET] Weisz, Thurber, Sweeney, Proffitt, & LeGagnoux, 1997; *The Coping with Depression Course for Adolescents*, [CWD-A], Lewinsohn, Clarke, Rohde, Hops, & Seeley, 1996; *Cool Kids*, Lyneham, Abbott, Wignall & Rapee, 2003, etc.) often includes treatment components such as psychoeducation, cognitive restructuring, and in-vivo exposure. Exposure techniques are partially based on the notion that the process of habituation occurs after a person has been exposed to a feared situation for a prolonged period of

time or over a repeated number of trials (Craske, 1999). Although exposure sessions may promote transient anxiety symptoms, such techniques are considered to be an essential component of anxiety treatment (Craske & Barlow, 2008; Kazdin, 2008; Kendall, Kane, Howard, & Siqueland, 1990; Kendall, Chu, Pimentel, & Choudbury, 2000). However, if exposure sessions induce a distress response in the parent as well, the parent may model anxiety or even interfere with the in-session or homework exercises, thereby potentially minimizing therapeutic benefits. Similarly, parental distress may also interfere with the presentation or encouragement of treatment-related homework assignments. Nonetheless, parenting factors such as these that may influence treatment outcome in youth anxiety are in need of further study.

In addition, the relationship between parenting factors and treatment outcome for adolescent depression has not been well studied. Parents who display difficulties managing their own emotional experiences may have difficulty aiding their children through some essential components of treatment. CBT for adolescent depression consists of strategies that challenge maladaptive cognitions and encourage changes in every day behavioral patterns to increase rewarding activities (Lewinsohn, & Clarke, 1999; Weisz et al., 1997; Lewinsohn, Clarke, Rohde, Hops, & Seeley, 1996; Kazdin, 2008). While these treatment components may not be as obviously distressing to adolescents and their parents, they are often difficult to initiate for anhedonic or withdrawn individuals. Parents who experience difficulties managing their own emotions may be challenged in how to best support their children in the processes of behavioral activation and cognitive restructuring, leading to poor completion of such activities.

## **Current Investigation**

As noted above, few studies have examined the influence of parents' own emotion regulation strategies on the socialization of youth emotion regulation. Additionally, while parental psychopathology has been implicated in poor youth treatment response among children with internalizing disorders, findings in this area are mixed and lack a clear mechanism through which this relationship occurs. The current investigation examined relationships between parent behaviors and youth internalizing symptom severity, as well as parent behaviors and youth cognitive-behavioral treatment outcomes that included parental responses to youth negative affect. Primary aims for this investigation were as follows:

**Aim 1.** To better understand the relationship between parental emotion regulation strategies and parental responses to youth negative emotionality in a clinical sample of adolescents with anxiety and/or depression.

*Aim 1, Hypothesis 1:* It was hypothesized that higher levels of parental suppression would be associated with heightened parent-reported minimization and punitive responses to youth negative affect. It was also hypothesized that greater parental use of suppression would be associated with higher personal distress reactions to youth negative affect. Additionally, it was hypothesized that parental use of suppression would be negatively associated with supportive parental responses to youth negative affect.

*Aim 1, Hypothesis 2:* It was hypothesized that higher levels of reappraisal would be negatively associated with parental distress, minimization, and punitive responses to adolescent negative emotionality. Additionally, higher levels of reappraisal were

hypothesized to be associated with higher levels of supportive responses when faced with youth negative emotionality.

**Aim 2.** To examine the influence of parental distress reactions and parental coping strategies on anxiety and depression symptom severity in this clinical sample of adolescents.

*Aim 2, Hypothesis 3:* It was anticipated that parental minimization and punitive responses to youth negative affect would be associated with higher anxiety and depressive symptom severity at an initial, pre-treatment evaluation for this clinical sample of adolescents. Additionally, it was hypothesized that parental minimization and punitive responses to youth negative affect would be associated with lower levels of youth positive affect and higher levels of youth negative affect at this initial evaluation point.

*Aim 2, Hypothesis 4:* It was expected that high levels of supportive parenting strategies would be negatively associated with anxiety and depression symptom severity at the pre-treatment assessment. Additionally, it was anticipated that supportive parenting strategies would be associated with higher levels of pre-treatment positive affect and lower levels of pre-treatment negative affect.

*Aim 2, Hypothesis 5:* It was expected that greater parental distress responses to youth negative affect would be associated with higher levels of symptom severity, lower levels of youth positive affect and higher levels of negative affect at the pre-treatment assessment.

*Aim 2, Hypothesis 6:* In agreement with findings from Fabes et al. (2001), it was expected that parental distress responses to youth negative affect would act as a

moderator between parental minimization of youth negative affect and pre-treatment symptom severity, such that the association between parental minimization and increased symptom severity was stronger for those children whose parents experience higher levels of distress in response to their emotions. Similarly, it was expected that greater parental distress responses to youth negative affect would act as a moderator between parental punitive responses to youth negative affect and pre-treatment symptom severity (see Figure 1).

*Aim 2, Hypothesis 7:* It was expected that parental distress reactions would also moderate the relationship between supportive parenting behaviors and pre-treatment symptom severity. In this moderation, the relationship between supportive parenting behaviors and pre-treatment symptom severity was expected to be weaker at higher levels of parental distress response to youth negative affect (see Figure 2).

**Aim 3.** To examine the influence of pre-treatment levels of parental distress and parental supportive, minimization, and punitive reactions to youth negative affect on subsequent treatment outcome in a cognitive-behavioral intervention for adolescent anxiety and depression.

*Aim 3, Hypothesis 8:* It was hypothesized that initial levels of parental minimization and punitive reactions to youth negative affect would be negatively associated with treatment outcome in an ongoing randomized controlled trial of a transdiagnostic cognitive behavioral treatment for emotional disorders in youth. It was also expected that higher parental reports of minimization and punitive responses to adolescent negative affect at pre-treatment would be associated with decreases in

adolescent negative affect and increases in positive affect from the pre-treatment to post-treatment assessments.

*Aim 3, Hypothesis 9:* Supportive parental reactions at pre-treatment were hypothesized to be positively associated with decreases in symptom severity from the pre-treatment assessment to the post-treatment assessment. Additionally, supportive parental reactions were anticipated to be associated with increases in positive affect and decreases in negative affect between the pre-treatment and post-treatment assessments.

*Aim 3, Hypothesis 10:* Parental distress reactions at pre-treatment were hypothesized to be negatively associated with decreases in symptom severity following treatment. Greater parental distress reactions at pre-treatment were also anticipated to be associated with decreases in positive affect and increases in positive affect following treatment.

## CHAPTER 2: METHOD

### **Participants**

A total of 89 adolescents and their parents completed an intake assessment at the Child and Adolescent Mood and Anxiety Treatment (CAMAT) Program at the University of Miami. During the intake assessment, the Anxiety Disorders Interview Schedule for the DSM-IV, Child Version, Child and Parent Report Forms (ADIS-IV-C/P; Silverman & Albano, 1996) was administered and questionnaires were completed by adolescents and their parents. Of the 89 adolescents who completed an intake assessment, 76 (85.39%) were diagnosed with a principal anxiety or depressive disorder and their data was used in subsequent analyses. These 76 adolescents were between the ages of 12 and 19 years old ( $M = 15.54$ ,  $SD = 1.79$ ) and 51.3% were male. Adolescents were identified as Hispanic/Latino (64.5%), Caucasian (22.4%), Other (6.6%), African American/Black (5.3%), and Asian (1.3%). One parent was asked to complete all questionnaires at each time point. Parental respondents were between the ages of 28 and 59 ( $M = 45.4$ ,  $SD = 6.2$ ). The parental respondent was typically the adolescent's mother (88.2%); however, 9.2% of respondents were fathers, and 2.6% were other family members who self-identified as the adolescent's primary caregiver (e.g. stepmother and sister) of the adolescent.

Of the 76 adolescents who were diagnosed with a principal anxiety or depressive disorder at the intake assessment, a total of 49 participants were recruited to an ongoing randomized controlled trial of the Unified Protocol for Emotional Disorders in Youth (UP-Y). The remaining 27 participants who completed an intake interview were not recruited to the UP-Y for various reasons, including preference for individualized

treatment, meeting study exclusionary criteria (e.g. adolescent previously received cognitive-behavioral therapy), or a decision by the parent or adolescent to not receive treatment services. Given that six of the UP-Y participants have not yet completed treatment, data was utilized in this investigation for the 43 participants who have completed the investigation at the present time. These 43 adolescents were between the ages of 12 and 18 years old at the intake assessment ( $M = 15.77$ ,  $SD = 1.68$ ) and had a primary diagnosis of a mood or anxiety disorder, based on study administration of the Anxiety Disorders Interview Schedule for the DSM-IV, Child Version (ADIS-IV-C/P; Silverman & Albano, 1996). 21 of the 43 adolescents eligible for inclusion in study analyses at this time were male (48.8%) and identified as 55.8% Hispanic/Latino, 25.6% Caucasian, 9.3% African American/Black, 7.0% Other, and 2.3% Asian. Parental questionnaires were completed primarily by the adolescent's mother (81.4%); however, fathers (14.0%) and other family members who identified as primary caregivers of the adolescent (4.6%) also completed parent forms. Parental respondents were between the ages of 32 and 59 ( $M = 45.3$ ,  $SD = 6.2$ ). Participants were excluded from the UP-Y study if they presented with a diagnosis of schizophrenia, bipolar I or II disorder, pervasive developmental disorder, organic brain syndrome, mental retardation, and severe current suicidal/homicidal ideation. An intent-to-treat analytic strategy was used to maximize the sample available for treatment-related study aims. As a result, adolescents and families that consented to the UP-Y study were included, regardless of number of treatment sessions completed ( $M = 12.3$  sessions,  $SD = 8.0$ ).

## **Procedure**

Adolescents were recruited to the UP-Y study after determining that they met study inclusion criteria, and did not meet for study exclusion criteria at a pre-treatment assessment. After additional parent consent and adolescent assent were obtained, adolescents were then enrolled in either an immediate treatment condition or an eight-week waitlist condition. During the intervention, adolescents met with a clinician for weekly 50-minute sessions, including a brief check-in with the youth's parents at the end of each session. The UP-Y is an emotion-focused treatment consisting of cognitive-behavioral treatment techniques delivered in a flexible format over the course of 8-21 sessions. Modules consisted of psychoeducation, cognitive restructuring, interoceptive and in-vivo exposure components. Adolescents who were assigned to the waitlist condition completed brief check-in phone calls or in-person meetings every two weeks for eight weeks before beginning the intervention. Parents completed study-related measures, including all those noted below in Measures, at the pre-treatment, post-waitlist, 8-weeks after treatment initiation and post-treatment assessments. Additionally, a version of the ADIS-IV-C/P (Silverman & Albano, 1996) was administered at all time points to determine adolescent diagnoses and clinical severity ratings.

## **Measures**

*Anxiety Disorders Interview Schedule for the DSM-IV, Child Version (ADIS-IV-C/P; Silverman & Albano, 1996).* The ADIS-IV-C/P (Silverman & Albano, 1996) is a youth version of the Anxiety Disorders Interview Schedule for DSM-IV (DiNardo, Brown, & Barlow, 1994). It is a semi-structured, clinician-administered interview designed to assess DSM-IV diagnoses including all anxiety, mood and externalizing

disorders. Additionally, it provides screening items for several other areas (e.g. drug/alcohol abuse, psychosis, and eating disorders). During administration, a trained rater interviews the child and the parent separately. The interviewer indicated a Clinical Severity Rating (CSR) of disorder symptoms on a scale of 0 (none) to 8 (extreme). Psychometric properties of the ADIS-IV-C/P have been well established (Silverman & Albano, 1996; Silverman, Saavedra, & Pina, 2001; Wood, Piacentini, Bergman, McCracken, & Barrios, 2002). The ADIS-IV-C/P has shown adequate test-retest reliability (Silverman, Saavedra, and Pina, 2001) and the validity of this measure has been supported via self-report and expert consensus (Wood, Piacentini, Bergman, McCracken, Barrios, 2002). In the current study, trained faculty or graduate students administer the full ADIS-IV-C/P as part of the initial assessment. A shorter version of the ADIS-IV-C/P (i.e., the Mini-ADIS-IV-C/P) is used at all assessments following the initial pre-treatment assessment and is administered by an independent evaluator who is blind to treatment condition.

*Child-report questionnaires.* *Revised Child Anxiety and Depression Scale, Child and Parent versions* (RCADS/RCADS-P; Chorpita, Yim, Moffitt, Umemoto & Francis, 2000; Ebesutani et al. 2010). The RCADS and RCADS-P are each comprised of 47 items measuring youth anxiety and depressive symptoms. This questionnaire requires respondents to rate each item on a scale of 0–3 corresponding to “never,” “sometimes,” “often,” and “always.” Subscales of this measure correspond with separation anxiety disorder (SAD), social phobia (SP), generalized anxiety disorder (GAD), panic disorder (PD), obsessive compulsive disorder (OCD), and major depressive disorder (MDD). The RCADS and RCADS-P have been shown to have good internal consistency, high

convergent and discriminant validity, and an adequate factor structure in both community and clinical samples of children and adolescents aged seven to 17 (Chorpita et al. 2000; Chorpita, Moffitt & Gray, 2005; Ebesutani et al. 2010). Cronbach's alpha coefficients for clinically referred youths ranges from .78 to .88 for individual subscales of the RCADS (Chorpita et al., 2005) and .81 to .88 for the RCADS-P (Ebesutani et al. 2010). Test-retest reliability coefficients ranged from .65 (OCD) to .80 (SP) (Chorpita et al., 2000). In our sample, excellent internal consistency was found for both the adolescent self-report RCADS total scale, ( $\alpha = 0.96$ ) and for the RCADS-P total scale ( $\alpha = 0.92$ ).

*Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988).*

The PANAS (Watson, Clark, & Tellegen, 1988) consists of two 10-item scales designed to provide brief measures of positive and negative affect (PA and NA). Respondents are asked to rate the extent to which they experienced certain emotions, using a five point likert scale ranging from one ("very slightly or not at all") to five ("very much") during a specified time. The present study utilizes "the past week" as a time frame. The test-retest reliabilities were .47 for both the PA and NA subscales and confirmatory factor analysis has indicated good fit for a two-factor model of PA and NA (Watson, Clark, & Tellegen, 1988). The relationships of the scales to measures of anxiety and depression are consistent with Clark and Watson's (Clark & Watson, 1991) tripartite theory (Crawford & Henry, 2004). Psychometric properties of the PANAS have also been established within adolescent samples (Crocker, 1997; Melvin & Molloy, 2000). Crocker (1997) found a two factor model best fit the data with an adolescent population, with both subscales displaying high internal consistency (.88 and .79 for the PA and NA subscales,

respectively). Coefficient alphas for the current sample were .87 and .94 for the PA and NA subscales, respectively.

***Parent-report Questionnaires. Emotion Regulation Questionnaire (ERQ; Gross & John, 2003).*** The ERQ (Gross & John, 2003) is a self-report measure of the use of emotion regulation strategies. It consists of 10 items assessing use of cognitive reappraisal and expressive suppression. Responses are based on a 7 point likert scale, with 1 representing “strongly disagree” and 7 representing “strongly agree.” The ERQ has shown high internal consistency ( $\alpha = 0.79$  reappraisal, 0.73 suppression) and test-retest reliability ( $r = 0.69$ ) and good convergent and discriminant validity (Gross & John, 2003). High internal consistency was found for both subscales in the current sample, ( $\alpha = 0.88$  reappraisal, 0.91 suppression).

***Coping with Children's Negative Emotions Scale (CCNES; Fabes, Eisenberg, & Bernzweig, 1990).*** The CCNES (Fabes, Eisenberg, & Bernzweig, 1990) consists of nine scenarios in which youth experience negative emotion. Parents were asked to identify how they respond to each scenario (e.g. “When my teenager gets down because he/she has had a bad day, I usually:”). Each scenario then has six responses which parents rate on a 7 point Likert scale regarding their likelihood of responding that way (1 = very likely, 7 = very likely). Responses include emotion focused (e.g. “try to get him/her to think of good things that happened”), problem-focused (e.g. “help him/her think of things to do to get his/her problem solved”), minimization (e.g. “tell him/her that he/she really has nothing to be sad about”), punitive (e.g. “tell him/her to straighten up and stop sulking around the house”), expressive encouragement (e.g. listen to him/her talk about

his/her feelings”), and distress responses (e.g. “become obviously uncomfortable when I see he/she is feeling down”).

The CCNES has been found to have good internal and test-retest reliability and good concurrent and construct validity (Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002). Cronbach's alpha coefficients were .69 for the Punitive subscale, .78 for the Minimization subscale, .70 for the Distress Reactions subscale, .85 for the Expressive Encouragement subscale, .80 for the Emotion-Focused subscale, and .78 for the Problem-Focused subscale (Fabes et al., 2002). While this measure was originally designed for use with school-aged children, it has been successfully used with adolescent participants in previous studies (e.g. Hughes & Gullone, 2010). Additionally, good internal consistency was found for individual subscales within the current study. Cronbach’s alpha coefficients for this sample were .76 for the Punitive subscale, .84 for the Minimization subscale, .86 for the Distress Reactions subscale, .85 for the Expressive Encouragement subscale, .76 for the Emotion Focused Coping Subscale, and .82 for the Problem Focused Coping Subscale.

### **Overview of Analyses**

**Aim 1, Hypothesis 1-2.** In order to examine the relationship between parental use of emotion regulation strategies and parent responses to youth negative emotionality, both linear and hierarchical regression analyses were conducted. For analyses for which covariates were identified, these were entered in the first step and parental use of suppression or reappraisal was entered in the second step. Linear regression analyses were used to examine relationships between variables without covariate effects.

**Aim 2, Hypotheses 3-5.** Both linear and hierarchical regression analyses were conducted to examine the relationship between parental minimization, punitive, supportive, and distress reactions to youth negative affect and indicators of symptom severity at the pre-treatment assessment. Separate regression analyses were conducted for each indicator of symptom severity and each response to youth negative affect. For hierarchical regressions, covariates were entered in the first step and parental responses to youth negative affect were entered in the second step.

**Aim 2, Hypotheses 6-7.** Hierarchical regression analyses were conducted to test whether the relationship between minimizing, punitive, and supportive parent reactions and pre-treatment symptom severity was moderated by parental distress. Separate hierarchical regression analyses were conducted for minimizing, punitive, and supportive parental responses. Predictors were centered (i.e., the group mean was subtracted from each predictor) before computing the regression equations to control for multicollinearity (Aiken & West, 1991). Parental responses to youth negative emotionality, parental distress responding, and covariates were entered in the first step, and the multiplicative interaction term of parenting responses and parental distress was entered in the second step.

**Aim 3, Hypotheses 8-10.** To examine the roles of parental distress and parental supportive, minimizing, and punitive responses to adolescent negative affect on youth treatment outcome, hierarchical regression analyses were conducted. Scores at the post-treatment assessment for each outcome indicator were entered as the criterion variable. To control for pre-treatment symptom severity, the pre-treatment scores of the treatment outcome indicators were entered in the first step of the analysis, along with covariates. In

separate sets of analyses, parental distress, minimization, punitive and supportive responses to youth negative affect were entered in the second step.

## CHAPTER 3: RESULTS

### **Preliminary Analyses**

Strong correlations between specific subscales of the CCNES were noted during preliminary analyses (see Table 1). To reduce the number of analyses and because of theory linking particular subscales (Fabes, Poulin, Eisenberg, Madden-Derdich, 2002), the Expressive Encouragement, Problem-Focused, and Emotion-Focused subscales were combined to form a composite measure of mothers' supportive reactions when faced with youth negative emotion expression. The scales of the CCNES have been successfully combined in similar ways in prior research (i.e. Suveg, Shaffer, Morelen, Thomassin, 2011; Nelson, O'Brien, Blankson, Calkins, & Keane, 2009; Fabes, Leonard, Kupanoff, & Martin, 2001). Given a lack of strong correlations between the Minimizing reactions and Punitive reactions subscales, these subscales were *not* combined to form a composite measure of parents' unsupportive reactions to their children's negative emotion expression, as originally intended, and instead examined independently in regard to associations with other parenting and youth measures.

Data from all adolescents who were diagnosed with a primary anxiety or depressive disorder and their parents ( $N = 76$ ) were used to test the hypotheses from Aim 1 and Aim 2. Means and standard deviations of the variables for Aims 1 and 2 are presented in Table 2. Data was normally distributed (skew < 3, kurtosis < 6). Correlations between study variables and youth age were conducted to test for confounding variables. Additionally, independent sample t-tests were conducted to test for any associations between study variables and youth gender and the parent who completed questionnaires. Mothers who completed these forms reported lower scores on the Minimization subscale ( $M = 31.5$ ,  $SD = 11.8$ ) than fathers or other family members ( $M = 41.1$ ,  $SD = 6.9$ ),  $t(66)$

= 2.11,  $p < 0.05$ . Additionally, gender and age of the youth were related to youth scores on the RCADS, with females reporting higher total scores ( $M = 49.3$ ,  $SD = 24.1$ ),  $t(71) = 2.32$ ,  $p < 0.05$  than males ( $M = 37.4$ ,  $SD = 19.6$ ) on the RCADS child measure and with total RCADS child scores increasing with age,  $r(76) = 0.22$ ,  $p < 0.05$ . Youth gender, age and the parent who completed the questionnaires were controlled for in the corresponding analyses by including these variables in the first step of relevant regression analyses (i.e. for Aim 1 and Aim 2, parental respondent was only controlled for in analyses including the Minimization subscale, and child age and gender were only included in the analyses which included child RCADS scores as a criterion variable). Missing data was estimated through full-information maximum likelihood (FIML). All regression analyses were conducted in Mplus, Version 6 in order to use FIML for missing data estimation.

Data collected from those who received the UP-Y protocol ( $n = 43$ ) were used to test hypotheses related to Aim 3. Means and standard deviations are presented in Table 3. Data was normally distributed (skew  $< 3$ , kurtosis  $< 6$ ). Correlations were conducted between study variables and youth age to test for confounding variables. Additionally, independent sample t-tests were conducted to test whether youth gender and the parent who completed the questionnaires were potential covariates. In this sub-sample, mothers also reported lower scores on the Minimization subscale ( $M = 30.0$ ,  $SD = 12.5$ ) than fathers or other family members ( $M = 41.1$ ,  $SD = 6.9$ ),  $t(40) = 2.28$ ,  $p < 0.05$ . Youth age was related to youth scores on the RCADS and the positive affect scale of the PANAS, with RCADS child scores increasing with age,  $r(42) = 0.29$ ,  $p < 0.05$  and scores on the positive affect scale of the PANAS decreasing with age  $r(42) = -0.42$ ,  $p < 0.05$ . However, gender was no longer associated with RCADS child scores in this sub-sample.

Parents responses on the Distress Reactions subscale were related to child gender and age, with higher scores for adolescent females ( $M = 28.2$ ,  $SD = 12.7$ ) than for adolescent males ( $M = 20.0$ ,  $SD = 8.0$ ),  $t(40) = 2.48$ ,  $p < 0.05$  and with scores increasing with adolescent age,  $r(42) = 0.29$ ,  $p < 0.05$ . These variables were controlled for by including each in the first step of the corresponding hierarchical regression analysis (i.e. the parent respondent was only controlled for in analyses which included the Minimization subscale as a predictor, child age was only controlled for in analyses which included the RCADS child scores, positive subscale of the PANAS or parent Distress Reactions subscale, and gender was only controlled for in analyses which examined Distress Reactions as a predictor). Pre-treatment symptom severity was also included in the first step of all analyses to determine change scores. Missing data was estimated using FIML. All regression analyses were conducted in Mplus, Version 6 (Muthén & Muthén, 2011).

Although multiple comparisons were made, it was determined that the Bonferroni correction would not be performed at this stage, given that the aims of the investigation were largely exploratory and largely absent from the existent research literature. Greater caution with p-values will certainly be required in subsequent research.

**Aim 1: Examining the relationship between parental emotion regulation strategies and parental responses to youth negative emotionality**

**Aim 1, Hypothesis 1.** Results did not support the hypothesis that parental use of suppression would be positively associated with minimization, punitive and distress reactions to youth negative affect and negatively associated with supportive responses. No significant relationships were found between parental use of suppression and parental scores on any of the subscales of the CCNES (see Table 4).

**Aim 1, Hypothesis 2.** Results partially supported the hypothesis that parental use of reappraisal would be positively associated with supportive responses and negatively associated with minimization, punitive and distress reactions. Parental responses on the Reappraisal subscale of the ERQ were not significantly correlated with parental responses on the Minimization or Punitive subscales of the CCNES (see Table 4). However, linear regression analyses indicated that 20% of the variance in parental responses on the Supportive subscale of the CCNES was accounted for by parental scores of the Reappraisal subscale of the ERQ,  $\beta = 0.44$ ,  $p < 0.01$ , adjusted  $R^2 = 0.19$ ,  $f^2 = 0.25$ . Additionally, parental scores on the Reappraisal subscale of the ERQ accounted for 9% of the variance in the Distress Reactions subscale,  $\beta = -0.29$ ,  $p < 0.01$ , adjusted  $R^2 = 0.08$ ,  $f^2 = 0.09$ . No covariates were included in these analyses.

**Aim 2: Examining the influence of parental distress reactions and parental coping strategies on anxiety and depression symptom severity**

**Aim 2, Hypothesis 3.** The hypothesis that parental minimization and punitive responses to youth negative affect would be associated with adolescent pre-treatment symptom severity was only partially supported. In a hierarchical regression analysis, parental respondent was controlled for and entered in the first step. Parental respondent accounted for less than 1% ( $R^2 = 0.002$ ) of the variance in RCADS-P scores. Parental scores on the Minimization subscale of the CCNES was entered in the second step and accounted for 7% of the variance in RCADS-P scores. Parental respondent and parent scores on the Minimization subscale of the CCNES accounted for 7% of the total variance in RCADS-P scores at the intake assessment,  $\beta = 0.28$ ,  $p < 0.05$ , adjusted  $R^2 = 0.05$ ,  $\Delta R^2 = 0.07$ ,  $f^2 = 0.07$ . No additional associations were found (See Table 5).

**Aim 2, Hypothesis 4.** The hypothesis that supportive parental responses to youth negative affect would be associated with decreased adolescent pre-treatment symptom severity was not supported. Parental responses on the Supportive subscale of the CCNES were not associated with principal diagnosis CSRs, child total RCADS scores, parent scores on the RCADS, or child scores on the negative affect or positive affect subscales of the PANAS (see Table 5).

**Aim 2, Hypothesis 5.** Results partially supported the hypothesis that parental distress responses to youth negative affect would be associated with adolescent pre-treatment symptom severity. Parental responses on the Distress Reactions subscale of the CCNES were not associated with primary diagnosis CSRs, child scores on the RCADS, or child scores on the positive affect subscale of the PANAS. Although, linear regression analyses indicated that scores on the Distress Reactions subscale of the CCNES accounted for 17% of the variance in RCADS-P scores,  $\beta = 0.41$ ,  $p < 0.01$ , adjusted  $R^2 = 0.16$ ,  $f^2 = 0.20$ . Also, linear regression analyses indicated that parent responses on the Distress Reactions subscale of the CCNES accounted for 8% of the scores on the negative affect subscale of the PANAS,  $\beta = 0.29$ ,  $p < 0.05$ , adjusted  $R^2 = 0.07$ ,  $f^2 = 0.09$  (see Table 5).

**Aim 2, Hypothesis 6.** The hypothesis that parental distress responding to adolescent negative affect would act as a moderator between unsupportive parenting behaviors and pre-treatment symptom severity was not supported as the interaction term was not significant for the relationship between Minimization or Punitive parental responses on the CCNES and principal diagnosis CSRs, parent RCADS scores, child

RCADS scores, child responses to the negative affect scale of the PANAS, or child responses to the positive affect scale of the PANAS (see Table 6).

**Aim 2, Hypothesis 7.** Results did not support the hypothesis that parental distress responding to adolescent negative affect would act as a moderator between parental supportive parenting behaviors and adolescent pre-treatment symptom severity. A moderated relationship was not found, as the interaction term was not significant for any of these analyses (see Table 6).

**Aim 3: Examining the influence of parental distress and parental supportive and unsupportive reactions to youth negative affect on treatment outcome in a cognitive-behavioral intervention for adolescent anxiety and depression.**

**Aim 3, Hypothesis 8.** Results did not support the hypothesis that minimization and punitive parental responses to youth negative affect would be negatively associated with treatment outcome. In fact, an inverse relationship was found between post-treatment child RCADS scores and parental responses on the Minimization subscale. Adolescent age, parental informant's relationship to the adolescent, and pre-treatment child RCADS scores were entered in the first step of a hierarchical regression analysis. These variables accounted for 29% of the variance in post-treatment child RCADS scores. Parent minimization reactions were entered in the second step. The full model accounted for 56% of the variance in post-treatment RCADS scores,  $\beta = -0.52$ ,  $p < 0.01$ , adjusted  $R^2 = 0.52$ ,  $\Delta R^2 = 0.25$ ,  $f^2 = 0.61$ . Similarly, an inverse relationship was found between post-treatment RCADS scores and parental responses on the Punitive subscales after controlling for adolescent age and pre-treatment child RCADS scores. Adolescent age and pre-treatment child RCADS scores accounted for 29% of the variance in post-

treatment child RCADS scores. Parental punitive responses to youth negative affect was entered in the second step. The full model accounted for 46% of the variance in post-treatment RCADS scores,  $\beta = -0.42$ ,  $p < 0.05$ , adjusted  $R^2 = 0.41$ ,  $\Delta R^2 = 0.17$ ,  $f^2 = 0.31$ . These results suggested better self-reported treatment outcomes for adolescents with parents who reported high levels of minimizing and punitive responses to youth negative affect. No additional associations were found (see Table 7).

**Aim 3, Hypothesis 9.** The hypothesis that supportive responses to youth negative affect would be positively associated with adolescent treatment outcome was partially supported. No associations were found between parent scores on the Supportive subscale of the CCNES and post-treatment scores on the parent RCADS, child RCADS, or positive affect scale of the PANAS, after controlling for pre-treatment scores on these respective measures (see Table 7). However, negative associations were found between the Supportive subscales of the CCNES and principal diagnosis CSR after controlling for pre-treatment symptom severity. Pre-treatment principal diagnosis CSR ratings accounted for 11% of the variance in post-treatment CSR ratings. Supportive responses on the CCNES was entered in the second step and the full model accounted for 24% of the variance in post-treatment CSR ratings,  $\beta = -0.43$ ,  $p < 0.01$ , adjusted  $R^2 = 0.20$ ,  $\Delta R^2 = 0.14$ ,  $f^2 = 0.17$ . Additionally, a hierarchical regression analysis indicated a negative relationship between the Supportive subscale of the CCNES and post-treatment scores on the negative affect subscale of the PANAS, after controlling for pre-treatment scores. Pre-treatment scores on the negative affect subscale of the PANAS accounted for 5% of the variability in post-treatment scores on the negative affect subscale of the PANAS. Supportive parental behaviors were entered in the second step. The full model explained

28% of the variance in post-treatment scores on the negative affect subscale of the PANAS,  $\beta = -0.50$ ,  $p < 0.01$ , adjusted  $R^2 = 0.24$ ,  $\Delta R^2 = 0.22$ ,  $f^2 = 0.32$ . Results indicated that greater levels of parental supportive responses predicted greater decreases in adolescent and depressive symptoms during treatment.

**Aim 3, Hypothesis 10.** Results did not support the hypothesis that parental distress reactions to youth negative affect would be negatively associated with treatment outcome. Conversely, a negative relationship was found between post-treatment child RCADS scores and parental responses on the Distress Reactions subscale of the CCNES after controlling for adolescent age and gender and pre-treatment RCADS scores. Adolescent age, gender and pre-treatment child RCADS scores accounted for 28% of the variance in post-treatment child RCADS scores. Parental scores on the Distress Responses subscale of the CCNES was entered in the second step and the full model accounted for 47% of the variance in post-treatment child RCADS scores,  $\beta = -0.48$ ,  $p < 0.01$ , adjusted  $R^2 = 0.43$ ,  $\Delta R^2 = 0.19$ ,  $f^2 = 0.36$ . These results indicated that greater levels of parental distress response was related to greater adolescent reported decreases in anxiety and depressive symptoms. No additional relationships were found (see Table 7).

## CHAPTER 4: DISCUSSION

Results of this investigation provide new information about parenting behaviors in the context of adolescents with internalizing disorders. While researchers have extensively examined parenting in relation to youth anxiety and depression (see Wood, McLeod, Sigman, Hwang, & Chu, 2003; Ginsburg & Schlossberg, 2002; Gar, Hudson, & Rapee, 2005; Garber, 2005 for reviews), the current investigation is one of the first to provide information specifically about parental responding to youth negative emotionality in this population. In order to obtain a broad understanding of parental responding to youth negative affect, various parental responses were examined within different contexts. Parental responses to youth negative emotionality were examined: 1) in relation to the parent's own use of emotion regulation strategies, 2) as a correlate of adolescent symptom severity, and 3) as a predictor of treatment outcome.

Given that youth with internalizing disorders experience difficulties managing and understanding their emotions (Southam-Gerow & Kendall, 2000; Suveg & Zeman, 2004) and parents play a large role in the socialization of youth emotion regulation (Eisenberg, Cumberland, & Spinrad, 1998), the results of this investigation have important implications for intervention research. These results suggest that parent responses to youth negative affect may be an important intervention focus for the treatment of youth anxiety and depression. Specifically, this investigation provides support for the beneficial influence of parental responses to youth negative affect that are marked by expressive encouragement, problem-focused coping and emotion-focused coping on treatment outcome. Furthermore, these supportive parental responses to youth negative affect were related to a parent's own use of adaptive emotion regulation

strategies. While little research has been conducted in this area, these results highlight the need to further examine the relationship between parenting behaviors and youth internalizing symptoms within a framework that incorporates supportive parenting behaviors involved in the socialization of youth emotion regulation.

The first aim of this study was to examine parental responses to youth emotion regulation within the context of parental use of emotion regulation strategies (i.e. suppression and reappraisal). Parental use of reappraisal was found to be negatively associated with distress responding to youth negative affect. This indicates that parents who are able to adaptively reappraise a negative emotional experience are less likely to respond in a distressed manner to their youth's displays of negative affect. The use of reappraisal as an emotion regulation strategy is associated with decreased subjective distress to potentially stressful stimuli (see Gross, 2002 for review). Parents who rely heavily on reappraisal as an emotion regulation strategy may experience less subjective distress when faced with youth negative affect, which can be thought of as a commonly stressful situation. Therefore, it is not surprising that these parents would display less distressed reactions when their adolescent is showing signs of negative affect. Parental use of reappraisal was also positively associated with supportive parental responses to youth negative affect (e.g. expressive encouragement, emotion-focused coping and problem-focused coping). These results suggest that parents who respond to their own negative emotions by thinking about the experience in a way that decreases the intensity of the emotion are more likely to respond to their youth's negative affect by encouraging them to express their emotions, helping them solve the problem that caused the distress, and directly targeting youth negative emotionality to help them feel better. In contrast to

suppression, which consists of a direct attempt to avoid the emotional experience, reappraisal is an emotion regulation strategy in which an individual must cognitively engage in the emotional experience by directly thinking about the distressing emotion (Gross, 1998; Campbell-Sills & Barlow, 2007). Given their ability to engage fully in their own negative emotions, parents who rely heavily on reappraisal as an emotion regulation strategy may be more receptive to youth displays of negative affect and try to engage in productive conversation about these emotions instead of trying to avoid or suppress the emotional experience.

Given that parental use of suppression was not associated with parental responses to youth negative affect, it appears that the degree to which parents try to hide or inhibit a negative emotional response is not predictive of their reactions to youth emotionality. This somewhat surprising null finding may be explained by the short-term effect that suppression has on emotional expression. For example, parents who rely heavily on suppression as an emotion regulation strategy may be able to respond to youth negative affect by inhibiting their own emotional responding in order to focus on the needs of their child. However, given that suppression does not have any effect on the subjective experience of emotion (Gross, 1998; Gross & Levenson, 1997), parental subjective distress to youth negative affect should be further examined, as parents who rely on suppression may model or display subtle signs of distress to youth negative affect. Longitudinal data on such behavior may have been illustrative in better understanding how chronic suppression may operate when it occurs over a longer-term. However, no research to date has examined the role of parental use of emotion regulation strategies on parental behaviors and greater investigation in this area is warranted.

The second aim of this study was to examine associations between parental responses to youth negative affect and adolescent internalizing symptom severity. While results supported only a few of the anticipated hypotheses, parental distress responding was found to be related to parent-reported RCADS scores and youth reports of negative affect on the PANAS. Additionally, parental minimization reactions to youth negative affect were associated with higher parent reports of anxiety and depressive symptoms on the RCADS.

Given that this study was cross-sectional in design, definitive conclusions are difficult to draw from these results. For example, these results may suggest that heightened levels of youth anxiety and depression elicit parental minimization and distress responses. However, these results may also imply that parental distress and minimization reactions lead to heightened levels of youth negative affect over time. An interaction between parent behaviors and youth internalizing symptoms may also explain these findings, as high levels of youth anxiety and depression may cause heightened parental distress responding to youth negative affect, which then may maintain and reinforce heightened levels of anxiety and depression in youth. Such cyclical relationships are also theorized to play a role in other parental behaviors associated with youth anxiety and depression, such as parental overcontrol (e.g. Gar, Hudson, & Rapee, 2005) and are likely to explain this finding as well. Finally, a third variable, such as parental psychopathology may separately explain heightened reactions to youth negative affect and an increased risk for internalizing symptoms in youth. Given that data on parental psychopathology was only collected for a small subsample of parents, this relationship could not be examined in the current investigation. While the directionality

of this relationship needs to be further explored, the current findings indicate that youth who may most benefit from supportive parenting responses are instead receiving responses to youth negative affect that are marked by distress and minimization.

Parental distress responding was also tested as a moderator between parental supportive, minimization, and punitive reactions to youth negative affect and pre-treatment symptom severity. The resulting lack of moderation indicates that the level of parental distress responding to youth negative affect does not strengthen or weaken the relationship between parental supportive, minimization, or punitive responses and pre-treatment symptom severity. These findings were not consistent with findings from Fabes and colleagues (2001) who found that parental distress responding to youth emotionality acted as a moderator between unsupportive parental reactions to youth negative affect and youth emotional responding. This discrepancy may be explained by the examination of these behaviors in a different population, as the Fabes et al. (2001) study was completed with a non-clinical sample of preschool children. Therefore, parental distress responding may not interact with other parental behaviors in the same manner in adolescents or with clinically-referred populations. The influence of parent responses to adolescent affect on internalizing symptoms may change during adolescence as peer relationships play a larger role in the onset and maintenance of depressive and anxiety symptoms (e.g. Furman & Buhrmester, 1992; Hecht, Inderbitzen, & Bukowski, 1998; LaGreca & Harrison, 2005). Therefore, as the relative contributions of parental influences decrease, the interaction between parental behaviors and youth outcomes may change. Additionally, the nature of parental behaviors related to emotion socialization tend to be less supportive and more punitive with older children compared to younger children (Dix,

1991; Klimes-Dougan, et al., 2007; Lunkenheimer, Shields, & Cortina, 2007). These developmental differences in general parenting behaviors may explain discrepant findings.

The purpose of Aim 3 was to test parental responses to youth negative affect as an indicator of treatment outcome in an emotion-focused, cognitive-behavioral treatment protocol. Results indicated an association between supportive parenting responses to youth negative affect and treatment outcomes, as measured by decreased principal diagnosis CSR ratings and scores on the negative affect subscale of the PANAS. These results provide support for the notion that parents who respond to youth negative affect by encouraging emotional expression, aiding in problem-solving techniques, and directly addressing the youth's negative emotional response are able to better aid their adolescents in treatment.

Family factors that interfere with treatment outcome for youth anxiety and depression, such as parental psychopathology, certain parental cognitive styles, and family climate have consistently been associated with poor treatment outcome. However, few studies have identified factors that promote treatment gains (see Rapee, Schniering, & Hudson, 2009; Creswell & Cartwright-Hatton, 2007; Sander & McCarty, 2005 for reviews). The association between parental supportive responses to youth negative affect and better adolescent treatment outcomes can be understood within the context of previous research on the socialization of youth emotion regulation (e.g. Eisenberg, Cumberland, & Spinrad, 1998; Morris et al., 2011; Suveg et al., 2008). Morris and colleagues (2011) examined the role of parental responses to youth emotional displays of anger and sadness during a behavioral observation task in which the child received a

disappointing prize. Results indicated that parental use of attention refocusing and cognitive reframing were associated with decreased subsequent youth emotion intensity. While this study was conducted with a younger sample of non-clinically referred youth, supportive parenting responses to adolescent negative affect may aid in treatment outcome through similar mechanisms. For example, cognitive-behavioral treatment for youth anxiety and depression often involves temporary increases in distress through engagement in situations and cognitions that may induce anxiety and sadness. Therefore, parents who respond in ways that support the adolescent through the emotional experience may have children who are able to engage more effectively in these treatment strategies.

Contrary to expected findings, results also indicate that parents who reported elevated levels of minimization, punitive, and distress responding to youth negative affect had children with better treatment outcomes, as measured by decreased post-treatment scores on the child RCADS. These results may indicate that parental minimization, punitive and distressed responding to youth negative affect aid in treatment outcome. While these results were unexpected and not supported by previous research, it may be possible that parental minimization, punitive, and distress reactions could act as a motivator for adolescents to engage more fully in treatment. In addition, subsequent exploratory analyses indicated that those reporting heightened levels of anxiety and depression at pre-treatment evidence the greatest gains over time in the UP-Y. Given the positive association between parental minimization and distress reactions with symptom severity at pre-treatment, results here could also be the by-product of a more general tendency for more impaired individuals to evidence greater change over time in this

investigation. Similarly, parental responses to youth negative affect may have changed over the course of treatment and those adolescents whose parents displayed higher levels of minimization, punitive and distress responses at the intake assessment may have benefited most from any subsequent changes in parenting behaviors. Given that changes in parental responses to youth negative affect over the course of treatment were not examined in this investigation, future research in this area is warranted. Lastly, these gains were seen only on youth reported measures; therefore, results may also highlight rater discrepancies (e.g. De Los Reyes, 2011; De Los Reyes, Youngstrom, Swan, Youngstrom, Feeny, & Findling, 2011), as children with parents who report high levels of minimization, punitive, and distressed reactions may simply report better treatment gains. Nonetheless, this unexpected finding deserves greater attention in future research.

### **Study Limitations**

While the results of this investigation provide insight into the relationship between parental reactions to youth negative affect and internalizing symptom severity and treatment outcome in youth, limitations are noted. First, reliance on self-reported parental behaviors may produce an informant bias to the degree that parents are cognizant of socially acceptable reactions to youth emotionality. In fact, parents tend to view their parenting behaviors to be more favorable than they actually are (Schwarz, Barton-Henry, & Pruzinsky, 1985). To address this limitation, future research should examine parental responses to youth negative affect in a behavioral observation task in addition to self-reported measures. For the third study aim, parental behaviors were also only measured at the pre-treatment assessment; therefore changes in parenting behaviors that may have occurred throughout treatment and influenced treatment outcomes were

not investigated. Future investigations should also examine changes in parental behaviors throughout treatment.

As previously discussed, the cross-sectional design of the first two aims prevents explanations about the directionality of the findings. Therefore, these relationships should be examined prospectively in future research. Additionally, significant relationships may not have been detected due to insufficient power. In contrast, the use of multiple significance tests in this size sample is certainly of concern. The aforementioned decision to forgo a Bonferroni test to correct for multiple tests of significance was buoyed by the exploratory nature of this investigation in a domain that is greatly understudied. Finally, this study is limited by its inability to test additional parent variables that may contribute to parental emotion regulation strategies, such as parental psychopathology. Future investigations should include both interview and self-report measures of parent internalizing symptoms in order to further examine the influence of parental psychopathology on these relationships.

### **Future Directions**

Given that the use of reappraisal is negatively associated with anxiety and depression (e.g. Aldao, Nolen-Hoeksema, & Schweizer, 2010); future investigations should examine the role of psychopathology on the relationship between parental emotion regulation strategies and parenting behaviors. Other variables which may be related to parental psychopathology, such as parental distress tolerance (e.g. Leyro, Zvolensky, Bernstein, & 2010) and maladaptive cognitive styles (e.g. Alloy et al., 1999) could also be examined in relation to parent behaviors. Additionally, the role of parental responses to youth negative affect should be examined in relation to parent behaviors

more typically studied in clinical populations (e.g. overprotection and criticism). Such work would further clarify the interactions between parents and youth with anxiety and depression.

The role of youth emotion regulation strategies as a mediator between parental responses to adolescent negative affect and anxiety and depressive disorders may be in need of further study at this stage. In a related investigation, Shortt, Stoolmiller, Smith-Shine, Eddy and Sheeber (2010) examined the role of maternal supportive responses to youth displays of anger, what the authors defined as “emotional coaching,” on adolescent externalizing symptoms. They found a relationship between maternal emotional coaching and decreased levels of adolescent externalizing symptoms, which was mediated by adolescent anger regulation skills. These results provide evidence for the role of supportive parenting behaviors on adolescent emotion regulation and emotional outcomes. However, no known study has examined emotional coaching on outcomes in adolescents at risk for internalizing symptoms.

Treatments focusing on youth anxiety and depressive symptoms may also benefit by incorporating parent components which focus on both parent emotion regulation strategies and components that explicitly target parent reactions to youth negative affect. While previous research has tested the incremental efficacy of treatment protocols for youth anxiety and depression which include parental involvement, evidence for enhanced efficacy of these protocols is mixed (see Rapee, Schneiring, & Hudson, 2009; Creswell & Cartwright-Hatton, 2007). Given variability among interventions which include family components, definitive conclusions about efficacious parental treatment components cannot be made.

While some of these treatment protocols for youth anxiety include explicit parent coaching in behavior management (e.g. Rapee, 2000), management of parent's own emotions and modeling positive responses to anxiety (e.g. Rapee, 2000; Shortt, Barrett, & Fox, 2001; Spence, Donovan, & Brechman-Toussaint, 2000), others have the more basic aim of informing parents about the youth protocol (e.g. Mendlowitz, Manassis, Bradley, Scapillato, Miezitis, & Shaw, 1999; Silverman, Kurtines, Ginsburg, Weems, White, & Hicks, 1999; Toren et al., 2000). Parents are also included in various treatments for adolescent depression, such as cognitive-behavioral family therapy (CBFT; Dattilio, 2001), interpersonal psychotherapy for adolescents (IPT-A; Mufson, Moreau, Weissman, & Klerman, 1993), and family systems approaches (e.g. Brent et al., 1997; Diamond, Reis, Diamond, Siqueland, & Isaacs, 2002). However, only 32% of depression treatments tested in clinical trials included parents in any capacity (Sander & McCarty, 2005). The current results suggest that treatment components which directly target parental responses to youth negative emotionality should be included in treatment protocols for youth anxiety and depression. Parental supportive responses to youth negative emotionality could be promoted by teaching parents to encourage emotional expression, help the adolescent use problem-solving skills to determine why they are distressed, and engage directly in conversation about the youth's negative emotionality. Parent sessions could be used to assess parental behaviors and also to address difficulties that they may experience in responding to youth negative affect. Future research should examine the efficacy of these components above treatments without parental components.

## **Conclusion**

Results of this investigation provide a broad, yet preliminary, understanding of behaviors involved in parental socialization of youth emotion regulation in adolescents with internalizing disorders. This study offers evidence for an association between parental use of reappraisal as an emotion regulation strategy and responses to youth negative affect. Although warranting further investigation, the association between parental minimization and distress responses to youth negative affect and internalizing symptom severity provides support for a potential interaction between youth negative affect and parental behaviors which may work to maintain youth anxiety and depressive symptoms over time. The association between supportive parenting responses and improved adolescent treatment outcome in an emotion-focused treatment protocol for anxiety and depression supports the investigation of treatment protocols that target such parenting strategies. Lastly, the findings that parental minimization, punitive, and distress reactions to youth negative affect were unexpected, and indicate some possibility that these responses to youth negative emotionality may also aid in treatment for internalizing symptoms. However, given that these results are not supported by theory or previous research, this relationship warrants further investigation. These results highlight the importance of examining parental behaviors within a context that incorporates parental practices related to the socialization of youth emotion regulation. Additionally, results provide support for the inclusion of components focused on parental responses to adolescent negative affect in prevention and intervention protocols for adolescent anxiety and depression.

Table 1: Intercorrelations, Means and Standard Deviations of the CCNES subscales.

	<b>1.</b>	<b>2.</b>	<b>3.</b>	<b>4.</b>	<b>5.</b>	<b>6.</b>	<b>M (SD)</b>
1. Minimization	-	0.52**	0.35**	0.12	0.12	0.36**	32.51 (10.54)
2. Punitive	-	-	0.03	0.01	0.10	0.48**	19.76 (7.79)
3. Emotion-Focused Coping	-	-	-	0.71**	0.62**	0.13	50.47 (6.88)
4. Problem-Focused Coping	-	-	-	-	0.61**	0.03	54.90 (6.70)
5. Expressive Encouragement	-	-	-	-	-	0.04	50.34 (8.38)
6. Personal Distress	-	-	-	-	-	-	23.06 (11.35)

*Note.* \*\* $p < 0.01$ . All subscales are from the Coping with Children's Negative Emotions Scale (CCNES; Fabes, Eisenberg, & Bernzweig, 1990).

Table 2: Means and Standard Deviations of Study Variables for Aims 1 and 2.

Measure/Subscale	Mean (SD)
ERQ Suppression	27.52 (12.43)
ERQ Reappraisal	36.36 (10.44)
CCNES Supportive	154.63 (20.73)
CCNES Minimization	32.47 (11.77)
CCNES Punitive	19.93 (8.33)
CCNES Distress Reactions	23.60 (11.90)
Pre-treatment Principal CSR	5.65 (1.09)
RCADS parent	42.87 (17.44)
RCADS child	43.44 (22.64)
PANAS positive	25.48 (8.10)
PANAS negative	40.08 (14.79)

Table 3: Means and Standard Deviations of Study Variables for Aim 3.

Measure/Subscale	Mean ( <i>SD</i> )
CCNES Supportive	152.30 (20.88)
CCNES Minimization	31.86 (12.40)
CCNES Punitive	19.67 (8.70)
CCNES Distress Reactions	24.31 (11.39)
Pre-treatment Principal CSR	5.72 (0.83)
Pre-treatment RCADS parent	44.87 (18.19)
Pre-treatment RCADS child	44.40 (22.70)
Pre-treatment PANAS positive	24.52 (7.85)
Pre-treatment PANAS negative	40.85 (13.23)
Post-treatment Principal CSR	3.63 (1.85)
Post-treatment RCADS parent	31.59 (20.00)
Post-treatment RCADS child	25.17 (17.37)
Post-treatment PANAS positive	26.59 (9.58)
Post-treatment PANAS negative	29.55 (11.28)

Table 4. Relationship between Parental Emotion Regulation Strategies and Parental Responses to Youth Negative Affect.

	<b>Suppression</b>		<b>Reappraisal</b>	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
Supportive	0.01	-0.11	0.20**	0.44**
Minimization				
Step 1: Control variable <sup>a</sup>	0.07		0.07	
Step 2: Minimization	0.01	0.13	0.00	0.05
Total $R^2$	0.09		0.07	
Punitive	0.00	-0.03	0.02	-0.14
Distress Reactions	0.03	0.05	0.09**	-0.29**

*Note.* <sup>a</sup>Control variable consisted of parent respondent.

\*\* $p < 0.01$

Table 5. Regression Coefficients of Parental Reactions to Youth Negative Affect on Pre-Treatment Measures of Symptom Severity.

Predictor	CSR		RCADS-P		RCADS		PANAS -PA		PANAS-NA	
	$\Delta R^2$	$\beta$								
Supportive										
Step 1: Control variables <sup>a</sup>					0.12					
Step 2: Supportive	0.01	-0.09	0.01	0.01	0.01	0.08	0.00	0.05	0.01	0.11
Total $R^2$	0.01		0.01		0.13		0.00		0.01	
Minimization										
Step 1: Control variables <sup>b</sup>	0.01		0.00		0.12		0.00		0.05	
Step 2: Minimization	0.00	0.06	0.07*	0.28*	0.00	0.04	0.00	-0.05	0.01	0.12
Total $R^2$	0.01		0.07		0.12		0.01		0.07	
Punitive										
Step 1: Control variables <sup>c</sup>					0.12					
Step 2: Punitive	0.04	-0.19	0.00	0.05	0.01	0.07	0.00	0.06	0.01	0.11
Total $R^2$	0.04		0.00		0.13		0.00		0.01	
Distress Reactions										
Step 1: Control variables <sup>d</sup>					0.12					
Step 2: Distress Reactions	0.02	-0.15	0.17**	0.41**	0.04	0.21	0.01	-0.08	0.08*	0.29*
Total $R^2$	0.02		0.17		0.16		0.01		0.08	

Note. <sup>a</sup>Control variables included youth age and youth gender for RCADS-C

<sup>b</sup>Control variables included parent respondent for CSR scores, RCADS-P, PA subscale of PANAS, NA subscale of PANAS. Control variables included youth age, youth gender, and parent respondent for RCADS-C.

<sup>c</sup>Control variables included youth age and youth gender for RCADS-C

<sup>d</sup>Control variables included youth age and youth gender for RCADS-C

\*  $p < 0.05$ , \*\* $p < 0.01$

Table 6: Hierarchical Regression Analyses Examining the Role of Distress Responding as a Moderator to the Relationship Between Parental Supportive, Punitive, and Distress Reactions to Youth Negative Affect and Pre-Treatment Symptom Severity.

	CSR		RCADS-P		RCADS		PANAS-PA		PANAS-NA	
	$\Delta R^2$	$\beta$								
Supportive										
Step 1: Supportive (centered)		-0.07		0.06		0.01		0.03		0.08
Distress (centered)	0.03	-0.16	0.17	0.37**	0.07	0.26*	0.01	-0.53	0.08	0.28*
Step 2: Interaction term	0.00	0.06	0.02	0.16	0.00	0.00	0.02	-0.15	0.00	-0.03
Total $R^2$	0.03		0.19		0.07		0.03		0.08	
Minimization										
Step 1: Minimization (centered)		-0.07		0.05		0.01		-0.18		0.06
Distress (centered)	0.03	-0.15	0.17	0.40**	0.07	0.33*	0.01	-0.10	0.08	0.27
Step 2: Interaction term	0.00	-0.07	0.00	0.01	0.02	-0.16	0.01	0.08	0.00	-0.04
Total $R^2$	0.04		0.17		0.09		0.01		0.08	
Punitive										
Step 1: Punitive (centered)		-0.11		-0.23		-0.11		0.11		-0.04
Distress (centered)	0.04	-0.06	0.20*	0.48**	0.08	0.30*	0.02	-0.15	0.02	0.31*
Step 2: Interaction term	0.01	-0.11	0.01	0.12	0.00	0.06	0.00	0.06	0.00	0.00
Total $R^2$	0.05		0.20		0.08		0.02		0.02	

Note. \*  $p < 0.05$ , \*\* $p < 0.01$ .

Table 7. Hierarchical Regressions of Parental Responses to Youth Negative Affect on Post-Treatment Symptom Severity.

Predictor	CSR		RCADS-P		RCADS		PANAS -PA		PANAS-NA	
	$\Delta R^2$	$\beta$								
Supportive										
Step 1: Control variables <sup>a</sup>	0.11		0.23		0.29		0.16		0.05	
Step 2: Supportive	0.14**	-0.43**	0.03	-0.21	0.01	-0.28	0.02	0.19	0.22**	-0.50**
Total $R^2$	0.24		0.26		0.30		0.18		0.28	
Minimization										
Step 1: Control variables <sup>b</sup>	0.17		0.37		0.29		0.10		0.10	
Step 2: Minimization	0.01	-0.11	0.00	-0.03	0.25**	-0.52**	0.00	-0.06	0.00	0.06
Total $R^2$	0.18		0.37		0.56		0.10		0.10	
Punitive										
Step 1: Control variables <sup>c</sup>	0.11		0.23		0.29		0.16		0.05	
Step 2: Punitive	0.02	0.11	0.01	-0.07	0.17	-0.42	0.02	-0.17	0.05	0.25
Total $R^2$	0.13		0.23		0.46		0.18		0.10	
Distress Reactions										
Step 1: Control variables <sup>d</sup>	0.11		0.28		0.28		0.25		0.06	
Step 2: Distress Reactions	0.01	-0.10	0.00	-0.07	0.19**	-0.48**	0.04	0.15	0.01	-0.12
Total $R^2$	0.12		0.28		0.47		0.29		0.07	

Note. <sup>a</sup>Control variables included pre-treatment scores for CSR scores, RCADS-P, and NA PANAS scores. Control variables included pre-treatment scores and youth age for child RCADS and PA PANAS scores.

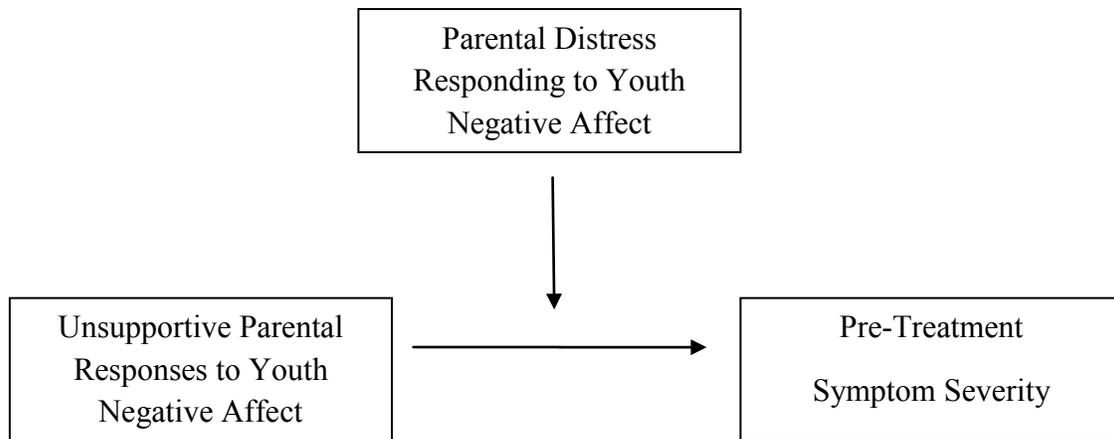
<sup>b</sup>Control variables included pre-treatment scores and parent respondent for CSR scores, RCADS-P, and NA PANAS scores. Control variables included pre-treatment scores, parent respondent, and youth age for child RCADS and PA PANAS scores.

<sup>c</sup>Control variables included pre-treatment scores for CSR scores, RCADS-P, and NA PANAS scores. Control variables included pre-treatment scores and youth age for child RCADS and PA PANAS scores.

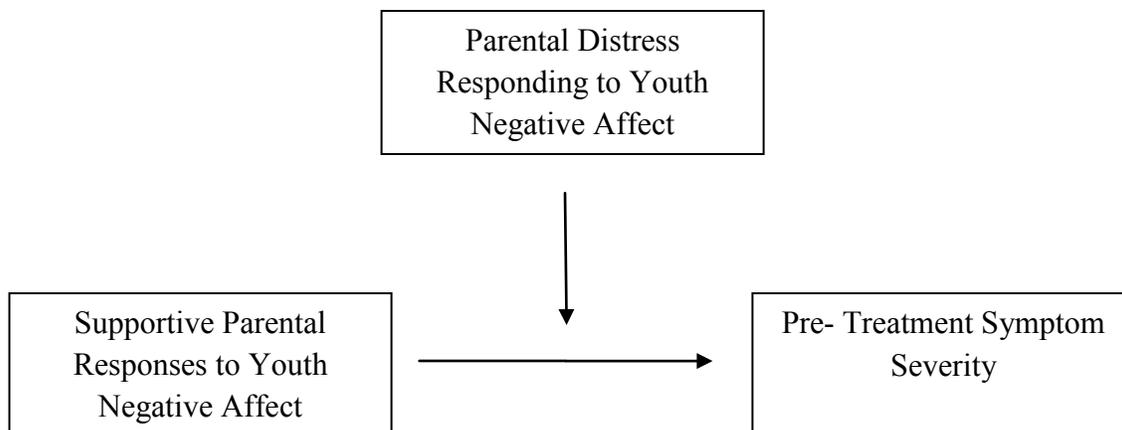
<sup>d</sup>Control variables included pre-treatment scores, youth gender, and youth age for all analyses.

\*  $p < 0.05$ , \*\* $p < 0.01$

*Figure 1.* Proposed Model of Parental Distress Responding as a Moderator Between Unsupportive Responses to Youth Negative Affect and Pre-Treatment Symptom Severity.



*Figure 2.* Proposed Model of Parental Distress Responding as a Moderator Between Supportive Responses to Youth Negative Affect and Pre-Treatment Symptom Severity.



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## Appendix A

### RCADS

Respond “Never,” “Sometimes,” “Often,” or “Always” to each question.

1. I worry about things.
2. I feel sad or empty.
3. When I have a problem, I get a funny feeling in my stomach.
4. I worry when I think I have done poorly at something.
5. I would feel afraid of being on my own at home.
6. Nothing is much fun anymore.
7. I feel scared when I have to take a test.
8. I feel worried when I think someone is angry with me.
9. I worry about being away from my parents.
10. I get bothered by bad or silly thoughts or pictures in my mind.
11. I have trouble sleeping.
12. I worry that I will do badly at my school work.
13. I worry that something awful will happen to someone in my family.
14. I suddenly feel as if I can't breathe when there is no reason for this.
15. I have problems with my appetite.
16. I have to keep checking that I have done things right (like the switch is off, or the door is locked)
17. I feel scared if I have to sleep on my own.
18. I have trouble going to school in the mornings because I feel nervous or afraid.
19. I have no energy for things.

20. I worry I might look foolish.
21. I am tired a lot.
22. I worry that bad things will happen to me.
23. I can't seem to get bad or silly thoughts out of my head.
24. When I have a problem, my heart beats really fast.
25. I cannot think clearly.
26. I suddenly start to tremble or shake when there is no reason for this.
27. I worry that something bad will happen to me.
28. When I have a problem, I feel shaky.
29. I feel worthless.
30. I worry about making mistakes.
31. I have to think of special thoughts (like numbers or words) to stop bad things from happening.
32. I worry what other people think of me.
33. I am afraid of being in crowded places (like shopping centers, the movies, buses, busy playgrounds)
34. All of a sudden I feel really scared for no reason at all.
35. I worry about what is going to happen.
36. I suddenly become dizzy or faint when there is no reason for this.
37. I think about death.
38. I feel afraid if I have to talk in front of my class.
39. My heart suddenly starts to beat too quickly for no reason.
40. I feel like I don't want to move.

41. I worry that I will suddenly get a scared feeling when there is nothing to be afraid of
42. I have to do some things over and over again (like washing my hands, cleaning or putting things in a certain order)
43. I feel afraid that I will make a fool of myself in front of people.
44. I have to do some things in just the right way to stop bad things from happening.
45. I worry when I go to bed at night.
46. I would feel scared if I had to stay away from home overnight.
47. I feel restless.

## PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you have felt this way during the past week. Use the following scale to record your answers.

1	2	3	4	5
very slightly or not at all	a little	moderately	quite a bit	extremely

___ interested	___ irritable
___ distressed	___ alert
___ excited	___ worried
___ sad	___ ashamed
___ upset	___ inspired
___ strong	___ nervous
___ guilty	___ angry
___ mad	___ determined
___ scared	___ attentive
___ hostile	___ jittery
___ enthusiastic	___ uneasy
___ depressed	___ active
___ proud	___ afraid



14. \_\_\_\_\_ When I start to feel emotional, I make sure to keep my emotions to myself.
15. \_\_\_\_\_ I regulate my emotions by thinking differently about whatever is making me emotional.
16. \_\_\_\_\_ In emotional situations, I try hard not to express my emotions.

### Caregiver Attitude/Behavior Questionnaire

Instructions: In the following items, please indicate on a scale from 1 (very unlikely) to 7 (very likely) the likelihood that you would respond in the ways listed for each item. Please read each item carefully and respond as honestly and sincerely as you can. For each response, please circle a number from 1-7.

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Response Scale:	1	2	3	4	5	6	7
	Very Unlikely			Medium			Very Likely

---

**1. When I see my teenager becoming angry at a close friend, I usually:**

- |  |               |
|--|---------------|
| a. become uncomfortable and uneasy in dealing with his/her anger | 1 2 3 4 5 6 7 |
| b. encourage him/her to express his/her anger                    | 1 2 3 4 5 6 7 |
| c. talk to him/her to calm him/her down                          | 1 2 3 4 5 6 7 |
| d. tell him/her not to make such a big deal out of it            | 1 2 3 4 5 6 7 |
| e. get angry at him/her for losing his/her temper                | 1 2 3 4 5 6 7 |
| f. help him/her think of things to do to solve the problem       | 1 2 3 4 5 6 7 |

**2. When my teenager gets down because he/she has had a bad day, I usually:**

- |   |               |
|---|---------------|
| a. tell him/her that he/she really has nothing to be sad about      | 1 2 3 4 5 6 7 |
| b. try to get him/her to think of good things that happened         | 1 2 3 4 5 6 7 |
| c. listen to him/her talk about his/her feelings                    | 1 2 3 4 5 6 7 |
| d. become obviously uncomfortable when I see he/she is feeling down | 1 2 3 4 5 6 7 |
| e. help him/her think of things to do to get his/her problem solved | 1 2 3 4 5 6 7 |
| f. tell him/her to straighten up and stop sulking around the house  | 1 2 3 4 5 6 7 |

**3. When my teenager gets anxious about performing in a recital or a sporting event, I usually:**

- |   |               |
|---|---------------|
| a. help him/her think of things to do to make sure he/she does his/her best | 1 2 3 4 5 6 7 |
| b. yell at him/her for becoming so anxious                                  | 1 2 3 4 5 6 7 |
| c. try to calm him/her down by helping him/her take his/her mind off things | 1 2 3 4 5 6 7 |
| d. tell him/her not to make such a big deal out of it                       | 1 2 3 4 5 6 7 |
| e. encourage him/her to talk about what is making him/her so anxious        | 1 2 3 4 5 6 7 |
| f. get anxious about dealing with his/her nervousness                       | 1 2 3 4 5 6 7 |

---

Response Scale:    1    2    3    4    5    6    7  
                               Very Unlikely            Medium            Very Likely

---

**4. When my teenager gets angry because he/she can't get something that he/she really wants, I usually:**

- |   |               |
|---|---------------|
| a. try to make him/her feel better by making him/her laugh                | 1 2 3 4 5 6 7 |
| b. help him/her think of other ways to go about getting what he/she wants | 1 2 3 4 5 6 7 |
| c. get upset with him/her for becoming so angry                           | 1 2 3 4 5 6 7 |
| d. become uncomfortable and don't want to deal with him/her               | 1 2 3 4 5 6 7 |
| e. tell him/her he/she is being silly for getting so angry                | 1 2 3 4 5 6 7 |
| f. encourage him/her to talk about his/her angry feelings                 | 1 2 3 4 5 6 7 |

**5. When my teenager gets sad because he/she has had his/her feelings hurt by a friend, I usually:**

- |  |               |
|--|---------------|
| a. get nervous dealing with his/her sad feelings                 | 1 2 3 4 5 6 7 |
| b. encourage my teenager to talk about what is bothering him/her | 1 2 3 4 5 6 7 |
| c. try to cheer him/her up                                       | 1 2 3 4 5 6 7 |
| d. tell him/her that things aren't as bad as they seem           | 1 2 3 4 5 6 7 |
| e. get angry at him/her for not being more in control of things  | 1 2 3 4 5 6 7 |
| f. help him/her think of ways to help make the problem better    | 1 2 3 4 5 6 7 |

**6. When I see my teenager become anxious about something at school, I usually:**

- |   |               |
|---|---------------|
| a. tell him/her that he/she is making too big a deal out of it    | 1 2 3 4 5 6 7 |
| b. become nervous and uneasy in dealing with his/her anxiety      | 1 2 3 4 5 6 7 |
| c. get angry at him/her for not dealing with things better        | 1 2 3 4 5 6 7 |
| d. encourage him/her to talk about what is making him/her nervous | 1 2 3 4 5 6 7 |
| e. help him/her think of things to do to solve the problem        | 1 2 3 4 5 6 7 |
| f. help comfort and soothe his/her anxious feelings               | 1 2 3 4 5 6 7 |

---

Response Scale:    1    2    3    4    5    6    7  
                           Very Unlikely            Medium            Very Likely

---

**7. When my teenager gets angry at a family member, I usually:**

- |  |               |
|--|---------------|
| a. try to help them resolve the conflict               | 1 2 3 4 5 6 7 |
| b. threaten to punish him/her                          | 1 2 3 4 5 6 7 |
| c. tell him/her he/she is over-reacting                | 1 2 3 4 5 6 7 |
| d. try to help him/her calm down                       | 1 2 3 4 5 6 7 |
| e. encourage him/her to let his/her angry feelings out | 1 2 3 4 5 6 7 |
| f. become very uneasy and avoid dealing with him/her   | 1 2 3 4 5 6 7 |

**8. When my teenager gets upset because he/she misses someone he/she cares about, I usually:**

- |   |               |
|---|---------------|
| a. become nervous dealing with him/her and his/her feelings                 | 1 2 3 4 5 6 7 |
| b. encourage him/her to talk about his/her feelings for this person         | 1 2 3 4 5 6 7 |
| c. try to get him/her to think of other things                              | 1 2 3 4 5 6 7 |
| d. tell him/her he/she has nothing to be upset about                        | 1 2 3 4 5 6 7 |
| e. get upset with him/her for not being in control of his/her feelings      | 1 2 3 4 5 6 7 |
| f. help him/her think of ways to get in touch with the person he/she misses | 1 2 3 4 5 6 7 |

**9. When my teenager becomes nervous about some social situation that he/she has to face (such as a date or a party), I usually:**

- |   |               |
|---|---------------|
| a. try to calm him/her down by pointing out how much fun he/she will have | 1 2 3 4 5 6 7 |
| b. give him/her advice about what to do in the social situation           | 1 2 3 4 5 6 7 |
| c. get angry at him/her for being so emotional                            | 1 2 3 4 5 6 7 |
| d. prefer not to deal with his/her nervousness                            | 1 2 3 4 5 6 7 |
| e. encourage him/her to express his/her feelings                          | 1 2 3 4 5 6 7 |
| f. tell him/her he/she is making a big deal about nothing                 | 1 2 3 4 5 6 7 |