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Predictors of Discrepancies in Parents' and Children's Reports of Child Emotion
Regulation

A thesis submitted in partial fulfillment of the requirements for the degree of Master of
Science at Virginia Commonwealth University.

by

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Abstract

PREDICTORS OF DISCREPANCIES IN PARENTS' AND CHILDREN'S REPORTS
OF CHILD EMOTION REGULATION

By Shannon E. Hourigan, B.A.

A thesis submitted in partial fulfillment of the requirements for the degree of Master of
Science at Virginia Commonwealth University

Virginia Commonwealth University, 2009

Major Director: Michael A. Southam-Gerow, Ph.D., Assistant Professor, Department of
Psychology

The ability to effectively regulate one's emotions has been linked with many aspects of well-being. However, disagreement in parents' and children's reports of children's emotion regulation presents significant measurement and conceptual challenges. This investigation aimed to identify predictors of these discrepancies from among demographic, psychopathology, and child emotional awareness measures and to examine patterns of discrepancies among three emotion types (i.e., anger, sadness, and worry) and three regulation "strategies" (i.e., inhibition, dysregulated expression, and coping). Sixty-one mother-child dyads (41 girls, mean age 9.3 years) participated. As hypothesized, age, child and parent report of psychopathology, and poor emotion awareness all emerged as significant predictors of discrepancy. Additionally,

discrepancies for inhibition subscales across all three emotions were of a larger magnitude than the other subscales; the effect was more pronounced for sadness than worry. Overall, the findings suggest patterns of disagreements are not random but rather may provide unique information that could elucidate relations among emotion regulation, psychopathology, and other indices of functioning.

Introduction

Emotions can be broadly defined as non-permanent, motivating feeling states that occur in response to an individual's interaction with something in the environment (Barrett & Campos, 1987). Emotions can have either positive (e.g., happy, proud, joyous) or negative (e.g., sad, jealous, frustrated) valence, vary in intensity, vary in complexity from simple (e.g., happy) to complex (e.g., ashamed), and can occur concurrently. Further, emotions differ from moods in that emotions are shorter lasting; one metaphor likens mood to climate and emotion to weather. Emotions are also thought to have a motivational component directing and energizing behavior (Barrett & Campos, 1987), although unlike motivational impulses such as hunger and thirst, emotional responding is far more flexible and can be directed at a wide range of potential targets (Gross & Thompson, 2007). Contemporary theorists propose that emotions consist of a variety of interwoven components, including behavioral, physiological, phenomenological, cognitive, and social in their definition of emotion and note the inherent difficulty in the measurement given the multifaceted nature of emotion (Solomon, 2002; Zeman, Klimes-Dougan, Cassano, & Adrian, 2007).

Researchers have long debated the definition of emotion so it no surprise that the definition of emotion regulation (ER) has also proven elusive. For the purposes of this paper, we will define ER as the modulation of emotional responses (increasing and decreasing the intensity of both positively and negatively valenced emotions) to achieve goals set within a social or environmental context (Thompson, 1994). ER involves the coordination and organization of a variety of systems, some of which will be discussed

later. These systems are diverse and can include neurophysiological, cognitive, facial responses, and perception and understanding of the behavior of others (Zeman, Cassano, Perry-Parrish, & Stegall, 2006).

The ability to effectively manage one's emotions is an important development of early childhood, and ER ability in childhood has been linked with many aspects of later well being and adjustment (Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997; Izard et al., 2001; Trentacosta & Izard, 2007; Southam-Gerow & Kendall, 2002; Spinrad et al., 2006). The ability to regulate emotions adaptively contributes to healthy development (National Research Council and Institute of Medicine, 2000). Similarly, deficits in ER abilities have been tied to a variety of negative outcomes, including internalizing and externalizing psychopathology (Casey, 1996; Zeman, Shipman & Suveg, 2002). Further, understanding of the developmental trajectory of ER has informed treatment development and been linked with successful treatment outcomes (Suveg, Kendall, Comer & Robin, 2006), suggesting that the study of ER is a highly relevant topic for clinical child/adolescent researchers.

Given the relation between ER and healthy development, accurate measurement of ER becomes a critical need for the field (Cole, Martin, & Dennis, 2004; Zeman et al., 2007). However, the measurement of ER presents several challenges. First, there is the difficulty inherent in obtaining reports from both parents and children on a construct that is not easily observable and is sometimes "internal" to the child. Parents cannot always know about children's thoughts and emotional processes, and children do not necessarily have the ability to report on their internal states. Further, even "observable" (i.e.,

behavioral) ER is subject to the observer's opportunity to "observe" the regulation as well as potential observer bias. To date, as can be imagined, there is no "gold standard" measurement tool for ER. Second, the term "emotion regulation" does not have a definition agreed upon by all researchers, making comparisons across studies difficult. Tools developed to date have differed in their definition of ER and thus, progress towards a set of consensus measurement methods has been slowed.

To move a step closer toward understanding the relation between children's ER and other indices of child functioning, this study seeks to explore the relation between discrepant parent-child reports of children's ER abilities and other factors to determine whether parents' and children's perspectives differ systematically. Before tackling the thorny issue of ER measurement, we must first lay some conceptual groundwork. Toward that end, this review will achieve six goals. First, we discuss definitional issues regarding the constructs of emotion and ER and reiterate our definition of ER for the purposes of this investigation. Second, we review relevant research linking ER skills to psychosocial outcomes. Third, we briefly review the body of literature discussing discrepancies among informant reports of children's behavior and internal states. Fourth, we explore potential moderators of discrepancies in parents' and children's reports of children's ER. Fifth, we discuss the application of the Children's Emotion Measurement Scales (CEMS; Zeman, Shipman & Penza-Clyve, 2001) parent and child report versions to the question of discrepancies in parent and child report of children's ER. Finally, we discuss a model that seeks to explain discrepant findings in clinical research and consider how this framework might apply to non-clinical settings.

Review of the Literature

Emotion Regulation: Theory

Toward the first goal of this review, this section explores two theories of ER and highlights some of the challenges inherent in its measurement. As discussed in the introduction, emotions are feeling states that occur in response to environmental and social interactions and serve to motivate action toward goals. This represents the functionalist perspective, which defines emotions as processes that serve the function of enabling an individual to interact with the environment to achieve a goal. Campos, Campos, and Barrett (1989) defined emotion as the “processes of establishing, maintaining, or disrupting the relations between the person and the internal or external environment, when such matters are significant to the individual” (p. 395). For example, the arousing feeling, expression, and action associated with anger are considered a functional response that evolved to generate the motivation and energy necessary to overcome the perceived obstacle in the environment (Campos et al., 1989). This framework is convergent with Gross and Thompson’s (2007) “modal model” of emotion, which they describe as “a person-situation transaction that compels attention, has particular meaning to the individual, and gives rise to a coordinated yet flexible multisystem response to the ongoing person-situation transaction” (p. 5). This theory of emotion, grounded in functionalist view of emotion, allows for an idiographic examination of seemingly maladaptive emotional responses within the context of an individual’s environment and goals.

It is important to note that the functionalist model is not the only model of emotion. For example, some theorists take the position that emotions are natural states that correspond to neurobiological structures (e.g., Ekman, 1994; Ekman, Friesen, & Ancoli, 1980; LeDoux, 1996; Panksepp, 2000). Indeed, there are several other theoretical perspectives on emotion in the literature. In the present investigation, however, we take a functionalist perspective and have thus only examined this particular view in any detail. The interested reader is referred elsewhere for more thorough examinations of other theoretical perspectives (e.g., Fox, 1994; Gross, 2007; Lewis & Sullivan, 1996).

Just as a consensus has been difficult to achieve around what is meant by emotion, an operational definition of ER has also been elusive (Bridges, Denham, & Ganiban, 2004; Calkins, 1994; Campos, Frankel, & Camras, 2004; Cole et al., 2004; Cole, Michel & Teti, 1994; Eisenberg, Champion, & Ma, 2004; Eisenberg & Spinrad, 2004; Southam-Gerow & Kendall, 2002; Thompson, 1994). Among researchers who agree that emotions are a functional response to the social and environmental contexts, disagreements exist regarding the specific mechanisms through which emotions are regulated. For example, Cole and colleagues (2004) conceptualize emotion and ER as separate processes. They posit that emotion is a constant and fluid stream of appraisals that exists mainly outside of conscious awareness, and only when these appraisals rise to the level of conscious awareness is regulation possible.

Gross and Thompson (2007) also conceptualize emotion and ER as distinct processes and have operationalized five families of emotion regulatory processes that can be considered in the following roughly temporal sequence: situation selection, situation

modification, attentional deployment, cognitive change, and response modulation (Gross, 1998; Gross & Thompson, 2007). The first, *situation selection*, involves choosing a situation that is most likely to support the desired emotional outcome, such as going out with a good friend after a hard day or avoiding a frustrating colleague. The second, *situation modification*, involves altering an existing situation in some way, such as choosing to sit next to a quiet woman reading a book rather than a loud teenager talking on a cell phone on a public bus. The third is *attentional deployment*, which allows individuals to regulate their emotions without changing the environment. This can be accomplished by drawing attention toward or away from a specific stimulus depending on the individual's goal; this is the first emotion regulatory process known to develop in human infants. The fourth ER strategy defined by Gross is *cognitive change*, which involves the appraisal or framing of an emotional situation and changing the way in which one thinks about it to cast the situation in a light more closely aligned with the desired emotional state. The final category of emotion regulatory strategies is *response modulation*, which refers to the way in which an individual responds to a given situation. This differs from the first four processes that can be described as antecedent-focused in that they focus on processes that modify the emotional experience before it occurs. Response modulation involves regulation of the response to an emotionally arousing situation, such as not showing anger during a political discussion in order to limit further provocation.

Campos and colleagues (2004) disagree with the notion that emotion and ER are distinct processes on the grounds that there is no evidence to support the existence of a

pure, unregulated emotion. They note that a two-factor theory is conceptually appealing and face valid, but they argue emotion and ER operate in tandem to facilitate goal development. They argue that to be able to discern one emotion from another, such as guilt from shame, one must understand “the function that the selected behaviors serve in interaction with the world, how those behaviors are related to the problem the person is facing, and how they are playing a role in solving that problem” (p. 379). Thus, they posit that to understand and correctly label an emotion, one must understand the individual’s goals and the interaction between the emotion and those goals.

Despite the debate, a broad definition does seem to be emerging; following a review of the literature, Southam-Gerow and Kendall (2002) identified five major features of ER. First, ER involves emotion serving as both a regulator of behavior and as the regulated phenomenon itself. Second, consistent with Thompson’s (1994) definition, ER involves the “purposeful (i.e., goal oriented) monitoring, evaluating, and modifying of emotional reactions by extrinsic and intrinsic processes” (p., 193, Southam-Gerow & Kendall, 2002). Third, the regulation of emotion involves not just the suppression of emotion, but rather complex modulation involving both up- and down-regulation of positive and negative emotions. Fourth, individual differences in neuroregulatory systems, behavioral traits, and cognitive abilities impact an individual’s ER skill development (Calkins, 1994).

The variety of definitions and debate in the literature highlight the importance of stating the definition of ER at the outset of any discussion. For the purposes of this study, ER will be defined as the ability to modulate the experience of one’s emotions and

emotional expression in order to obtain a goal embedded in the social and environmental context. Not surprisingly, a construct with such a complicated and illusive definition presents researchers with significant challenges of measurement. Before this paper delves more deeply into a discussion of those challenges, it will first review the importance of ER in development, factors that may influence the development of ER abilities, and the relation between ER and psychopathology.

Emotion Regulation as a Critical Developmental Task

Toward the second goal of this review, this section discusses some of the relevant research linking emotional development to psychosocial outcomes. Researchers have suggested that the ability to control one's emotions to best achieve goals is experience-dependent (Calkins, 1994). Some developmental theorists have identified the development of this skill as one of the most important tasks of early childhood (Calkins & Hill, 2007; National Research Council and Institute of Medicine, 2000). Supporting this assertion are numerous findings linking emotional competence to academic, (Izard et al., 2001; Trentacosta & Izard, 2007), social (Denham et al., 1997; Spinrad et al., 2006), physical (Salovey, Rothman, Detweiler, & Steward, 2000), and psychological functioning (e.g., Cole et al., 1994; Southam-Gerow & Kendall, 2000, 2002). Given the relation between ER and healthy development, it is critical for those studying the construct to understand the course of its development.

Developmental psychologists conceive of development as a series of qualitative changes among and within behavioral and biological systems that occur in stages throughout the aging process. Within this perspective, the development of various

systems and of the individual as a whole is thought to proceed from a relatively unorganized condition through a hierarchy of increasingly differentiated and complex stages (Cicchetti, Ganiban, & Barrett, 1991; Werner, 1957). Thus, normative development is brought about by the successful negotiation of these hierarchical stages and is thought to involve the integration of behavioral, cognitive, biological, and socioemotional systems, and because each new development builds on the previous developments, an early failure to master one of the tasks of development is thought to derail the process and lead toward incompetence.

The study of ER is thought to provide a mechanism through which to understand both typical and atypical development. Cole and colleagues (2004) proposed that the construct of ER allows researchers to understand “how emotions organize attention and activity and facilitate strategic, persistent, or powerful actions to overcome obstacles, solve problems, and maintain well-being at the same time as they may impair reasoning and planning, complicate and compromise interpersonal interactions and relations, and endanger health” (p. 318), making the study of ER valuable from both clinical and developmental perspectives.

Emotional competence is demonstrated when “we emerge from an emotion-eliciting encounter with a sense of having accomplished what we set out to do” (Saarni, 1999; p. 3). The development of this competence is an ongoing process that involves the acquisition of a variety of skills necessary for interaction in a social context. Saarni’s work has been most influential to date, particularly because she has outlined a comprehensive model of emotional competence, including delineating eight skills

essential to the development of emotional competence. The first of these skills is awareness of one's own emotional state, including the awareness of more than one simultaneous emotion and awareness that emotions can occur below the level of consciousness. The second skill is the ability to discern others' emotions based on context and expressive signals. The third skill is the ability to use language to express emotion, including increasingly sophisticated use of emotion-related imagery and symbolism. The fourth skill involves empathy and sympathy for others. The fifth skill is the understanding that one's inner state is not necessarily reflected in one's external reflection, at later stages of development the understanding that one's outer expression can impact another person. The sixth skill outlined by Saarni is adaptive coping with negative emotions and adverse situations. The seventh skill is ability to engage in emotional communication in relations and understand increasingly complex concepts such as emotional reciprocity and genuineness of emotional display. Finally, the eighth skill outlined by Saarni concerns the match between one's personal theory of emotion, moral sensibility, and one's life.

Whereas Saarni's (1999) model of development focuses on the relations among the social contexts, emotional, and social development, other researchers focus on understanding the neurobiological mechanisms involved in the development of ER. Cicchetti and colleagues (1991) propose a model that incorporates both internal factors such as central nervous system functioning and the development of neurotransmitter systems and external factors such as caregiver responsiveness and affective modeling. Given the interaction between and relative contributions of both internal (e.g., biological)

and external (e.g., environmental) mechanisms involved in development, it is useful at this point to discuss internal and external influences separately, before rejoining the two for a discussion of potential interactions that may affect the development of ER ability.

Internal Factors: Temperament. Current evidence emphasizes the role of factors relating to temperament in maladaptive ER and in the development of psychopathology. Temperament is defined as “constitutionally based individual differences in emotional, motor, and attentional reactivity and self-regulation...believed to demonstrate consistency across situations as well as relative stability over time” (Rothbart & Bates, 1998, p. 109) and is considered to have a biological basis (Eisenberg, Fabes, Guthrie & Reiser, 2000). More simply, temperament is a biologically-based, relatively stable characteristic that describes an individual’s pattern of reacting to various stimuli.

Rothbart and colleagues (e.g., Derryberry & Rothbart, 1997; Rothbart & Bates, 1998; Rothbart & Sheese, 2007) posit that individual differences in temperament interact with ER abilities to affect emotion expression and development of ER strategies. They view emotions as integrative systems that organize individual thought, feeling, and action, and allow the individual to rapidly determine the significance of an event and react to it. Patterns of reactivity, responses to change in the internal or external environment, vary broadly across the population; however, a single individual’s pattern of responses is thought to be quite stable across time. Whereas human beings display a wide range of latency, duration, and intensity of affective, motor, physiological, and orienting reactions, responses within a single individual are much less varied (Rothbart & Sheese, 2007). Indeed, longitudinal research has supported this position. Murphy,

Eisenberg, Fabes, Shepard and Guthrie (1999) examined individual consistency in emotionality and regulation across six years spanning early and middle childhood. Using the reports of parents and different teachers at different ages to eliminate the potential bias of having a single reporter provide information at all time periods, they found individual differences in ER and emotionality were predictive of similar functioning in later years. Children became generally more emotionally regulated and less emotionally intense throughout development; however, individual differences in these characteristics remained (Murphy et al., 1999). The findings suggest that whereas emotions become increasingly more regulated throughout development, ER abilities develop along relatively stable trajectories within each individual.

Indeed, research has linked positive and negative temperament to higher order personality traits and internalizing symptomatology (Anthony, Lonigan, Hooe, & Phillips, 2002). However, individual differences in self-regulatory capacities are thought to be moderated by a construct called effortful control, defined as the ability to “inhibit a dominant response in order to perform a subdominant response, to plan, and to detect errors” (p. 336, Rothbart & Sheese, 2007). These individual differences in self-regulatory capacities include attentional focus and control and inhibitory control in childhood and adulthood, perceptual sensitivity and low-intensity pleasure in childhood, and activational control in adulthood (Rothbart & Sheese, 2007).

It is thought that the ability to control behavior allows the child to inhibit or activate responses adaptive for the given situation, facilitating socially competent interactions and adaptive adjustment (Eisenberg, Hofer, & Vaughan, 2007). Consistent

with this view, research has found children who were able to employ self-distraction techniques in a delay-of-gratification task were more likely to be rated as socially competent by their peers and teachers than children who were not successful at the delay of gratification task (Raver, Blackburn, Bancroft, & Torp, 1999). Further longitudinal research has demonstrated that that effortful control is a relatively stable construct predictive of overall competence. Several studies have demonstrated that children's early lack of regulation predicted low social competence in childhood and adolescence and low quality of social functioning in adulthood (Caspi, 2000; Caspi, Henry, McGee, Moffitt, & Silva, 1995; Henry, Caspi, Moffit, & Silva 1996).

Eisenberg and colleagues have proposed the construct of emotional intensity as related to some aspects of ER. Intensity of emotion, regardless of valence, is thought to be a relatively stable temperamental dimension and part of the construct of emotionality related to children's social competence and underlying positive or negative behavior (Maszk, Eisenberg, & Guthrie, 1999). Indeed, research has shown that emotional intensity is predictive of concurrent social status as well as social status five months after the initial assessment, suggesting that children's individual levels of emotional intensity affect their social status with peers (Maszk et al., 1999). Longitudinal research that followed children for six years from preschool through late elementary or middle school found that early individual differences in emotionality were predictive of later functioning. Further, whereas children became generally less emotionally intense over time, there was modest individual consistency on most measures of emotionality and regulation. Children's levels of negative emotional intensity showed significant

reductions across time, which the authors suggest may be a product of decreasing acceptability of negative emotional displays over time (Murphy et al., 1999). Similar to research that links early emotional competence to social outcomes, these findings support the theory that stable individual characteristics in emotional responding exist. These characteristics are an important part of understanding the development of ER.

External Factors: Parental Socialization. Whereas biologically based differences underlie many individual differences in ER, throughout the course of development, nature becomes inextricably intertwined with nurture (e.g., Calkins & Hill, 2007; Caspi et al., 2002). Research regarding familial influences on ER suggests a complex interaction of factors that is beyond the scope of this paper, however, this paper will devote some attention to the impact of family and socialization of emotion on the development of emotional competence. Interested readers seeking a thorough discussion of familial influence on emotional competence should consult relevant reviews (Eisenberg, Cumberland, & Spinrad, 1998; Morris, Silk, Steinberg, Myers, & Robinson, 2007).

Research suggests that parents socialize children's ER in two main ways, either through direct teaching of emotion or through indirect methods such as modeling (Zeman et al, 2006). Saarni (1999) outlines a number of processes through which emotion socialization occurs within the family context. One such process is parental filtering of children's emotional experiences, for example, by limiting the type of entertainment available to the child or by choosing a day-care center environment over at home care with a grandparent. Another socialization mechanism involves transmission of beliefs about emotion through particular discipline tactics and parents' beliefs and feelings about

emotions (Saarni, 1999). The influence of parental behavior on children's ER abilities seems to begin at a very early age; indeed, parental emotional support in early infancy appears to be related to infant ER ability. Studies have demonstrated that infants with mothers responsive to their changing emotional cues engaged in more self-regulation in the form of gaze aversion and reacted less negatively to stimulation than did infants with less responsive mothers (Gable & Isabella, 1992; Stifter & Moyer, 1991). Although it is impossible to separate the effect of genetic and environmental influences (e.g., are mothers who are more responsive more likely to have babies who employ gaze aversion due to a shared genetic loading? Or does the experience of having a responsive mother uniquely aid in the development of gaze aversion ability?), the evidence suggests that early parental emotional support is related to the development of ER competence.

Evidence from a number of research groups suggests that children's ER ability is related to the type of emotion socialization experiences experienced. Eisenberg and colleagues (1998) identify the expression of negative emotions by parents and parents' negative reactions to children's expressions of emotion as variables associated with children's expression of negative emotions and social competence. In particular, parental negative expressivity and negative reactions to children's displays of emotion are associated with negative expressivity and low social competence on the part of the child (Eisenberg et al., 1998). For example, Denham and colleagues (1997) found support for the theory that parental socialization of emotion impacts children's emotional and social competence in a preschool sample. Using observational and self-report measures, Denham and colleagues found that parental modeling of expressive styles and parental

responsiveness to child emotions was predictive of preschoolers' emotional and social competence. Specifically, parents who were affectively positive and displayed a balanced range of emotions had children who were similarly positive and affectively balanced. These same parents who reported remaining affectively positive in challenging situations had children who were more skilled at identifying emotions. Conversely, parents who were affectively negative tended to have children who were less socially competent (Denham et al., 1997).

Researchers have examined the emotional patterns of children raised by mothers with mood disorders to further examine the impact of parental modeling on child emotional development. Infants whose mothers suffer from depression often experience environments where their caregivers do not respond to emotional bids. In this caregiving environment, infants change their emotional patterns to elicit responses from their caregivers, and it is hypothesized that this environment does not support the development of these neurological tracts. These infants are noted to display more irritability and restlessness, and may experience more severe outcomes such as nonorganic failure to thrive, reactive attachment disorder, and rumination disorder (Cicchetti et al., 1991; Cole et al., 1994). Research with older children of depressed mothers suggests that children model parental ER strategies. Children of depressed mothers were more likely to engage in less effective ER strategies in response to a delay task than children of mothers who have never been depressed (Silk, Shaw, Skuban, Oland, & Kovacs, 2006).

The wide variety of individual and family variables related to the socialization of emotion (i.e., age, gender, siblings, parent variables such as psychopathology, the bi-

directional nature of socialization wherein both child and parent mutually affect emotional responses) make the unique contribution of parental socialization on overall emotional development nearly impossible to identify. However, it is clear that parental socialization practices exert an important effect on children's emotional competence. Family research also presents the challenge of extricating socialization influences from the effects of genetic endowment. Parents and children share similar genetic loading and are likely to have similar temperaments. ER is thought to be influenced by socialization, but it is instructive to briefly review the literature examining other environmental impacts on ER. The complex nature of the interactions among these diverse influences and ER is important to remember when considering the challenges inherent in the measurement of ER, particularly when interpreting parent report.

External Factors: Adverse Environmental Circumstances. In addition to the influence exerted by the family system, the child's environment may play a critical role in the development of emotional competence, even from a very young age. Research with human fetuses suggests that laboratory-induced maternal stress increases fetal stress, as indexed by increased heart rate and motor activity (DiPietro, Costigan, & Gurewitsch, 2003). This finding alone does not necessarily provide support for the position that the early environment has a long-term impact. However, taken with the finding that maternal prenatal anxiety predicts child difficulties in self-regulation at age 4 after controlling for maternal postnatal anxiety (O'Connor, Heron, Golding, Beveridge, & Glover, 2002), the evidence seems to suggest that the earliest environment may impact ER abilities.

Cicchetti and colleagues (1991) illustrate the potential impact of environmental factors that may disrupt normative development by looking at patterns of maladaptive ER in children of mothers with unipolar depression and maltreated children. For example, during the fourth and ninth months of life, changes in neurological inhibitory systems and cognitive development allow the infant, who is able to independently achieve homeostasis and has begun to take an interest in his environment, modify his behavior to meet both his own needs and respond to the environment. During this period of development, neurological connections are being made that enable infants to regulate arousal and distress. It is thought that a stable caregiving environment facilitates the development of neural pathways thought to be related to the child's ability to self-soothe (Cicchetti et al., 1991). This supposition is supported by research that has found maltreated infants have response patterns consistent with the type of abuse they suffered. Physically abused infants respond to caregivers with what appears to be anger, sadness, and fear, and emotionally neglected infants demonstrate blunted affect. Cicchetti and colleagues suggest that caregiving environments insensitive to infant arousal states might impact neurodevelopment resulting in characteristic patterns of responding to stimuli consistent with the caregiving environment (Cicchetti et al., 1991).

Taken together, the family socialization and environment-related findings suggest a complex web of interactions between the developing child's ER capacities, the child's individual characteristics, and the caregiving environment. Research suggests relatively stable patterns of responding and interaction exist at the individual level and interact with environmental influences in the development of ER abilities.

Emotion Regulation and Psychopathology

Given developmental models of ER and the importance of ER across multiple domains of functioning, it is hypothesized that problems in ER development would lead to problems in adjustment. Consistent with this theory, there is a body of research predicting children's internalizing and externalizing behavior problems from measures of ER. In the next section, we review the literature looking at the relation between ER and psychopathology. Toward that end, this review will discuss the relation between ER and internalizing behavior, disruptive behavior, and eating disorders.

Internalizing Disorders. Zeman and colleagues (2002) examined children's self-reports of emotion understanding, emotion management, internalizing symptoms, and peer reports of externalizing behavior and were able to predict internalizing and externalizing behavior from emotion measures. They found that children's self-reported difficulty identifying negative emotions, inhibition of anger, and inappropriate expression of anger and sadness significantly predicted internalizing symptoms. Additionally, constructive coping with anger was inversely related to internalizing and externalizing symptoms. These findings support the hypothesis that adaptive functioning is closely tied to the ability to manage negative situations and emotional states.

The finding of characteristic patterns of ER deficits in individuals with anxiety disorders has been replicated in research comparing children diagnosed with anxiety disorders with children with no psychological disorders on self- and mother-reported ER, emotional intensity, and emotional self-efficacy in worried, sad, and angry scenarios (Suveg & Zeman, 2004). Children with anxiety disorders reported significantly less

regulated expression than non-anxious children across all emotional scenarios. Additionally, children with anxiety disorders reported less adaptive coping than non-anxious children, and mothers of anxious children indicated that their children were significantly more “inflexible, labile, and emotionally negative” than mothers of non-anxious children. Mothers of anxious children also reported that their children were significantly less self-aware and were significantly less appropriate in their emotional expression than did mothers of non-anxious children. Clinically anxious children perceived themselves to be significantly less emotionally efficacious than did the control children, though all children perceived themselves to be less efficacious in coping with the worried scenario. Anxious children reported experiencing significantly more intensity in their experiences of anger and worry than did non-anxious children (Suveg & Zeman, 2004), suggesting characteristic patterns of emotional responding among various forms of child psychopathology.

These patterns have been uncovered in adolescents as well. In a study of ER strategies, depressive symptoms, and problem behavior in 152 adolescents in seventh and tenth grades using self-reports about the intensity, lability, and strategies used to regulate negative emotions in a naturalistic context, researchers found that ER strategies involving disengagement or involuntary engagement were related to higher levels of depressive symptoms and problem behavior (Silk, Steinberg & Morris, 2003). Additionally, in a study examining use of cognitive ER strategies in adolescents with internalizing, externalizing, comorbid internalizing and externalizing problems, and control adolescents, Garnefski, Kraaij, and van Etten (2005) found that adolescents with

internalizing problems reported significantly more use of self-blame and rumination ER strategies than externalizing or control individuals. In the aggregate, these findings point to patterns of deficient emotional competence characteristic of certain psychological problems often seen in youth.

Disruptive Behavior Disorders. The term “disruptive behavior disorders” encompasses several DSM-defined disorders associated with inattention, hyperactivity, impulsivity, aggression, and/or antisocial behavior. However, the disruptive behavior disorders are not a homogenous group. It is important to note that there are important distinctions in patterns of risk and causal factors within the disruptive behavior disorders, with inattention, impulsivity, and hyperactivity linked associated with genetic and psychobiological influences, and aggressive behavior linked with deviant parenting and other environmental risk factors (Mullin & Hinshaw, 2007). Research examining patterns of ER in disruptive children has often not controlled for comorbidity of impulsive, hyperactive, and aggressive symptoms, leaving questions unanswered about the relation between patterns of emotional responding and types of externalizing responses (Mullin & Hinshaw, 2007).

Casey has attempted to address this question with a series of studies that explored the emotion expression, appraisal, and regulation of youth with attention deficit hyperactivity disorder (ADHD), oppositional defiant disorder (ODD) and major depressive disorder (MDD; Casey, 1996). She found that children with ADHD were more emotionally expressive and tended to express more positive emotions than other diagnosed children. Children with ODD were more typically negative in their vocal

emotional expressions, and children with MDD displayed less facial emotions than children with ODD and ADHD. Further, children with ADHD and ODD showed deficits in emotion appraisal when compared to children with depressed and non-diagnosed children (Casey, 1996). The pattern of results suggests certain deficits in emotion processes may be related to specific forms of psychopathology.

Other researchers have uncovered patterns of deficits in emotion recognition in children with ADHD. For example, Cadesky, Mota, and Schachar (2000) noted that youth with ADHD have difficulty identifying emotions, potentially due to difficulty attending to emotional cues. Further, deficits in emotion recognition in others and oneself is correlated with higher levels of ADHD symptomatology (Norvilitis, Casey, Brooklier, & Bonello, 2000). Additionally, Braaten and Rosen (2000) found that boys with ADHD were less empathic than peers without ADHD, suggestive of a relation with poor emotion recognition in others.

Although Casey's findings seem promising, more work is needed to further understand the link between specific emotional deficits and common forms of child psychopathology. The evidence is mixed regarding specific patterns of responding for groups of children with specific diagnoses, and research has yielded mixed results regarding a consistent pattern of emotional responding for youth diagnosed with ADHD. Researchers have suggested that whereas problems in attention and impulse control, executive functions, and academic achievement characterize the disorder, there is not a clear pattern of poorly regulated emotional responding unless other externalizing problems (e.g., aggression) are present (Melnick & Hinshaw, 2000; Mullin & Hinshaw,

2007). Further, findings related to heightened emotional reactivity have yielded conflicting and inconclusive results (Braaten & Rosen, 2000; Maedgen & Carlson, 2000; Walcott & Landau, 2004).

In addition to research focusing on emotional deficits in youth with ADHD, there is a growing body of evidence to suggest a relation among negative emotional reactivity, effortful control, and conduct problems (Frick & Morris, 2004; Mullin & Hinshaw, 2007). High levels of negative emotional reactivity, the propensity to respond with hostility, anger, or fear, have been linked with conduct problems in both cross-sectional (Eisenberg et al., 2001; Frick et al., 2003) and prospective research (Caspi, 2000; Eisenberg et al., 1997). Further, low levels of effortful control have also been linked to conduct problems. Eisenberg and colleagues (2001) found that children with conduct problems performed significantly more poorly on a measure of persistence than children with no parent-reported internalizing or externalizing behavior problems, highlighting the unique contribution of effortful control beyond the construct of negative reactivity in the development of conduct problems. Further, in a longitudinal study following a consecutive birth cohort from age 3 to age 18, a temperamentally based construct that reflects inability to modulate impulsivity, lack of persistence in problem solving, and negative reactivity to stress measured at age 5 was predictive of conviction for a violent crime at age 18 (Henry et al., 1996). Taken with the findings regarding the internalizing psychopathology, these findings further support the hypothesis that characteristic patterns of ER deficits are associated with emotional disorders.

Eating Disorders. In addition to links between deficits in emotional competence and internalizing and disruptive behavior, researchers have identified deficits in emotion awareness and identification in adolescent girls with bulimia nervosa. One theory suggests disordered eating serves as a maladaptive strategy to regulate negative emotions. Sim and Zeman (2004) investigated emotional functioning in girls with bulimia nervosa, girls with depressive disorder diagnoses, and girls without a history of mental health problems and found girls with bulimia nervosa displayed significant deficits in skills related to emotional functioning compared to girls in other groups. Girls with bulimia nervosa reported significantly less motivation to express emotion, had significantly more difficulty identifying emotions and bodily sensations, required significantly longer time to access a verbal label to describe their emotional state, and had significantly more difficulty discriminating between emotions presented in response to hypothetical situations. Further, girls with bulimia nervosa and girls with a depressive disorder were significantly more likely to use a non-specific emotion word (e.g., bad, strange) to identify how they felt and evidenced significantly less emotional awareness than girls with no history of mental illness. It is hypothesized that these deficits in emotional awareness contribute to the use disordered eating behavior as a coping strategy to regulate negative emotions that are difficult to identify (Sim & Zeman, 2004).

In addition to identifying differences in emotion awareness abilities among groups of adolescent girls with bulimia and other levels and types of psychopathology, researchers have also tested the mediational effects of ER variables on the relation between body dissatisfaction and bulimic behavior (Sim & Zeman, 2005). An

investigation of sixth, seventh, and eighth grade girls uncovered that frequency with which girls experience negative affect, lack of emotional awareness, and non-constructive coping of negative emotions all partially mediated the relation between body dissatisfaction and bulimic behaviors (Sim & Zeman, 2005). Taken together, these findings support the hypothesis that bulimic behavior may serve as a misguided coping strategy to manage the experience of negative emotions (Sim & Zeman, 2004; 2005).

Summary

Given theory and emerging data, the development of emotional competence and psychopathology are related to each other, though the specific patterns of that relation are yet to be clarified. Further research is needed to determine the interaction between development of emotional competencies, psychopathology, and other intrinsic and extrinsic individual factors involved in child development. As with most child research, the input of parents is likely to be critical to understanding the complete picture of child emotional competencies, especially as they relate to psychopathology. However, the incorporation of parent reports in the understanding of psychopathology, behavior problems, and emotion variables is not without difficulty. In particular, discrepancies between parents and youths when reporting on constructs like psychopathology or emotion regulation pose challenges for researchers and clinicians alike. In the next section, we describe the methodological and measurement difficulties that arise from discrepant reports on the same construct.

Parent-Child Discrepancies

When trying to understand and measure aspects of child functioning, professionals in many settings (e.g., medical, mental health, research) often ask multiple reporters, including the children themselves as well as the child's parents. Similarly, multi-method measurement is considered a critical element in well-designed research (e.g., Kazdin, 2002). Although logic might suggest that knowing and reporting on one's own inner state may seem the bailiwick of the individual her/himself, given children's limited cognitive and introspective abilities, reliance on additional reporters is common. One result of this ubiquitous procedure is discrepancies between parents and children (Achenbach, McConaughy, & Howell, 1987; Choudhury, Pimentel, & Kendall, 2003; Comer & Kendall, 2004; De Los Reyes & Kazdin, 2005; Grills & Ollendick, 2002; 2003; Jensen et al., 1999; Offord et al., 1996; Yeh & Weisz, 2001; Youngstrom, Loeber, & Southamer-Loeber, 2000). In short, parents and children rarely agree 100% when asked to report on aspects of the child's functioning. The lack of a "gold standard" against which to measure differences presents significant theoretical and methodological challenges as it leaves the clinicians and researchers alike with little guidance for how to interpret the lack of agreement between informants. Arguments exist in support of and in opposition to differential weighing of information from various reporters. Developmental level may influence children's ability to understand and report on their internal states, and research has shown that parent report may be influenced by parent variables such as psychopathology (e.g., Chi & Hinshaw, 2002; Renouf & Kovacs, 1994). In this section, we review the literature examining relations between differing parent and child reports of

clinical symptoms and emotion to determine if patterns exist to guide our exploration of discrepancies.

There is considerable debate in the psychopathology literature as to who is the more reliable reporter of children's emotion-related symptomatology—the child or his or her parent. Some studies have suggested that child self-reports may be more reliable indicators of internalized distress, as children with internalizing disorders have been found to report a greater number of symptoms than their parents (e.g., Edelbrock, Costello, Dulcan, Conover, & Kala, 1986; Jensen, Traylor, Xenakis, & Davis, 1988). Additionally, researchers have suggested that using parents as sole informants for internalizing symptoms (e.g., anxiety, depression) in youth is problematic because of the difficulty inherent in others—even parents—reporting on a child's internal state (e.g., Angold et al., 1987; Edelbrock et al., 1986; Frick, Silverthorn, & Evans, 1994). On the other hand, some research suggests that parents are more thorough reporters of children's anxious distress. For instance, parents' ratings of their children have indicated more numerous anxious symptoms (e.g., DiBartolo, Albano, Barlow & Heimberg, 1998; Rapee, Barrett, Dadds, & Evans, 1994; Schniering, Hudson, & Rapee, 2000). Similarly, children have been found to report less distress and fewer symptoms than their parents (e.g., Rapee et al., 1994; Schniering et al., 2000; Schwab-Stone, Fallon, Briggs, & Crowther, 1994). There is some suggestion that children tend to be less reliable than their parents in reporting complex details about anxious pathology such as duration and time of onset (Schniering et al., 2000), and research suggests children have the tendency to under-report symptoms related to social desirability concerns (DiBartolo et al., 1998).

However, these findings are difficult to synthesize without a single reliable marker of the construct available. The meaning and source of discrepancies in parent and child report is unclear.

Research examining parent and child agreement on behaviors of diagnostic importance suggests that highest levels of agreement occur when parents and children are asked about concrete, observable behaviors (Herjanic & Reich, 1982). Indeed, a body of research suggests concordance among informants is greater for externalizing compared with internalizing disorder symptomatology (Achenbach et al., 1987; Hawley & Weisz, 2003; Jensen et al., 1988; Kolko & Kazdin, 1993; Silverman & Eisen, 1992). Research on symptom level agreement suggests the concordance of reporters on externalizing symptomatology may be related to the behaviorally based, observable nature of many externalizing symptoms (e.g., suspended or expelled, in trouble with police, ran away from home; Herjanic & Reich, 1982). A symptom-level examination of parent-child agreement in youth assessed for anxiety disorders uncovered that symptom level agreement between parents and children was highest for symptoms considered family based or observable (e.g., “child gets very upset, cries, or begs parents to stay home when they plan to go somewhere without him/her”), non-school based, (e.g., “child gets more nervous or scared than other children his age when answering or talking on the telephone”), and socially acceptable, (e.g., “child worries more than other kids about family matters [e.g., divorce, finances]”). Agreement was lowest for non-family based symptoms, (e.g., “child gets more nervous and scared than other children his/her age when using school or public bathrooms;” Comer & Kendall, 2004). This suggests that

parents may be more reliable informants of behaviors they are able to observe than behaviors that occur outside of their experience and suggests caution in the interpretation of parent reports of behaviors outside of the home or parents' purview.

In addition to patterns of agreement in parent and child report related to visibility of various behavioral symptoms, some preliminary research has been conducted suggesting patterns of agreement may exist associated with informants' understanding of the target individual's goals in the situation. Research examining discrepancies in reports of parents and children's memories of children's emotions has found that the goals of each of the informants are related to concordance of informant reports. Levine, Stein, and Liwag (1999) asked parents and children to recall instances during the past week when the child had experienced happiness, sadness, fear, and anger. Parents were asked to provide contextual details about the events surrounding the emotional experience. Children were then asked if they recalled the incident reported by parents and asked to describe the event in detail. Researchers then analyzed the concordance in parent and child reports of each participant's goals of the situation, emotions experienced by the child, and the timing of events. They found that children agreed most with parental attributions about the event when the event elicited a happy or sad emotion, less often when the event involved fear, and least when the event involved anger. Further, this discordance was closely related to competing goals between parents and children, disagreements between parents and children about the child's goals in the emotional event, and disagreement about time frames surrounding the event (Levine et al, 1999). The findings from Levine and colleagues' examination of discrepant recall of

emotionally charged events suggest that there may be some consistency in parents and children's differing recollection of emotional experiences. Specifically, the involvement of the goals of the informant influences his or her interpretation of emotional behavior, and when these goals are not jointly understood, disagreement is more likely to occur. This is consistent with the functionalist theory that the goals of the individual must be understood before an outside observer can accurately interpret an emotional response.

Moderators of Discrepancies

The research discussed so far suggests that parent child disagreement occurs non-randomly; in other words, there appear to be correlates of agreement and disagreement. We now turn to a review of potential moderators predicted to relate to discrepancies between parents' and children's reports of child ER. As a primary aim of the present study is to identify predictors of discrepancies in parent and child reports of children's ER, the following review will address moderators as they relate to ER and discrepancy and agreement research separately where applicable. A number of potential predictors have emerged from the literature and will be examined here, including demographic variables, measures of psychopathology, and emotion awareness. First, we will turn to literature addressing gender differences in both ER and parent-child agreement to inform potential moderators of discrepancies in parents' and children's reports of children's ER abilities.

Gender and Emotion Regulation. Given the functionalist perspective that ER processes are person-environment goal-oriented transactions (e.g., Campos et al., 1989), it follows that children will display emotion differently given variations in their

environment. Further, if emotional displays in later childhood are affected by early socialization experiences early in life, and males and females receive different messages about appropriateness of emotional displays (Brody & Hall, 2000), one might hypothesize that gender is a moderator of ER. Indeed, differences in children's ER based on gender have been found. Zeman and Garber (1996) found that when asked how they would regulate emotions in hypothetical situations about anger, sadness, and physical pain with several different audience members (i.e., peer, self, mother, or father), girls reported that they would express sadness and physical pain significantly more often than boys. Further, girls were significantly more likely than boys to report that others would be accepting and understanding of their emotional expression. When asked about strategies used to display affect, boys reported using aggressive strategies significantly more than girls in both the expression of anger and sadness. Girls reported using affective strategies (e.g., crying) to express their affect significantly more than boys (Zeman & Garber, 1996).

Further, in Zeman and Shipman's (1998) study of the influence of social context and audience on children's ER, a number of gender differences emerged. Girls reported controlling the desire to cry more than boys, and boys reported restricting the desire to act aggressively more than girls did. Additionally, boys and girls reported different goals for their emotional regulation. Girls reported restricting responses to anger and sadness to protect others' feelings, while boys reported regulating their responses to anger for social reasons but restricted responses to anger due to the expectation that the other would not react supportively (Zeman & Shipman, 1998). The authors suggest that these findings

may be consistent with socialization in a culture where boys are taught to inhibit the expression of emotions that suggest vulnerability and where girls are taught to prioritize others' emotional needs.

Gender and Discrepancies. Whereas gender differences appear to exist in the regulation of emotions, reports of gender differences in the area of parent-child agreement have been mixed (Choudhury et al., 2003; Garber, Van Slyke, & Walker, 1998; Grills & Ollendick, 2003; Kiss et al., 2007; Krain & Kendall, 2000; Rapee et al., 1994). Some research seems to indicate that parents are more sensitive to their sons' internalizing distress than the distress of their daughters'. For example, Grills and Ollendick (2003) found that boys showed significantly higher agreement with their parents than girls in the diagnosis of social phobia and separation anxiety disorder. Krain and Kendall (2000) found that fathers reported significantly more anxiety in their sons than in their daughters, and fathers' reports were more highly correlated with their sons' reports than their daughters', suggesting fathers may be more aware of their sons' distress than their daughters'. Similarly, Kiss and colleagues (2007) uncovered that mothers report more overall depressive symptoms in their sons than the boys report about themselves despite finding no overall gender effect on parent-child agreement. These same mothers reported that their daughters had more mood symptoms than the daughters reported about themselves, though these daughters reported more cognitive symptoms than did their mothers (Kiss et al., 2007). On measures of delinquent involvement, Frank and colleagues (2000) found parents' and daughters' reports were more discrepant than parents' and sons' (Frank, Van Egeren, Fortier & Chase, 2000). Additionally, Sourander,

Helstela, and Helenius (1999) reported discrepancies between adolescent self report and parent report were greater overall for parents and girls, particularly in reports of internalizing reports, suggesting that internalizing problems among girls are more likely to go unnoticed by parents.

However, findings that parents and male children tend to agree more reliably than parents and female children are not consistent. Frank and colleagues (2000) found greater discrepancies between parents' and sons' reports of moods and feelings than between parents' and daughters' reports. One study suggests that gender-related agreement is related to the types of disorders diagnosed in male and female children. In their study of interrater and parent-child agreement for childhood anxiety disorders, Rapee and colleagues (1994) found evidence that suggested that anxiety disorders characterized by more "overt" fears such as separation anxiety disorder and simple phobia were more reliably diagnosed in males, while disorders characterized by more "covert" fears, such as social phobia and overanxious disorder, were more reliably diagnosed in females. Further, it is important to note that several researchers have failed to uncover an effect of gender on parent-child agreement (e.g., Achenbach et al., 1987; Stanger & Lewis, 1993; Tarullo, Richardson, Radke-Yarrow, & Martinez, 1995). Clearly, the findings regarding gender and parent-child agreement are generally mixed and inconclusive. Though it is possible that this research will uncover gender differences, given the complex social and biological variables inherent in the study of gender-related dynamics, understanding the mechanisms and meaning responsible for possible differences is beyond the scope of this research.

As with gender, our review of this literature will first address age as it relates to ER, then we will turn our attention to the research addressing the relation between age and parent child agreement and discrepancies.

Age and Emotion Regulation. Given the developmental trajectory of ER (Cicchetti et al, 1991; Cole et al., 1994) increasing sophistication with age is to be expected. This has a number of potential implications for the understanding of parent-child discrepancies in reports of children's ER. One such implication is that with increasing age and cognitive sophistication, children are better able to understand, articulate, and communicate their emotional experiences, thus increasing the likelihood for a shared understanding of emotional experiences between parents and children. However, as children age, they gain the ability to hide their emotions and as adolescents, may begin to seek independence and autonomy from their parents. Thus, it is not entirely clear what effect age may have on parent-child discrepancies.

To understand the impact of individual goals on emotional expression, one vein of research attempts to establish children's understanding of the relation between expressed emotions and goals by asking children to report how they would regulate or express certain emotions in specific situations. Using this projective paradigm, Saarni (1988) found that children regulate emotions differently depending on the audience and expect different responses to their emotions from peers and parents. However, she also found that the children's expectation of audience response varies as a function of age. Looking specifically at children's differential regulation around different individuals, Saarni found that younger children were more likely to regulate their emotions with peers and expected

ridicule from peers as an outcome of emotional expression. Conversely, older children expected adults to provide non-supportive responses to displays of emotion and were more likely to regulate their emotions in the presence of adults (Saarni, 1988).

Similarly, Zeman and Garber (1996) asked children how they would express sadness, anger, and physical pain in a number of hypothetical scenarios involving four potential audience members: self, peer, mother, and father. They found that whereas younger children reported expressing sadness and anger significantly more than older children, all children reported being less likely to express their affect in the presence of a peer than in the presence of a parent. Older children also indicated that they would be less likely to express pain or sadness to their fathers than would younger children (Zeman & Garber, 1996). Taken together, this evidence suggests that children's affect expression strategies change as a function of audience and age.

Further evidence for age-related differences in children's ER strategies can be found in a study of children's use of emotion strategies in various challenging situations. Shipman and colleagues examined children's perceptions of outcomes using various expressive strategies (e.g., verbal and facial expressions, crying, sulking, and aggression) to express negative emotions (e.g., sadness or anger) to different individuals (e.g., mother, father, best friend). The authors also found that younger children reported more frequent use of facial and verbal expressive strategies and expected more acceptance and positive responses to these strategies than older children (Shipman, Zeman, Nesin, & Fitzgerald, 2003). They suggest this finding is a result of increasing socialization of emotional responses over time wherein older children are aware that they are expected to

regulate their emotions more effectively than younger children, and they expect more negative responses and more conflict in response to expressive displays of negative emotions as a result of their perceived increase in ability due to age.

Age and Discrepancies. Given developmental increases in introspection, communication skills, and self-monitoring ability (e.g., Kraemer, et al., 2003; Renouf & Kovacs, 1994), one would expect to see increases in agreement between parents and children over time. However, evidence suggests that this increased agreement is inconsistent and can be attenuated by other variables. In a longitudinal investigation of parent-child agreement of child depressive symptoms, researchers found that parent-child agreement increased as children became older, but that this relation was negatively affected by maternal depression (Renouf & Kovacs, 1994). Given variations in methodology and sample characteristics in research exploring age differences in agreement, the inconsistency in the literature is difficult to interpret. A number of studies have supported findings of higher parent-child agreement in older children than younger children in the domains of diagnostic impairment on several structured diagnostic interviews (Choudhury, et al., 2003; Grills & Ollendick, 2003; Jensen et al., 1999; Rapee et al, 1994). However, even among findings in favor of agreement between parents and older children, the findings are varied and somewhat contradictory. For example, Rapee and colleagues (1994) found that older children and parents agreed more on diagnoses of social phobia and overall anxiety disorders, but failed to find age-related differences for the diagnoses of separation anxiety disorder, overanxious disorder, or simple phobia.

Conversely, researchers have also found evidence suggesting that parents and younger children agree more than older children on certain domains. Choudhury and colleagues found that younger children and their parents evidenced more agreement on the presence of generalized anxiety disorder, separation anxiety disorder, and specific phobia than did older children, and older children tended to agree with their parents on the presence of social phobia, though overall agreement was poor overall for both age groups (Choudhury et al., 2003). Grills and Ollendick (2003) found trends toward better agreement for younger children and their parents on diagnoses of depression and ADHD – combined type, and better for parents and older children on diagnoses of separation anxiety disorder, generalized anxiety disorder, and internalizing disorders; however, these differences were not statistically significant (Grills & Ollendick, 2003). Further, researchers have found evidence for better agreement between parents and younger children on reports of children’s anxiety (Krain & Kendall, 2000), and researchers have found significantly more agreement between parents and preadolescents compared to adolescents on presence of child diagnostic problems (Tarullo et al., 1995). By contrast, research has also failed to detect age related differences in parent-child concordance on reports of internalizing or externalizing behavior problems or functional impairment (Garber et al., 1998; Seiffge-Krenke & Kollmar, 1998; Yeh & Weisz, 2001). As is the case with the research on gender differences, findings regarding parent-child agreement and child age are mixed and inconclusive.

Research on age and gender and their relations to emotion regulation and discrepancies has been somewhat plentiful. Next, we move to a review of how

discrepancies concerning ER may be related to the specific emotion felt by the child, and then we will discuss relations between discrepancies and child psychopathology.

Emotion Type. Emotions are posited to serve an adaptive function in children's interactions with their environment and those in the environment. However, children's ability to regulate different emotions is likely to vary as a function of the affect expressed (Zeman, Shipman, & Penza-Clyve, 2001). Research has shown that children report expressing emotion differently when in the presence of different social partners. In a study examining factors thought to influence children's emotional displays, namely presence of social partner (i.e., mother, father, peer, or alone), negative emotion (i.e., anger, sadness, or physical pain), and child factors (e.g., age and sex), Zeman and Garber (1996) found that children expected audience members to be significantly more accepting of the expression of physical pain than of the expression of sadness or anger. Further, children expected mothers to be significantly more accepting of the expression of pain than would peers, and children expected both parents to be significantly more accepting of the expression of pain than peers. These findings suggest that various individuals in a child's life may observe different regulation strategies and skills based on the child's perception of the observer's reaction, presenting significant challenges for measurement and interpretation of informant's reports of children's ER abilities.

Further, recall that the study examining parent and child agreement of a remembered emotional event experienced by the child suggested that concordance varied as a function of emotion type. Levine and colleagues' (1999) finding that children and parents agreed most often about children's goals during an emotional event when the

event primarily evoked either happiness or sadness, less often when the event evoked fear, and least often when the event evoked anger. These findings suggest that parents may differentially understand children's goals in an emotion-eliciting situation as a function of emotion type. Further investigation into discrepancies between parents' and children's reports of children's ER abilities may provide some insight into this question.

Child Psychopathology and Discrepancies. Given the relation between ER deficits and psychopathology, (e.g., Braaten & Rosen, 2000; Cadesky et al., 2000; Casey, 1996; Caspi, 2000; Eisenberg et al., 1997; 2001; Frick & Morris, 2004; Garnefski et al., 2005; Henry et al., 1996; Melnick & Hinshaw, 2000; Mullin & Hinshaw, 2007; Norvilitis et al., 2000; Silk et al., 2003; Suveg & Zeman; 2004; Zeman et al., 2002), it is expected that psychopathology may be related to discrepancies in parent and child reports of child ER. However, it is unclear as to what direction to expect this effect. For example, it is possible that children with internalizing psychopathology might have more extreme subscale scores than children with no psychopathology and that this extreme score makes a higher discrepancy mathematically more likely. However, it is also possible that behaviors associated with psychopathology may make parents more aware of children's ER, resulting in lower discrepancy scores. Given the findings suggesting that parents and children are more likely to agree on symptoms that are readily observable (e.g., Comer & Kendall, 2004; Herjanic & Reich, 1982), we expect that visibility of behavior will moderate discrepancies in that dyads will show lower mean discrepancy scores on subscales associated with overt behaviors, suggesting that discrepancies on reports of dysregulated expression will be of lesser magnitude than discrepancies in reports of less

visible ER strategies. Further, given that the sample used in this research is a community-based non-clinic-referred sample, the overall level of psychopathology is expected to be relatively low. Given the preliminary nature of this research, we are unable to make specific predictions regarding the effect of child psychopathology on parent-child discrepancies.

Awareness. As this research focuses on differences in parent and child report of child ER, and given the developmental trajectory of emotion-related skills, it seems reasonable to question the contribution of a skill considered by some researchers to be a core foundation upon which later emotion abilities are built. Awareness of one's affective experience is the first of Saarni's (1999) eight skills critical for the development of emotional competence and one of several important components of what Halberstadt and colleagues have termed "affective social competence" (Halberstadt, Denham & Dunsmore, 2001; Halberstadt, Dunsmore, & Denham, 2001). Halberstadt and colleagues suggest that poor awareness of one's affective experience is related to difficulty with communication, social competence, and the development of an ineffective repertoire of behavioral responses to emotional experience (Halberstadt, Denham, et al., 2001). Research comparing emotion awareness between girls with eating and depressive disorders with girls with no history of mental disorders supports this theory. Sim and Zeman (2004, 2005) found significant differences in emotion awareness between girls with and without a history of mental disorders suggesting a link between emotion awareness and later ER deficits. Given this relation (Penza-Clyve & Zeman, 2002; Sim & Zeman, 2004) and the importance of children's ability to label their internal emotional

experience on reliable self-reporting of such states, awareness is predicted to be related to discrepancies in reports of children's ER.

Analysis of Discrepancies

Whereas the presence of informant discrepancies is frustrating for the researcher or clinician attempting to integrate informant reports to identify a consistent pattern of behaviors for a target child, the nature of such informant discrepancies may provide valuable information about the behavior or relation of interest (De Los Reyes & Kazdin, 2006). In order to advance the study of children's ER, we must learn how to explore and understand the discrepancies. A recent review article by De Los Reyes and Kazdin (2005) grappled with the question of informant discrepancies within clinical assessment settings. Although the application of De Los Reyes and Kazdin's framework may not be applicable to non-clinical research situations due to the absence of many elements present in clinical assessments, a review of this framework may be useful in guiding the exploration of parent-child discrepancies as a whole.

Guided by the sociocognitive literature, De Los Reyes and Kazdin (2005) discussed the actor-observer phenomenon and importance of perspective on memory recall as potential influences that may explain discrepant informant reports. The actor-observer phenomenon is an attributional bias that involves our tendency to attribute our own behaviors to environmental or contextual variables, whereas we attribute others' behaviors to dispositional causes (Jones & Nisbett, 1971). According to the actor-observer phenomenon, children are likely to believe their behaviors are caused by contextual factors, whereas parent and teacher reports of children's behavior are more

likely to attribute the same behavior to the child's disposition. De Los Reyes and Kazdin posit that the characteristics of the clinical assessment process tend to give the context of a child's behavior short shrift due to both the weight often given parent and teacher reports of children's behavior as well as characteristics of measures that focus on disposition (De Los Reyes & Kazdin, 2005). Whereas the demands of the clinical assessment process may heighten the effects of the actor-observer phenomenon, this bias is present in many situations beyond the clinician's office. We suspect that this bias exerts an effect on parent and child reporting of a variety of behaviors and experiences in research settings, particularly given the tendency of measures to ask parents to report on child behaviors without the anchor of context (e.g., "argues a lot," "nervous, high strung, or tense," Achenbach & Rescorola, 2001).

De Los Reyes and Kazdin also focus their attention on the importance of perspective and memory recall, drawing on research that finds that a person's perspective when recalling a memory may influence which memory is recalled, potentially biasing recall to memories in support of the individual's perspective. This is particularly important in a clinical assessment situation where information is gathered about a child's problem behaviors to inform treatment. De Los Reyes and Kazdin (2005) posit that the problem-focused goal of the clinical assessment process may negatively skew perspective and result in biased memory for negative events, resulting in informant discrepancies. As with the actor observer phenomenon, we suspect that while these biases may be unintentionally activated in the clinical assessment process, it is possible that this is also the case in other assessment settings.

Although De Los Reyes and Kazdin's (2006) framework was developed to understand discrepant reports in clinical settings and may not fully apply to the understanding of discrepant parent child reports of behaviors when the informants are not reporting on behaviors to obtain services, the method of discrepancy analysis may provide a useful tool for understanding patterns of discrepant responding between parents and children on ER measures. De Los Reyes and Kazdin (2006) have suggested that the "informant discrepancies often revealed in the process of collecting information of childhood dysfunction may be integrally related to dysfunctional interactions between the informants providing the information" (p. 646). In an examination of the relation among discrepancies between mother and child in perceived behavior problems, maternal stress, and mother-child conflict, the researchers found support for their hypothesis that the level of conflict in the mother-child relation and level of maternal stress are related to the mother-child discrepancies in perceived behavior problems. Further, this research supports the use of discrepancies as constructs of interest, suggesting that the examination of child and parent reports of children's ER abilities may provide a lens through which to conceptualize a potentially confusing pattern of findings.

Measurement of Child Emotion Regulation

To best explore parent-child discrepancies in ER, the Children's Emotion Management Scales (CEMS; Zeman et al., 2001) were selected to measure ER strategies for discrete emotions. The CEMS were developed to provide a measure of children's management of normative emotional experiences. The original sadness measure, the Children's Sadness Measurement Scale (CSMS; Zeman et al., 2001) has since been used

as a template for parallel anger and worry measures. The measures were designed to measure over- and under-control of emotion expression as well as emotion coping. Toward this end, each scale has three subscales: Inhibition, associated with the suppression of emotional expression (e.g., I hide my anger), Dysregulated-Expression, associated with the outward expression of emotion in an uncontrolled or dysregulated manner (e.g., I attack whatever it is that makes me mad), and Coping, associated with attempts to manage with emotional arousal in a constructive, controlled manner (e.g., I try to deal calmly with what is making me mad).

The CEMS were chosen as a focus of this research because of their capacity to measure the regulation of different types of emotion (i.e., anger, sadness, and worry) and the availability of parallel parent versions. Further, the CEMS measures allow for the examination of specific maladaptive regulation strategies as opposed to a more general measure of ER such as the ER Checklist (ERC; Shields & Cicchetti, 1997). The ability to measure various regulation strategies within specific emotions provides the opportunity to explore the relation between discrepant parent-child reports of children's regulation of several emotions and other factors to determine whether parents' and children's perspectives differ systematically.

Statement of Purpose

Children who are unable to effectively regulate their emotions are at risk for a variety of psychological problems as well as social and academic maladjustment suggesting that ER is an important area of clinical and research inquiry. However, the examination of ER presents a number of significant measurement challenges. First, there is the difficulty inherent in obtaining reports from both parents and children on a construct that is not easily observable and is sometimes “internal” to the child. Children do not necessarily have the ability to report on their internal states, and parents cannot always know about children’s thoughts and emotional processes. Further, even “observable” (i.e., behavioral) ER is subject to the observer’s opportunity to “observe” the regulation as well as potential observer bias. Thus, researchers and clinicians seeking to understand parent or child reports of child ER must interpret complicated and frequently conflicting information.

The aim of the current study is to explore the relation between parents’ and children’s reports of children’s ER abilities to determine whether these reports vary systematically. Using parallel parent and child measures of sadness, anger, and worry regulation, an analysis of the discrepancy between informant reports provides information about the magnitude of the difference between two informants’ reports as well as the direction of that difference (De Los Reyes & Kazdin, 2004). This method of analysis is useful as this research seeks to understand the relation between the difference in parent and child reports, including *which* informant reports more or less of a particular regulation strategy. This investigation seeks to predict discrepancies in parent and child

report of child emotion regulation from among demographic, psychopathology, and child emotional awareness measures. This study will expand upon previous research by examining patterns of discrepancies for three specific emotions (i.e., anger, sadness, and worry) and three regulation “strategies” (i.e., inhibition, dysregulated expression, and coping).

Hypotheses

1. It is hypothesized that child age will significantly contribute to the prediction of discrepancies; however, given the exploratory nature of this research, this direction is difficult to predict.
2. It is hypothesized that measures of child psychopathology will significantly contribute to the prediction of discrepancies.
3. It is hypothesized that child emotion awareness will significantly contribute to the prediction of discrepancies.
4. It is hypothesized that greater discrepancies will exist for inhibition subscales for each of the three measures (i.e., sadness, anger, and worry) given the research findings that parents and children are more likely to agree on overt versus covert behaviors.
5. It is hypothesized that the magnitude of discrepancies will vary by emotion of interest, however, given that this is a new area of research, direction of effect is difficult to predict for each emotion.

Method

The data for this study were gathered as part of a larger IRB-approved research project to investigate emotion understanding, ER, and child adjustment (e.g., psychopathology symptoms, peer-related social variables) in clinic-referred and non-referred children. The current investigation included only non-referred children.

Participants

Of the original pool of 64 children and their mothers who provided complete data for this study, three participants were removed. One mother-child dyad participated in the study twice; only the first set of data was retained in the current dataset to eliminate potential practice effects. One child's report was considered invalid by the interviewer due to comprehension difficulties and was removed, and the last participant removed was a multivariate outlier. Two additional children were thought to have comprehension difficulties. Analyses were run with and without these two cases, and the basic findings remained the same, thus the two cases were retained for all analyses.

The final dataset sample for the present study included 61 children and their mothers (41 girls and 20 boys) between the ages of 7 and 12 ($M = 9.3$, $SD = 1.6$) who participated in the larger IRB-approved study; 40 (65.6%) of the children were Caucasian, 15 (24.6%) were African American, 1 (1.6%) was Asian, and 5 (8.2%) were of mixed ethnic background. Most children ($n = 41$, 67.2%) resided with both parents, 19 children (31.1%) lived with their mother, and 1 child (1.6%) was reported to live in another living arrangement; 15 children (24.6%) lived with a non-parent adult in the home. Annual family income was distributed across income levels as follows: < \$15,000

= 6.6%, \$15,001 - \$30,000 = 11.5%, \$30,001 - \$45,000 = 13.1%, \$45,001 - \$60,000 = 13.1%, \$60,000 - \$75,000 = 11.5%, \$75,001 - \$90,000 = 8.2%, > \$90,001 = 32.8%. Two families (3.3%) declined to report annual income.

Participants were recruited via IRB-approved fliers sent to local schools, posted in community centers, and distributed to psychology undergraduates who received course credit for referring interested and eligible families. Families were considered eligible if the child was not mentally retarded or diagnosed with a pervasive developmental disorder, was not currently receiving mental health services, and was not taking psychotropic medication.

Procedures

Children and guardians completed questionnaires at the Center for Psychological Services and Development (CPSD) or Psychology Department offices. After parents and children completed the informed consent and assent procedure, parents and children moved to separate rooms to complete paper and pencil forms. Trained research assistants or graduate students were available to help children read items as needed. Parents completed paper and pencil questionnaires, and parents completed the CBCL using either a laptop computer to facilitate data entry or the paper version of the CBCL depending on the availability of a computer. Financial compensation in the form of gift cards was provided to families for their participation.

Measures

Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001). Caregivers completed the most recent versions of the CBCL, a widely-used and extensively-

researched measure of demonstrated reliability and validity (Achenbach & Rescorla, 2001). The CBCL provides a total behavior problem score, two broadband scales of internalizing and externalizing dysfunction, and several subscales (e.g., withdrawn, aggressive, anxious).

Children's Sadness, Anger, and Worry Management Scales (CSMS, CAMS, CWMS). The Children's Emotion Management Scales (Zeman et al., 2001) consist of a 12-item Sadness scale (CSMS), an 11-item Anger scale (CAMS), and an 11-item Worry Scale (CWMS) that children respond to on a 3-point Likert scale: 1 (hardly ever), 2 (sometimes), 3 (often). Factor analysis yielded three factors: Inhibition (e.g., "I get mad inside but I don't show it"), Dysregulated Expression, (e.g., "I cry and carry on when I am sad"), and ER Coping (e.g., "I try to calmly deal with what is making me feel mad"). Coefficient alphas ranged from .59 to .79, and test-retest reliability ranged from .61 to .80. Research has demonstrated construct validity for each of the factors using primarily Caucasian, middle-class samples (Zeman et al., 2001).

Children's Sadness, Anger, and Worry Management Scales—Parent Version (CSMS-P, CAMS-P, CWMS-P). The Children's Emotion Management Scales—Parent Versions (Zeman et al., 2001) contain the same items that exist in the Children's Emotion Management Scales (described above), with each item modified to reflect a parent's perspective of their child's emotion management. Coefficient alphas for the sadness scale ranged from .60 to .87 (Cassano, Perry-Parrish & Zeman, 2007).

Emotion Expression Scale for Children (EESC; Penza-Clyve & Zeman, 2002) is a 16-item self-report scale designed to measure two aspects of deficient ER: lack of

emotion awareness and lack of motivation to express negative emotion. The measure demonstrated high internal consistency with coefficient alphas between .81 and .83 and moderate temporal consistency reliability ($r = .56$ to $.59$). The measure showed convergent validity; the emotion awareness factor was positively related to the inhibition and dysregulated expression of sadness and anger, and negatively related to constructive coping with sadness and anger.

The Revised Child Anxiety and Depression Scale (RCADS, Chorpita, Yim, Moffitt, Umemoto, & Francis, 2000). The RCADS is a 47-item child self-report measure that assesses symptoms of several DSM-IV anxiety and depressive disorders (i.e., separation anxiety disorder, social phobia, obsessive-compulsive disorder, panic disorder, generalized anxiety disorder, and major depressive disorder). The measure has a strong psychometric profile including Cronbach's alpha coefficients ranging between .71-.85 and one-week retest reliability coefficients ranging from .65 to .80. In addition, the RCADS depression scale correlated highly (.70) with the Children's Depression Inventory (CDI, a child self-report depression measure) whereas the several anxiety scales were correlated highly with the Revised Child Manifest Anxiety Scale (RCMAS, a child self-report anxiety measure), offering good validity evidence. These psychometric data were confirmed in another study that included a confirmatory factor analysis (de Ross, Gullone, & Chorpita, 2002).

Demographics Form. Parents completed a form that queries many family contextual variables, including family composition, minority status, income level, and parents' education level as well as individual variables such child's age and grade level.

Results

Analytic Plan

The first three hypotheses testing contribution of age, gender, child psychopathology, and child emotion awareness to the prediction of discrepancy between parents' and children's reports on the nine ER measures were assessed using multiple regression analyses. Nine regression analyses were conducted, one for each discrepancy score. Age and gender were entered in the first step, and RCADS Total Anxiety and Depression, CBCL Internalizing, CBCL Externalizing, and EESC Poor Awareness were entered in the second step.

The final two hypotheses comparing mean discrepancy scores by emotion type and by subscale were tested using a two-way repeated measures ANOVA. The hypothesis regarding higher mean discrepancy scores for inhibition subscales was addressed using planned contrasts, and post-hoc contrasts were used to examine differences among discrepancy scores for the three emotion types. For post-hoc contrasts, we adjusted our alpha level to minimize Type I errors using the Bonferroni procedure.

Score Calculation

Mothers' and children's perceptions of child emotion regulation were assessed using the parallel parent and child report forms of the CEMS. Subscale scores were computed by calculating the item mean to permit comparisons among subscales with different numbers of items. Scores for the three subscales of each of the three emotion measures were calculated for both informants, resulting in a total of nine subscale scores for each informant, all on the same metric (range from 1.0-3.0). Table 1 displays the

means and standard deviations for all measures and presents the effect sizes (Partial η^2) for differences between informant reports on the CEMS measures. Using Cohen's (1988) guidelines, (.01 = small, .06 = moderate, .14 = large effect), it is clear that the differences between parent and child report on the anger and sadness inhibition subscales demonstrate a very large effect size, and the differences between parent and child report on anger dysregulation, anger coping, and worry inhibition demonstrate a small effect. Additionally, the means and standard deviations for the psychopathology measures are within expected ranges for a community sample (Achenbach & Rescorla, 2001; Chorpita et al., 2000). Table 2 displays correlations among each informant's report on the CEMS measures and five predictor variables used in subsequent hierarchical regression analyses.

Table 1

Means and Standard Deviations of Measures for the Total Sample (N = 61)

Measure	Parent <i>M (SD)</i>	Child <i>M (SD)</i>	Partial η^2
Children's Anger Management Scale			
Inhibition	1.34 (0.39)	1.72 (0.53)	.271**
Dysregulated Expression	1.68 (0.49)	1.56 (0.52)	.038
Regulation Coping	2.07 (0.59)	2.14 (0.51)	.025
Children's Sadness Management Scale			
Inhibition	1.38 (0.43)	1.85 (0.55)	.349**
Dysregulated Expression	1.73 (0.58)	1.75 (0.49)	.001
Regulation Coping	2.06 (0.51)	2.11 (0.40)	.008
Children's Worry Management Scale			
Inhibition	1.65 (0.37)	1.76 (0.46)	.041
Dysregulated Expression	1.73 (0.31)	1.73 (0.44)	.000
Regulation Coping	2.20 (0.43)	2.24 (0.45)	.003
CBCL Internalizing T-score	51.03 (8.80)		
CBCL Externalizing T-score	49.89 (8.97)		
RCADS Total Anxiety and Depression T-score		48.52 (10.41)	
EESC Poor Awareness		2.37 (0.66)	

Note. Emotion management measures rated on 3-point scale. Subscale means represent item mean for each subscale. CBCL: Child Behavior Checklist; RCADS: Revised Child Anxiety and Depression Scale; EESC: Emotion Expression Scale for Children. * $p < .05$, ** $p < .01$

Table 2

Correlations Among Parent- and Child-Report CEMS Subscale Scores and Predictors

Variable	Gender	Age	CBCL Internal.	CBCL External.	RCADS	EESC
Parent Report						
Anger						
Inhibition	-.115	.284*	-.054	-.161	.039	.065
Dysregulation	.120	-.013	.144	.435**	-.009	.056
Coping	-.026	.063	-.244	-.410**	-.027	-.208
Sadness						
Inhibition	-.010	.018	.013	-.010	-.084	.150
Dysregulation	.019	-.097	.420**	.415**	-.053	.120
Coping	-.052	.051	-.354**	-.359**	-.192	-.293*
Worry						
Inhibition	-.256*	.191	-.029	-.079	.032	.250
Dysregulation	.060	.186	.015	.200	-.030	.001
Coping	-.051	.093	-.182	-.229	-.264*	-.323*
Child Report						
Anger						
Inhibition	-.154	-.199	-.113	-.036	.054	.141
Dysregulation	.032	.432**	.056	.064	.326*	.149
Coping	.003	-.158	.009	-.134	-.159	.035
Sadness						
Inhibition	-.178	-.045	.177	.034	.083	.176
Dysregulation	.188	.013	-.007	.186	.436**	.084
Coping	-.277*	.059	.100	-.124	-.304*	.079
Worry						
Inhibition	-.191	-.005	-.044	.016	-.274*	.081
Dysregulation	-.029	-.011	.022	.111	.353**	.397**
Coping	-.024	-.192	-.113	-.217	-.027	.053

Note. * $p < .05$, ** $p < .01$

Discrepancy scores were calculated by subtracting each child subscale score from the corresponding parent subscale score. To retain the directionality of the discrepancy scores, the signs (plus or minus) were maintained. The mathematical properties of the discrepancy scores and correlations between parent and child report on each subscale can be found in Table 3. Positive discrepancy scores indicate that mothers reported higher use

of that ER strategy than children reported; conversely, negative discrepancy scores indicate higher child than mother reports.

Table 3

Discrepancy Score Characteristics

	Range	M	SD	Skewness	Kurtosis	<i>r</i>
Anger						
Inhibition	-1.75 – 1.00	-.39	.64	-.254	-.305	.077
Dysregulation	-1.67 – 1.33	.13	.64	-.386	.075	.203
Coping	-1.50 – 1.50	-.08	.61	.102	.033	.391**
Sadness						
Inhibition	-2.00 – 1.75	-.47	.64	.354	1.518	.163
Dysregulation	-1.00 – 1.67	-.02	.68	.252	-.362	.208
Coping	-1.20 – 1.20	-.05	.55	.002	-.478	.298*
Worry						
Inhibition	-1.50 – 1.25	-.11	.54	-.091	.338	.182
Dysregulation	-1.33 – 0.67	-.01	.47	-1.007	1.285	.254*
Coping	-1.67 – 1.33	-.03	.63	-.289	.284	-.039

Note. *N* = 61. Possible range for discrepancy scores is -2.00 – 2.00. Correlation between parent and child subscale scores. * *p* < .05, ** *p* < .01

It is noteworthy that on the nine subscales, only three subscales demonstrated significant correlations between parent and child reports. The strongest correlation between parent and child report was found in the Anger Coping subscale ($r = .391, p < .01$), followed by Sadness Coping ($r = .289, p < .05$), and Worry Dysregulated Expression ($r = .254, p < .05$). The mean correlation among the nine subscales was $r = .198$. Table 4 displays the correlations among the discrepancy and predictor scores.

Table 4
Correlations Among Discrepancy and Predictor Scores

Variable	Gender	Age	CBCL Internal.	CBCL External.	RCADS	EESC
CBCL Internalizing	-.157	-.010		.416**	-.132	.059
CBCL Externalizing	.058	.043	.416**		.001	.234
RCADS Total	.086	.045	-.132	.001		.458**
EESC Poor Awareness	-.163	.044	.059	.234	.458**	
Anger						
Inhibition Discrepancy	.058	.341**	.061	-.068	-.021	-.078
Dysregulation Discrepancy	.065	-.363**	.064	.281*	-.274*	-.079
Coping Discrepancy	-.027	.194	-.243	-.284*	.107	-.230
Sadness						
Inhibition Discrepancy	.145	.051	-.143	-.035	-.128	-.049
Dysregulation Discrepancy	-.121	-.092	.364**	.220	-.362**	.042
Coping Discrepancy	.155	.004	-.404**	-.245	.043	-.332**
Worry						
Inhibition Discrepancy	-.014	.137	.017	-.069	.256*	.105
Dysregulation Discrepancy	.067	.134	-.011	.030	-.350**	-.371**
Coping Discrepancy	-.018	.199	-.044	-.003	-.161	-.258*

Note. * $p < .05$, ** $p < .01$

Figures 1 through 9 display the distribution of discrepancy scores for each of the nine subscale scores.

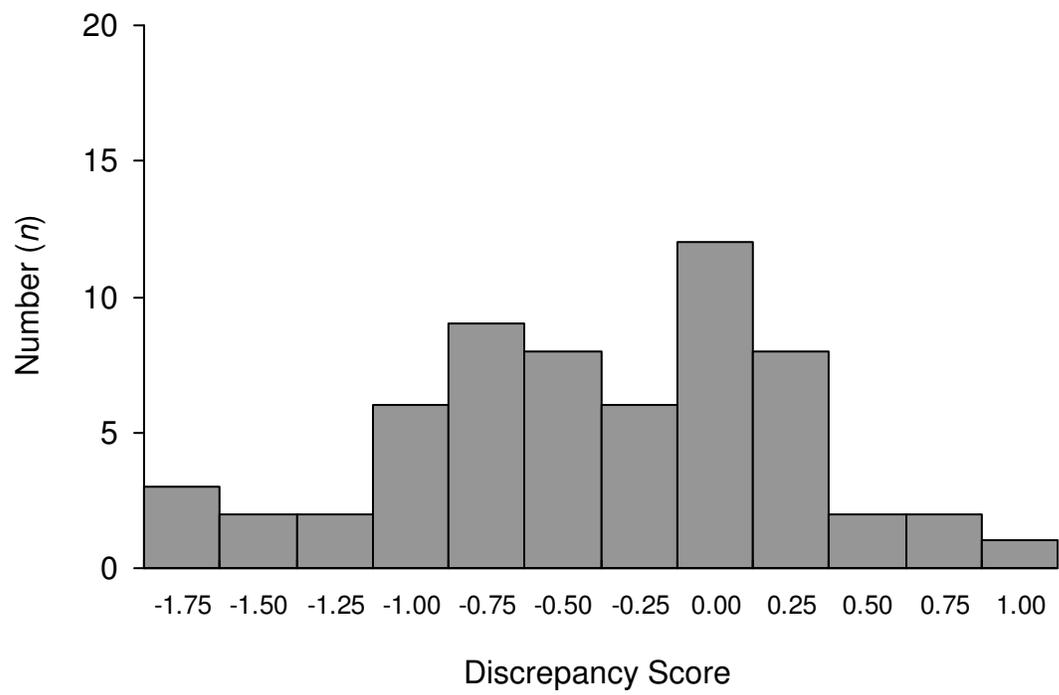


Figure 1. Anger Inhibition Discrepancy Score Distribution

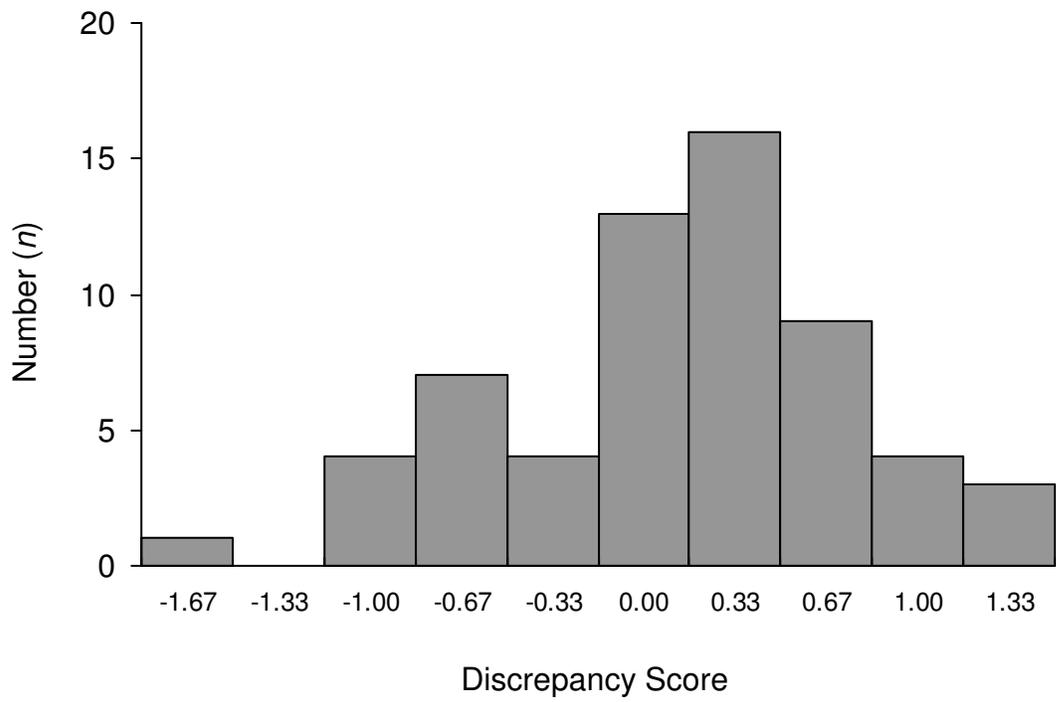


Figure 2. Anger Dysregulated Expression Discrepancy Score Distribution

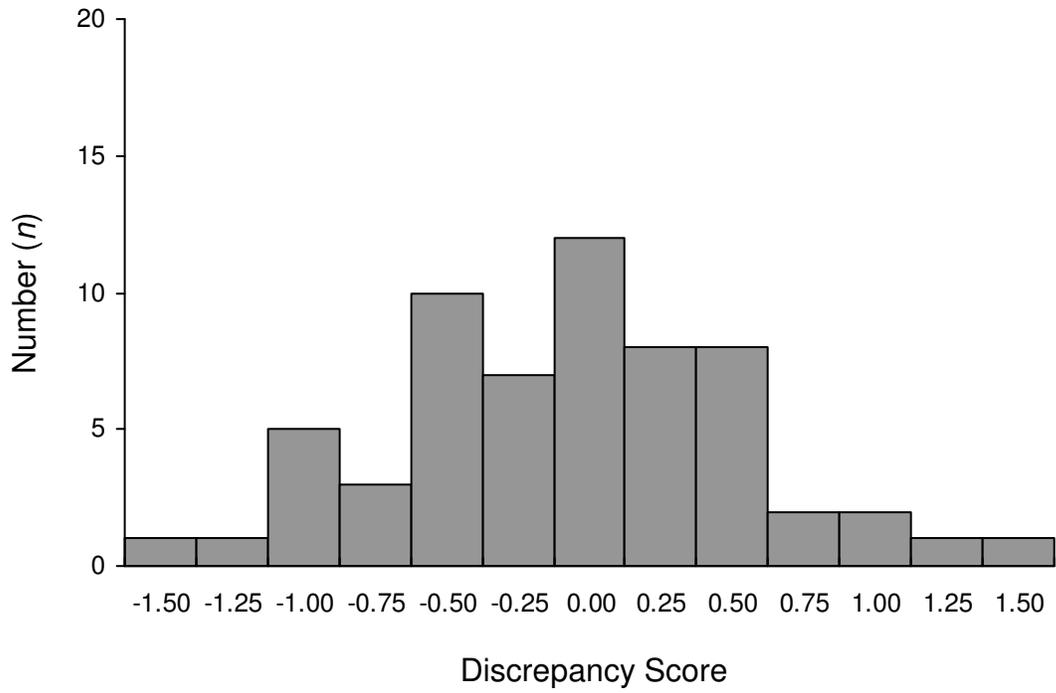


Figure 3. Anger Coping Discrepancy Score Distribution

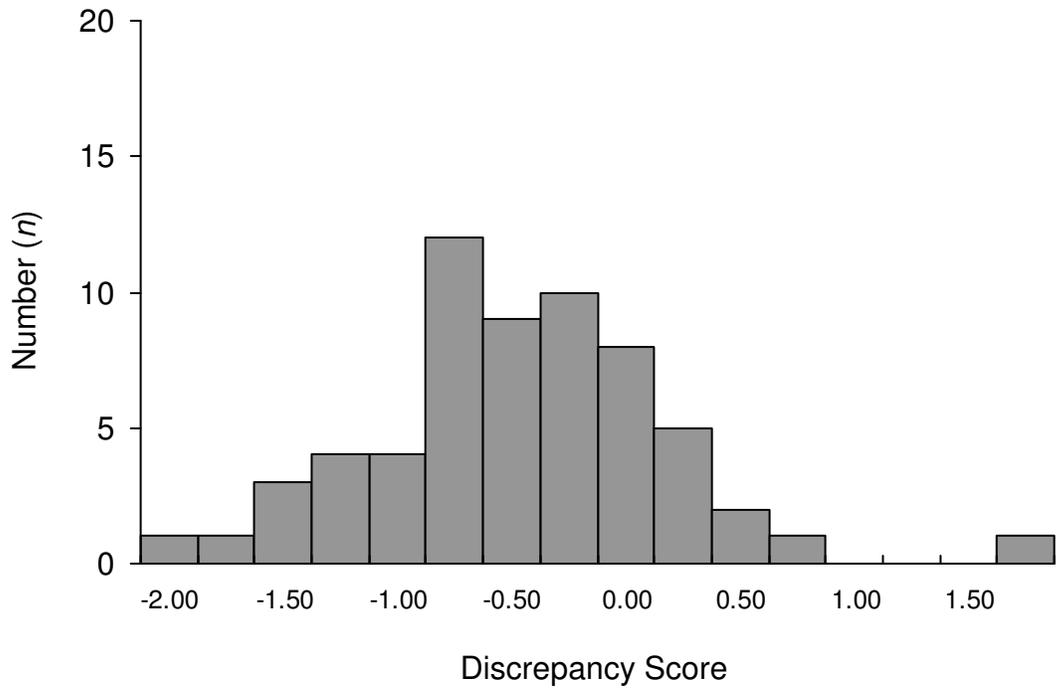


Figure 4. Sadness Inhibition Discrepancy Score Distribution

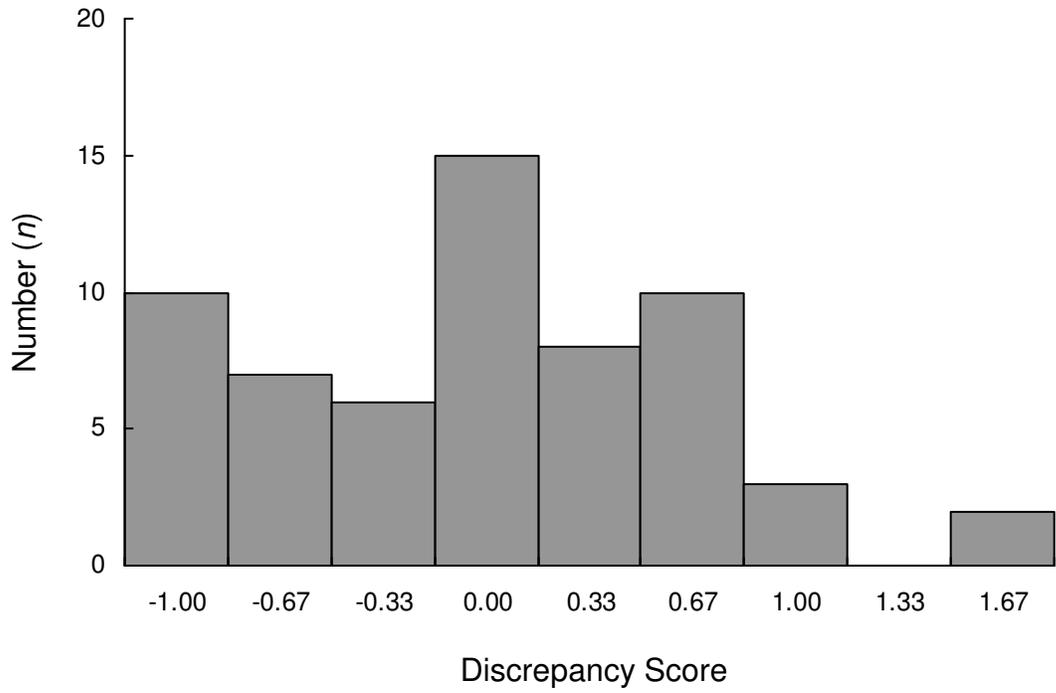


Figure 5. Sadness Dysregulated Expression Discrepancy Score Distribution

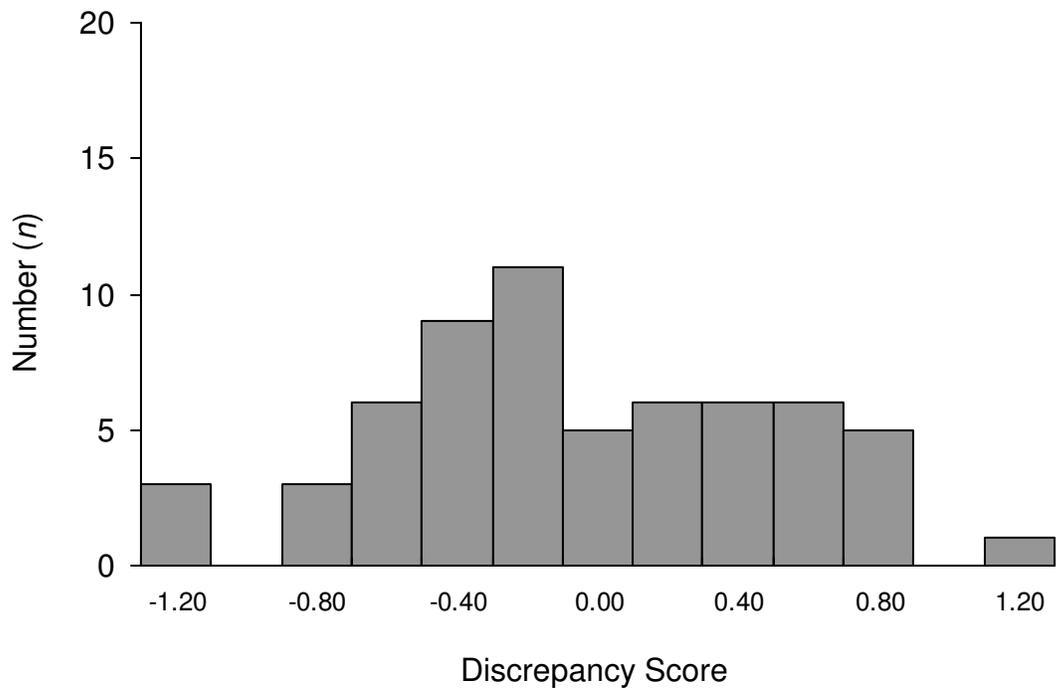


Figure 6. Sadness Inhibition Discrepancy Score Distribution

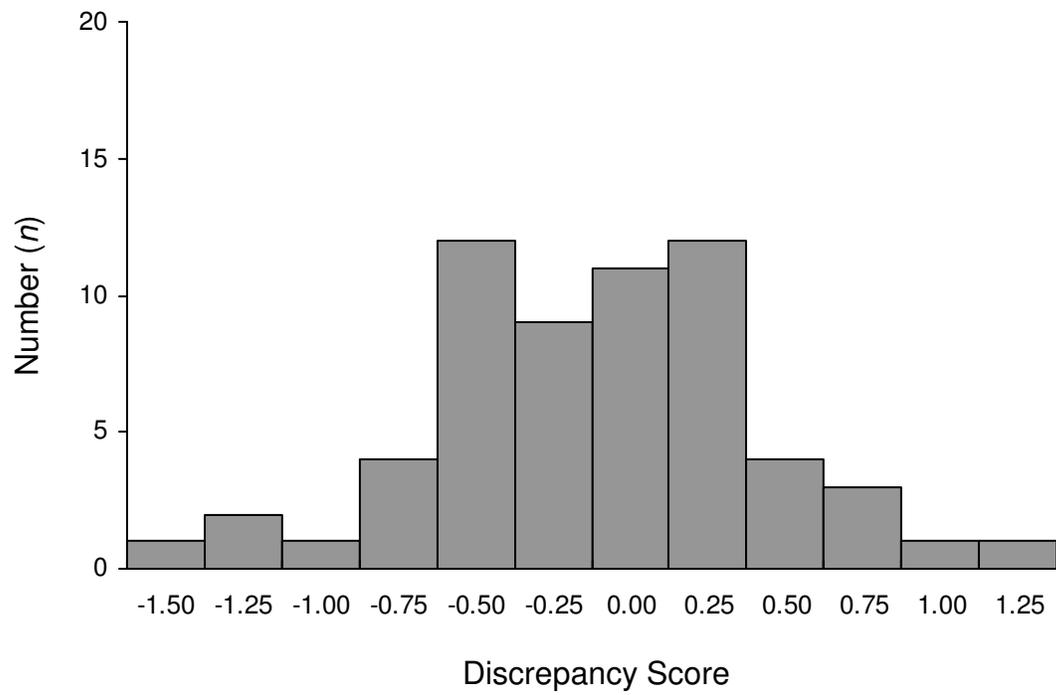


Figure 7. Worry Inhibition Discrepancy Score Distribution

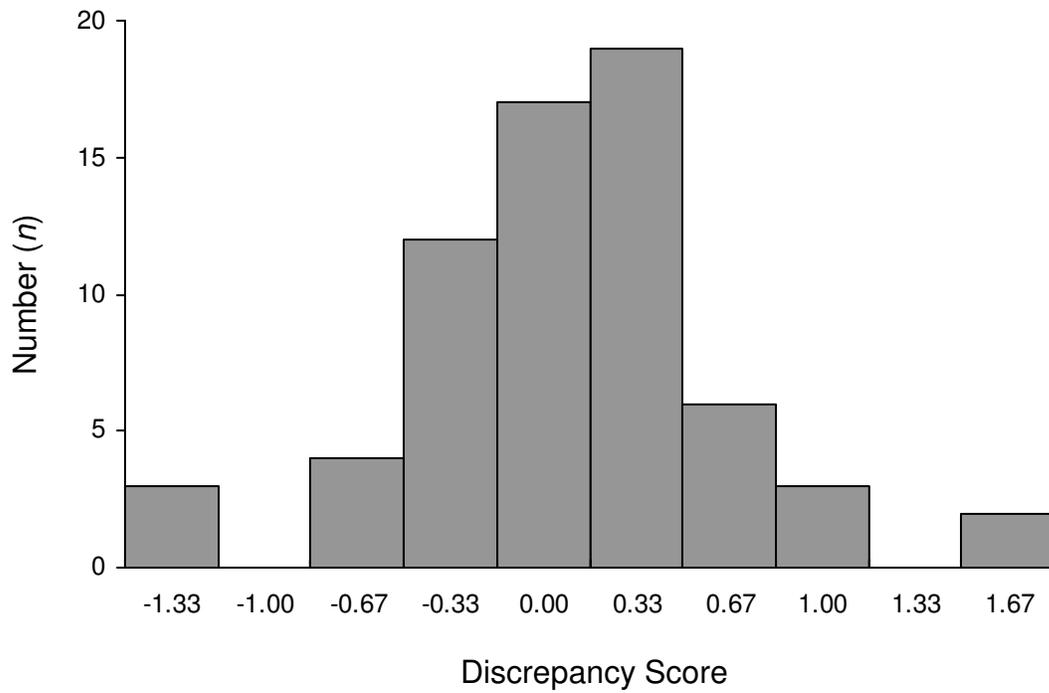


Figure 8. Worry Dysregulated Expression Discrepancy Score Distribution

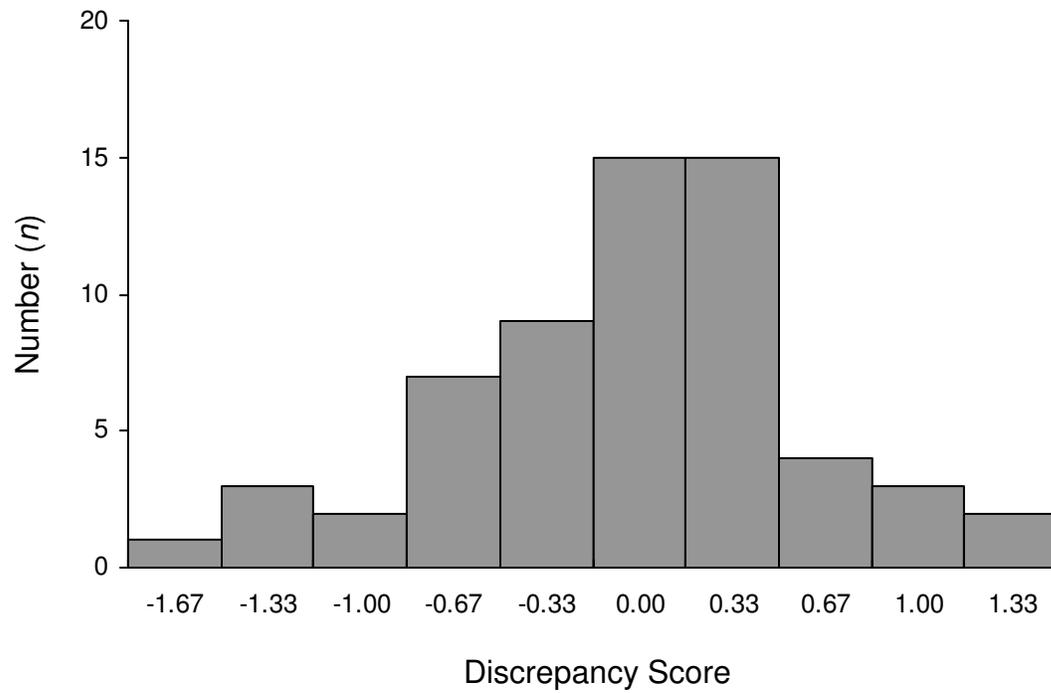


Figure 9. Worry Coping Discrepancy Score Distribution

Independent samples t-tests and one-way ANOVAs were used to determine whether the any differences existed among the predictor and discrepancy score means by age and race. A modified Bonferroni correction described by Holm (1979) and recommended by Jaccard and Guilamo-Ramos (2002) was employed to adjust the alpha level to correct for family-wise error rate. For each of the two families of tests (discrepancy and predictor), a per-family error rate of .05 was employed, although the alpha level for each test differs based on the number of tests in the family. No significant differences were found when scores were compared by gender or by race.

Table 5

Discrepancy and Predictor Means and Standard Deviations by Gender and Race

Variable	Gender		Race		
	Male <i>n</i> = 20	Female <i>n</i> = 41	White <i>n</i> = 40	Black <i>n</i> = 15	Other <i>n</i> = 6
	Predictor				
Age	9.35 (1.6)	9.24 (1.6)	9.12 (1.6)	9.40 (1.8)	10.00 (0.9)
CBCL Int.	53.0 (7.3)	50.1 (9.4)	51.7 (9.1)	51.0 (7.1)	46.2 (10.1)
CBCL Ext.	49.2 (8.1)	50.2 (9.4)	50.1 (8.8)	52.3 (8.9)	42.7 (7.7)
RCADS	47.3 (11.5)	49.1 (9.9)	47.3 (10.7)	50.5 (9.2)	51.7 (11.7)
EESC	2.5 (0.8)	2.3 (0.6)	2.3 (0.6)	2.7 (0.7)	2.4 (0.6)
	Discrepancy Score				
Anger					
Inhibition	-0.44 (0.7)	-0.34 (0.5)	-0.37 (0.6)	-0.23 (0.7)	-0.88 (0.4)
Dysregulation	0.07 (0.6)	0.15 (0.6)	0.15 (0.6)	0.02 (0.6)	0.22 (0.8)
Coping	-0.05 (0.6)	-0.09 (0.6)	-0.03 (0.6)	-0.07 (0.6)	-0.42 (0.3)
Sadness					
Inhibition	-0.60 (0.6)	-0.40 (0.7)	-0.44 (0.7)	-0.55 (0.5)	-0.42 (0.6)
Dysregulation	0.10 (0.7)	-0.07 (0.7)	-0.07 (0.7)	0.16 (0.6)	-0.11 (0.7)
Coping	-0.17 (0.6)	0.01 (0.5)	0.01 (0.5)	-0.24 (0.6)	0.07 (0.4)
Worry					
Inhibition	-0.10 (0.5)	-0.12 (0.6)	-0.04 (0.5)	-0.15 (0.5)	-0.50 (0.7)
Dysregulation	-0.05 (0.5)	0.02 (0.4)	0.05 (0.4)	-0.09 (0.6)	-0.17 (0.6)
Coping	-0.02 (0.7)	-0.04 (0.6)	0.03 (0.6)	-0.16 (0.7)	-0.11 (0.5)

Note. CBCL: Child Behavior Checklist; RCADS: Revised Child Anxiety and Depression Scale; EESC: Emotion Expression Scale for Children. Anger, Sadness, and Worry means represent the discrepancy score mean. Predictor critical p -value=.0010; discrepancy score critical p -value=.0056.

Hierarchical Regression Analyses: Contributions of Age, Gender, Psychopathology, and Emotion Awareness

Overview. To examine the relation among age, measures of psychopathology, and child emotion awareness on parent-child discrepancies, a series of nine hierarchical multiple regression analyses were conducted. For each regression, one discrepancy score served as the dependent variable, age and gender were entered in the first step given the

relation among age, gender, and emotion regulation (ER) suggested in the literature, and psychopathology and awareness scores were entered in the second step.

Analyses were performed using SPSS; evaluation of the variables revealed acceptable normality of predictor variables and no transformations were necessary. No outliers among the cases were identified, and no cases had missing data, $N=61$. Tables 6 through 15 demonstrate the results of each regression analysis. Table 15 demonstrates the individual relation of the four variables to each of the nine discrepancy scores after controlling for only age and gender; given the exploratory nature of this research, this information was deemed valuable insofar as it reveals the relation of individual psychopathology and awareness predictors to the discrepancy score without the presence of other correlated variables.

Anger inhibition. Multiple regression was used to determine the relation among age, gender, psychopathology, awareness, and anger inhibition discrepancy scores. Table 6 displays the unstandardized regression coefficients (B), standard error (SE B), the standardized regression coefficients (β), the squared semipartial correlations (sr^2), and R^2 at each step. For all analyses, both R^2 and adjusted R^2 will be provided, but only adjusted R^2 will be used to interpret amount of variance accounted for by the model to correct for the relatively small sample size. At Step 1, R for regression was significantly different from zero, $F(2, 58) = 4.002, p < .05$, with $R^2 = .12$ and adjusted $R^2 = .09$. At the second step with all predictors entered into the equation, R for regression failed to reach significance, and the adjusted R^2 value of .05 indicates that 5% of the variability in anger inhibition discrepancy scores is predicted with all predictors in the equation. An

inspection of the regression coefficients in Table 3 and Table 12 reveals that neither gender nor any of the psychopathology or awareness variables contributed significantly to the prediction of anger inhibition discrepancy. An increase in age was associated with an increase in anger inhibition discrepancy scores, meaning that as age increased, parents reported more use of anger inhibition than children reported.

Table 6

Summary of Hierarchical Regression Analysis for Variables Predicting Anger Inhibition Discrepancy Score

	B	SE B	β	sr^2
Step 1				
Gender	.092	.166	.068	.005
Age	.136	.049	.344**	.118
Step 2				
Gender	.120	.179	.089	.007
Age	.140	.050	.354**	.125
CBCL Internalizing	.010	.010	.137	.015
CBCL Externalizing	-.009	.010	-.133	.013
RCADS Total	-.000	.009	-.001	.000
EESC Poor Awareness	-.053	.149	-.055	.002

Note. $R^2 = .121$ for Step 1, $\Delta R^2 = .026$ in Step 2 ($p > .05$), * $p < .05$, ** $p < .01$

Anger dysregulated expression. Table 7 displays the relevant statistics for this analysis. R was significantly different from zero at the end of each step. Age and gender alone predicted 11% of the variance in the anger dysregulated expression discrepancy, adjusted $R^2 = .11$, $R^2 = .14$, $F(2, 58) = 4.521$, $p < .05$. The addition of psychopathology variables improved the equation; after step 2, $R^2 = .30$, $F(4, 56) = 3.850$, $p < .005$.

Addition of psychopathology and awareness scores results in a significant increment in the prediction of anger dysregulated expression discrepancy scores, $\Delta R^2 = .17$, F_{increase}

(4, 54) = 3.176, $p < .05$. The adjusted R^2 of .22 indicates that 22% of the variance in the DV is accounted for by the six IVs in the model. A closer examination of the regression coefficients reveals that age was the most potent contributor followed by CBCL Externalizing then RCADS Total, as indicated by the squared semipartial correlations. The beta weights and squared partial correlations in Table 12 indicate that after controlling for age and gender with no other predictors in the equation, individually CBCL Externalizing and RCADS Total contribute significantly to the prediction of discrepancy in parent and child reports of anger dysregulated expression. A decrease in age and RCADS total score predicted an increase in anger dysregulated expression discrepancy score, meaning that as age increased and children reported more total anxiety and depression, children reported more dysregulated expression of anger than parents reported. Further, an increase in parent report of externalizing behavior is associated with parents reporting more dysregulated expression of anger than children reported.

Table 7

*Summary of Hierarchical Regression Analysis for Variables Predicting Anger**Dysregulated Expression Discrepancy Score*

	B	SE B	β	sr^2
Step 1				
Gender	.073	.165	.054	.003
Age	-.143	.048	-.362**	.130
Step 2				
Gender	.053	.163	.040	.001
Age	-.145	.045	-.365**	.132
CBCL Internalizing	-.008	.009	-.111	.010
CBCL Externalizing	.024	.009	.342*	.088
RCADS Total	-.017	.008	-.275*	.056
EESC Poor Awareness	-.004	.133	-.004	.000

Note. $R^2 = .135$ for Step 1, $\Delta R^2 = .165$ in Step 2 ($p < .05$), * $p < .05$, ** $p < .01$

Anger coping. Table 8 displays the relevant statistics from the hierarchical regression predicting anger coping discrepancy scores from age, gender, awareness, and psychopathology variables. With age and gender in the equation at the first step, the regression failed to reach significance; however, the addition of psychopathology and awareness variables significantly improved the predictive power of the equation $\Delta R^2 = .18$, $F_{\text{increase}}(4, 54) = 3.113$, $p < .05$ and the overall model achieved significance, $R^2 = .22$, $F(6, 54) = 2.513$, $p < .05$. The adjusted R^2 value of .13 indicates 13% variability in anger coping discrepancy scores is predicted by the overall model. A closer inspection of the regression coefficients indicates that with all predictors in the model, EESC Poor Awareness contributed the most unique variance of the four predictors in the second step. However, an inspection of Table 12 reveals that CBCL Externalizing has the strongest

relation with anger coping discrepancy when controlling for age and gender $pr^2 = .088$, $p < .05$, and EESC Poor Awareness failed to achieve statistical significance.

Table 8

Summary of Hierarchical Regression Analysis for Variables Predicting Anger Coping Discrepancy Score

	B	SE B	β	sr^2
Step 1				
Gender	-.028	.167	-.021	.000
Age	.073	.049	.193	.037
Step 2				
Gender	-.139	.165	-.108	.010
Age	.076	.046	.199	.039
CBCL Internalizing	-.010	.009	-.145	.016
CBCL Externalizing	-.010	.009	-.151	.017
RCADS Total	.014	.008	.236	.041
EESC Poor Awareness	-.298	.135	-.320*	.071

Note. $R^2 = .038$ for Step 1, $\Delta R^2 = .180$ in Step 2 ($p < .05$), * $p < .05$, ** $p < .01$

Sadness Inhibition. Hierarchical multiple regression was employed to determine whether report of psychopathology or emotion awareness would improve prediction of discrepancy in mothers' and children's reports of children's sadness inhibition above age and gender. Effect size analyses revealed a very large effect of informant in the report of sadness inhibition (partial $\eta^2 = .349$), and no significant correlation exists between mothers' and children's reports of sadness inhibition ($r = .16$, *ns*). However, neither age and gender alone nor the addition of psychopathology and awareness variables predicted sadness inhibition discrepancies. An inspection of the regression coefficients in both Table 9 and Table 15 reveals that none of the predictors contributed significantly to sadness inhibition discrepancies.

Table 9

*Summary of Hierarchical Regression Analysis for Variables Predicting Sadness**Inhibition Discrepancy Score*

	B	SE B	β	sr^2
Step 1				
Gender	.200	.176	.147	.021
Age	.022	.052	.056	.003
Step 2				
Gender	.208	.189	.153	.021
Age	.024	.053	.060	.004
CBCL Internalizing	-.011	.011	-.147	.017
CBCL Externalizing	.000	.011	-.002	.000
RCADS Total	-.012	.009	-.196	.029
EESC Poor Awareness	.071	.155	.072	.004

Note. $R^2 = .024$ for Step 1, $\Delta R^2 = .044$ in Step 2 ($p > .05$), * $p < .05$, ** $p < .01$

Sadness dysregulated expression. Table 10 displays relevant statistics from this analysis. After Step 2, with all IVs in the equation, the model predicted the discrepancies between parents' and children's reports of sadness dysregulated expression, $R^2 = .28$, $F(6, 54) = 3.495$, $p < .01$. The adjusted R^2 value of .20 indicates one fifth of variability in sadness dysregulated expression discrepancy scores is predicted by the full model including age, gender, child report of anxiety, depression, and poor awareness, and parent report of internalizing and externalizing problems. The addition of psychopathology and awareness variables in Step 2 significantly improved prediction of discrepancy in parent and child report of sadness dysregulated expression by age and gender, $\Delta R^2 = .25$, $F_{inc}(4, 54) = 4.797$, $p < .005$. An examination of the regression coefficients reveals a strong relation among the RCADS Total score, CBCL Internalizing and the IV. With all of the predictors included in the model, RCADS Total was the most potent predictor of sadness

dysregulated expression discrepancy. However, after controlling for age and gender with no other predictors in the model, RCADS Total and CBCL Internalizing contribute similar amounts of variance to the discrepancy score ($pr^2 = .125$ and $pr^2 = .124$, respectively), though their effects are in opposite directions. An increase in RCADS Total score predicted a decrease in sadness dysregulated expression discrepancy scores; as RCADS scores increased, children reported higher levels of dysregulated expression of sadness than their parents reported. Conversely, as CBCL Internalizing scores increased, discrepancy scores increased, meaning higher parent report of internalizing behavior on the CBCL was associated with parents reporting more dysregulated expression of sadness than their children reported.

Table 10

Summary of Hierarchical Regression Analysis for Variables Predicting Sadness

Dysregulated Expression Discrepancy Score

	B	SE B	β	sr^2
Step 1				
Gender	-.177	.186	-.124	-.015
Age	-.040	.055	-.096	.009
Step 2				
Gender	-.024	.175	-.017	.000
Age	-.035	.049	-.083	.007
CBCL Internalizing	.021	.010	.267*	.055
CBCL Externalizing	.005	.010	.067	.003
RCADS Total	-.027	.009	-.414**	.127
EESC Poor Awareness	.207	.149	.201	.028

Note. $R^2 = .024$ for Step 1, $\Delta R^2 = .256$ in Step 2 ($p < .005$), * $p < .05$, ** $p < .01$

Sadness coping. As with the prediction of sadness dysregulated expression, hierarchical regression was employed to determine if the addition of information

regarding child and parent report of psychopathology and emotion awareness improved prediction of sadness coping discrepancy score by age and gender. Table 11 displays the relevant statistics for this analysis. With all IVs in the equation, $R^2 = .28$, $F(6, 54) = 3.535$, $p < .01$. The first step of the model did not predict discrepancy in sadness coping. However, the addition of parent reports of internalizing and externalizing behavior and child report of psychopathology and poor emotion awareness in Step 2 significantly improved the model, $\Delta R^2 = .26$ $F_{\text{increase}}(4, 54) = 4.850$, $p < .001$; the adjusted R^2 of .20 suggests that the full model predicts 20% of the variance in sadness coping discrepancy scores. With all IVs in the equation, child poor emotion awareness and parent report of internalizing behavior were both significant predictors with poor awareness contributing slightly more to the prediction of parent-child discrepancies of sadness coping as indicated by the squared semipartial correlation. However, with only age and gender in the equation, both parent reports of psychopathology as well as child report of poor emotion awareness emerged as significant predictors as indicated by the squared partial correlations in Table 15. Both child report of poor emotion awareness and parent report of child internalizing psychopathology were associated with children reporting higher levels of adaptive sadness regulation strategies than their parents.

Table 11

Summary of Hierarchical Regression Analysis for Variables Predicting Sadness Coping Discrepancy Score

	B	SE B	β	sr^2
Step 1				
Gender	.180	.151	.155	.024
Age	.003	.044	.009	.000
Step 2				
Gender	.028	.142	.024	.001
Age	.004	.039	.011	.000
CBCL Internalizing	-.022	.008	-.350**	.095
CBCL Externalizing	-.001	.008	-.012	.000
RCADS Total	.009	.007	.170	.021
EESC Poor Awareness	-.319	.116	-.382**	.100

Note. $R^2 = .024$ for Step 1, $\Delta R^2 = .258$ in Step 2 ($p < .005$), * $p < .05$, ** $p < .01$

Worry inhibition. Hierarchical regression was used to predict the discrepancy between mothers' and children's report of children's worry inhibition; however, both the first step including only demographic variables, $R^2 = .02$, $F(2, 58) = .554$, as well as the full model with all of the predictors included $R^2 = .10$, $F(6, 54) = .951$, failed to reach significance. An inspection of the regression coefficients for the full model (Table 12) as well as the coefficients for those variables excluded from the first step (Table 15) revealed that none of the IVs demonstrated a significant predictive relation with worry inhibition discrepancy scores.

Table 12

*Summary of Hierarchical Regression Analysis for Variables Predicting Worry Inhibition**Discrepancy Score*

	B	SE B	β	sr^2
Step 1				
Gender	-.011	.148	-.010	.000
Age	.046	.043	.136	.018
Step 2				
Gender	-.013	.156	-.011	.000
Age	.044	.043	.130	.017
CBCL Internalizing	.006	.009	.100	.008
CBCL Externalizing	-.007	.009	-.115	.010
RCADS Total	.014	.008	.266	.052
EESC Poor Awareness	-.003	.128	-.004	.000

Note. $R^2 = .019$ for Step 1, $\Delta R^2 = .077$ in Step 2 ($p > .05$), * $p < .05$, ** $p < .01$

Worry dysregulated expression. Hierarchical regression was employed to determine if the addition of information regarding psychopathology or poor emotion awareness improved prediction of worry dysregulated expression discrepancy by age and gender; relevant statistics can be found in Table 13. The overall model with adjusted R^2 of .13 indicates that 13% of the variability in discrepancies between parents' and children's reports of dysregulated expression of worry is predicted by the full model including all predictors, $R^2 = .22$, $F(6, 54) = 2.478$, $p < .05$. The addition of psychopathology and awareness variables in Step 2 significantly improved the model $\Delta R^2 = .19$, $F_{inc}(4, 54) = 3.320$, $p < .05$. However, despite the significant improvement in the prediction of worry dysregulated expression discrepancies, an examination of the regression coefficients reveals that none of the individual predictors differed significantly from zero with all predictors in the model. However, when entered alone into the

regression after controlling for age and gender, RCADS Total and Poor Awareness each demonstrate significant negative predictive ability ($\beta = -.365$, $pr^2 = .135$ and $\beta = -.375$, $pr^2 = .140$, respectively), indicating that neither RCADS Total nor Poor Awareness contribute enough unique variance to the prediction of worry dysregulated expression discrepancies to differ significantly from zero when all predictors are included in the regression.

Table 13

Summary of Hierarchical Regression Analysis for Variables Predicting Worry

Dysregulated Expression Discrepancy Score

	B	SE B	β	sr^2
Step 1				
Gender	.070	.129	.071	.005
Age	.040	.038	.136	.018
Step 2				
Gender	.027	.127	.028	.001
Age	.044	.035	.152	.023
CBCL Internalizing	-.004	.007	-.068	.004
CBCL Externalizing	.006	.007	.118	.010
RCADS Total	-.011	.006	-.236	.041
EESC Poor Awareness	-.205	.103	-.288	.057

Note. $R^2 = .023$ for Step 1, $\Delta R^2 = .193$ in Step 2 ($p < .05$), * $p < .05$, ** $p < .01$

Worry coping. Similar to the prediction of worry inhibition, the demographic, psychopathology and awareness variables failed to predict the discrepancy in mothers' and children's reports of worry coping. Neither the first Step, $R^2 = .04$, $F(2, 58) = 1.200$ nor the full model $R^2 = .12$, $F(6, 54) = 1.267$ achieved significance. Further inspection of the regression coefficients (Table 14) in the full model revealed that the unique contribution of all of the predictors failed to achieve significance. However, an

examination of the predictors in relation to the discrepancy score after controlling for age and gender revealed a significant relation between EESC Poor Awareness and the DV ($\beta = -.279, pr^2 = .077, p < .05$). After controlling for age and gender, an increase in report of poor awareness is associated with children reporting higher levels of worry coping than parents report.

Table 14

Summary of Hierarchical Regression Analysis for Variables Predicting Worry Coping Discrepancy Score

	B	SE B	β	sr^2
Step 1				
Gender	-.016	.173	-.012	.000
Age	.078	.051	.199	.040
Step 2				
Gender	-.092	.181	-.069	.004
Age	.081	.050	.206	.042
CBCL Internalizing	-.006	.010	-.080	.005
CBCL Externalizing	.006	.010	.089	.006
RCADS Total	-.003	.009	-.050	.002
EESC Poor Awareness	-.261	.148	-.271	.051

Note. $R^2 = .040$ for Step 1, $\Delta R^2 = .084$ in Step 2 ($p > .05$), * $p < .05$, ** $p < .01$

Table 15

Predictor Relation to Discrepancy Score After Controlling for Age and Gender

Variable	CBCL Internalizing		CBCL Externalizing		RCADS Total		EESC Poor Awareness	
	β	pr^2	β	pr^2	β	pr^2	β	pr^2
Anger								
Inhibition	.077	.007	-.087	.009	-.043	.002	-.084	.008
Dysregulated Exp.	.071	.006	.295*	.100	-.265*	.081	-.056	.003
Regulation Coping	-.250	.064	-.292*	.088	.102	.011	-.249	.063
Sadness								
Inhibition	-.122	.015	-.047	.002	-.144	.021	-.028	.001
Dysregulated Exp.	.353**	.124	.232	.055	-.351**	.125	.027	.001
Regulation Coping	-.389**	.151	-.255*	.067	.030	.001	-.316*	.099
Worry								
Inhibition	.018	.000	-.075	.006	.254	.065	.100	.010
Dysregulated Exp.	.002	.000	.020	.000	-.365**	.135	-.375**	.140
Regulation Coping	-.044	.002	-.010	.000	-.170	.030	-.279*	.077

Note: Anger: Children's Anger Management Scale Discrepancy Score, Sadness: Children's Sadness Management Scale Discrepancy Score Worry: Children's Worry Management Scale Discrepancy Score, CBCL: Child Behavior Checklist; RCADS: Revised Child Anxiety and Depression Scale; EESC: Emotion Expression Scale for Children * $p < .05$. ** $p < .01$

Comparison of Emotion and Subscale Means

A two way 3 (emotion: anger, sadness, or worry) x 3 (subscale: inhibition, dysregulated expression, or coping) repeated measures ANOVA was conducted to test whether discrepancy scores varied as a function of emotion measure or subtest.

Preliminarily, I examined the results of several Mauchly's tests to test the assumption of sphericity. Although there was no evidence of a violation for that assumption for the test of the main effect of emotion, the tests for the main effect of subscale ($\chi^2 (2) = 6.603, p < .05$) and the interaction ($\chi^2 (9) = 29.364, p < .001$) both suggested that the assumption of sphericity was violated. Therefore, in both cases, degrees of freedom were corrected for

these two tests using the Huynh-Feldt estimates. The tests for the two main effects, emotion, $F(2, 120) = 4.250, p < .05$, and subscale, $F(1.86, 111.69) = 11.313, p < .001$, and the test for the interaction, $F(3.40, 304.10) = 3.168, p < .05$, were all statistically significant. As a result, only the interaction will be interpreted.

To better understand the meaning of the interaction, contrasts were performed comparing discrepancy scores on all emotion types to sadness and all subscales to inhibition. The Bonferroni correction was applied to control for familywise error rate ($\alpha = .05/4 \text{ tests} = .013$); the Bonferroni approach was chosen for contrasts due to its superior performance in controlling for familywise error rate in the presence of nonsphericity (Myers & Well, 2003). Contrasts revealed significant interactions when comparing worry to sadness for both inhibition compared to dysregulated expression $F(1, 60) = 12.399, p < .005$, and inhibition compared to coping $F(1, 60) = 7.398, p < .01$. An inspection of the interaction graph reveals that discrepancy scores on inhibition subscales were much lower than both coping and dysregulated expression subscales for measures of sadness compared to measures of worry.

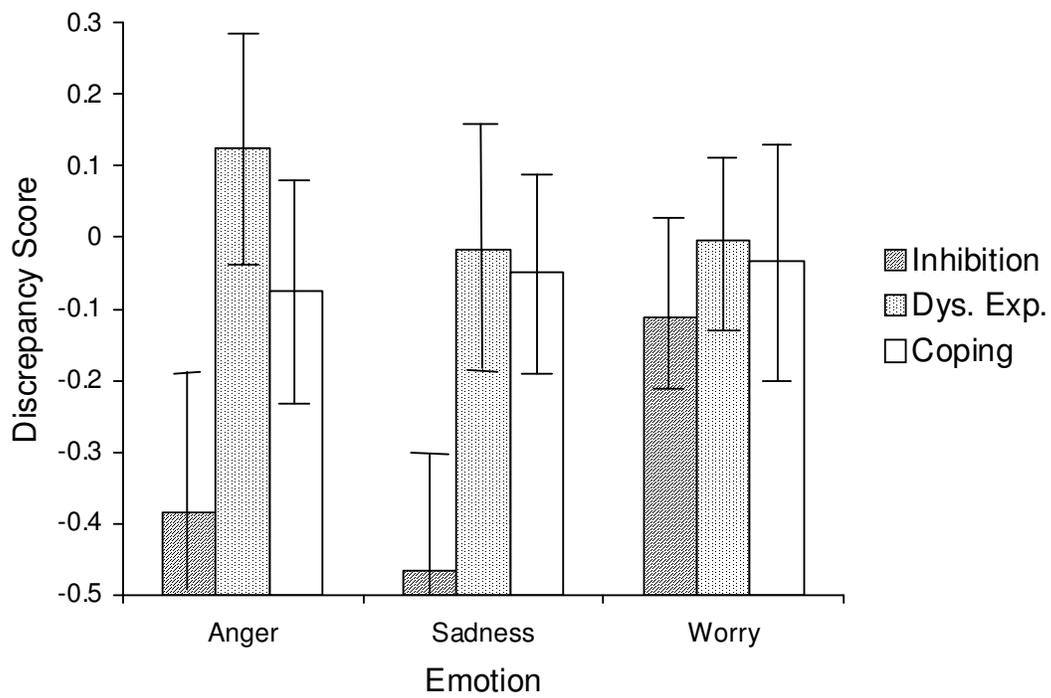


Figure 10. Comparison of emotion and subscale means with error bars representing 95% confidence intervals.

Discussion

This investigation aimed to identify predictors of discrepancies between parents' and children's reports of child ER from among demographic (i.e., age, gender), psychopathology (i.e., parent reports of internalizing and externalizing symptoms, child reports of anxiety and depression symptoms), and child emotional awareness measures. In addition, the study examined whether there were differences in the magnitude and direction of discrepancies among three emotion types (i.e., anger, sadness, and worry) and three facets of regulation (i.e., inhibition, dysregulated expression, and coping). Among the predictors of discrepancies investigated, a number of significant patterns emerged among predictors and discrepancy scores. Specifically, age emerged as a significant predictor of the two anger subscales measuring maladaptive regulation. In addition, parent reports of child internalizing and externalizing symptoms (i.e., CBCL Internalizing and Externalizing scales) tended to predict relations among discrepancies within a specific emotion, namely anger and sadness, whereas child reports of internalizing symptoms (i.e., RCADS) and poor emotional awareness (i.e., EESC Poor Awareness) tended to predict relations among discrepancies within specific subscales (dysregulated expression and coping, respectively). In contrast to some past work, child gender was not a significant predictor of discrepancy. Finally, discrepancies for the inhibition subscales across all three emotions were negatively valenced and of a larger magnitude than discrepancies for coping and dysregulated expression subscales, the effect was more pronounced for sadness than worry; anger was not significantly different

from either sadness or worry. After the main findings are reviewed more thoroughly, clinical implications and future directions will be discussed.

Of the two demographic variables we expected to predict mother-child discrepancies in reports of child ER, only age demonstrated a predictive relation and only with regard to discrepancies in reports of anger. As child age increased, parents reported more inhibition of anger than children reported, and children reported more dysregulated expression of anger than parents reported. These findings suggest that age was an important consideration when interpreting discrepant reports of anger regulation. Given developmental increases in introspection, communication skills, and self-monitoring ability (e.g., Kraemer, et al., 2003; Renouf & Kovoacs, 1994), it is expected that over time, children would become more reliable reporters of their emotional experience and behavior, so our finding that an increase in discrepancy between parents' and children's reports increasing age seems paradoxical at first glance. This paradox is based upon the assumption that as children age and become more aware of their own emotions, their perceptions of their emotional experiences begins to mirror the perspective of their parents. However, the functionalist view of emotion posits that one must consider the adaptive function of emotional expression in children's interaction with their environment, and an understanding of this person by environment interaction is a critical component of understanding the emotion. Thus, these findings suggest increasing cognitive sophistication may not be related to the development of shared goals between parents and children.

The unique relation between age and discrepancies in parent and child reports of anger regulation raises questions regarding the association among discrepancies and other developmental processes. Parental socialization of emotion plays an important role in the development of ER ability (Eisenberg, Spinrad, & Cumberland, 1998). There is a rich literature that explores parents' supportive and nonsupportive responding of children's expression of negative emotions and the extent to which particular parental socialization practices are associated with children's emotional competence (Denham, 1997; Eisenberg & Fabes, 1994, Eisenberg, et al., 1996; Eisenberg, et al., 1998, Malatesta & Wilson, 1988). Anger is an affective state that communicates aggression and can serve to warn others in the interpersonal system of an impending attack (Garside & Klimes-Dougan, 2002). Unlike sadness and worry, which are internally focused negative emotions, anger may be directed out toward others. It is possible that more attention is given to the socialization of anger because of its relation with interpersonal conflict and aggression.

Thus, age related differences may reflect the development of parental socialization and contingency responding in which parental responses to displays of anger shape child expression in the presence of that parent (Garside & Klimes-Dougan, 2002). Indeed, past work by Zeman and Garber (1996) suggests that achievement of parent-child agreement about children's expression and experience of anger is complicated by two facts. First, children appear to regulate their emotional expression differently in the presence of different individuals. Second, child willingness to express anger varied as a function of age, with younger children reporting more willingness to express anger than older children. Perhaps the increase in parent report of anger

inhibition associated with age is partially accounted for by children's decreasing willingness to express anger in front of their parents. Similarly, children's increased report of dysregulated expression with increased age beyond their parents' report of dysregulated expression may reflect increasing sophistication in differential regulation of emotional expression. It is notable that age predicted discrepancies only within anger subscales. This may be a meaningful result reflecting the specific relation among the development of anger-related ER strategies and informant perception of those strategies. It is possible that given anger's function as an emotion that communicates aggression and problems within an interpersonal system (Garside & Klimes-Dougan, 2002), parents' interpretation, recollections and reports of the child's anger regulation are influenced by parental socialization goals, which may vary from children's goals in the situation. However, further research is needed to replicate and clarify the relation among age and discrepancies in informant reports of anger regulations.

Parent and child reports of psychopathology were also predictive of discrepancies across specific emotions, a finding concordant with the relations found in other studies between various mental disorders and emotion regulation (Cadesky et al., 2000; Casey, 1996; Garnefski et al., 2005; Silk et al., 2003; Sim & Zeman, 2004; Suveg & Zeman, 2004). Specifically, the CBCL internalizing scale demonstrated a significant positive relation with the discrepancy between mothers' and children's reports of children's sadness dysregulated expression, indicating that as parents reported higher levels of internalizing behavior on the CBCL, they also reported higher levels of dysregulated sadness than did their children. Additionally, in exploratory analyses (with only age and

gender in the model), increased CBCL Internalizing scores negatively predicted sadness coping discrepancies, suggesting that when parents perceived high levels of child internalizing symptoms, their children reported higher levels of sadness coping than their parents. These findings make sense based purely on the expected relation between items on the CBCL and items on the sadness regulation measure; namely, that parents who view youth as experiencing high levels of internalizing symptomatology (e.g., sadness, anxiety) will also view youths' regulation of sadness as poor. For example, parents who endorse CBCL items such as, "Cries a lot," "Unhappy, sad, or depressed," "There is very little he/she enjoys" may also be likely to endorse CSMS items such as "My child cries and carries on when he/she is sad." Conversely, these same parents may be less likely to endorse items on the sadness coping subscale such as "My child tries to deal calmly with what is making him/her feel sad." In a sense, then, the findings offer some support to the validity of the CEMS-Sadness measure (Zeman et al., 2001). However, a similar finding with the CEMS-Worry measure was lacking. These findings are also convergent with Suveg & Zeman's (2004) research linking anxiety symptomatology and measures of emotion regulation. In that study, mothers of anxious children reported less adaptive coping than mothers of anxious children, suggesting convergence among mother reports of child psychopathology symptoms and emotional responding.

Whereas parent reports of internalizing behavior were associated with discrepancies on measures of sadness, parent reports of children's externalizing psychopathology were related to the prediction of parent-child discrepancies in the report of child anger regulation. The CBCL externalizing score demonstrated a significant

positive relation with anger dysregulated expression, revealing increased parent report of externalizing behavior on the CBCL was associated with increased parent report of dysregulated expression of anger. This finding echoes the earlier reported finding with regard to the CBCL internalizing scale—namely that externalizing symptomatology is frequently characterized by dysregulated expression of anger (e.g., “Argues a lot,” “Temper tantrums or hot temper”). Further, in our exploratory analyses (controlling for only age and gender), parent report of child externalizing behaviors demonstrated a negative relation with both anger and sadness *cop*ing discrepancy scores, indicating that as parents’ reports of externalizing behaviors increase, children report higher levels of anger and sadness coping than parents report. This is convergent with research suggesting that children with disruptive behavior disorders show deficits in skills relating emotional competence (Cadesky et al., 2000; Casey 1996) that may be necessary for healthy coping (Saarni, 1999). As discussed earlier, again we see some modest validity support for the CEMS-Anger measure insofar as parents who view their children as experiencing high levels of problematic behaviors do not view their children as engaging in positive coping efforts.

Unlike parent reports of psychopathology, which predicted patterns discrepancies across specific emotions, child self-reports of psychopathology predicted patterns of discrepancies across subscale types. Specifically, as children’s reports of their own anxiety and depression increased, so did their report of dysregulated expression of sadness and anger compared to that of their parents. When controlling only for age and gender, the same relation emerged for worry dysregulated expression discrepancies.

There are several possible interpretations of this finding. A common theme across all findings becomes clear here—to the extent that a reporter views the child as experiencing higher levels of symptoms, that reporter also views the child as regulating feelings relevant to the symptoms more poorly than the other reporter. Thus, an overall finding here is that the validity of the CEMS measures is modestly supported by these data. The finding that child-report of anxiety and depression is related to increased child report of dysregulated expression recalls work by Suveg and Zeman (2004), whose research suggested that children with anxiety disorders reported less regulated expression of emotion across a variety of scenarios designed to evoke worry, sadness, and anger, than children without an anxiety diagnosis.

Finally, we examined the predictive power of child emotional awareness, with the rationale that children's awareness of their emotions will have an impact on their knowledge of their regulation efforts. Results indicated that the poor awareness of emotions was significantly and negatively related to the coping scales for all three emotion measures as well as the worry dysregulated expression subscale. In other words, children who reported lower levels of emotion awareness tended to be the children who reported higher levels of coping for anger, sadness, and worry relative to their mothers. They also reported more dysregulated worry than did their mothers. It is notable that with the exception of dysregulated worry, these children did not report less inhibition or dysregulated expression of emotions than their parents, rather, these children reported more adaptive coping. Thus, children who report poor emotion awareness disagreed systematically with their parents regarding the dysregulated expression of worry and their

use of emotion regulation coping of sadness, worry, and anger. Because awareness of one's own emotions is considered the first step in the development of later emotional competence (Halberstadt, Denham et al, 2001; Saarni, 1999), the finding is counterintuitive and warrants some discussion.

One possible interpretation for the finding may be that children in the present study reported socially desirable behavior with regard to their coping behaviors (Comer & Kendall, 2004; Dadds, Perrin & Yule, 1998). Specifically, if children with poor emotion awareness are generally unreliable reporters of their own emotional experience, one variable that may be consistent across these children is the desire to present as "good."

Alternatively, assuming that the children's reports of emotion awareness were valid, it may be that the children with lower awareness were applying that "low" awareness onto their reports of emotion regulation. In other words, if the children really did have low levels of emotion awareness, then reporting "overly high" coping scores would not be surprising (and perhaps not be valid). Unfortunately, neither possibility nor any other can be confirmed in the present study. Indeed, the finding could be a spurious one, idiosyncratic to this sample. Future research should explore the relation between emotion awareness and emotion regulation more carefully, perhaps controlling for social desirability.

Our final set of analyses aimed to identify whether mean discrepancy scores differed systematically based on emotion type or ER strategy (i.e., the three CEMS subscales of inhibition, coping, and dysregulation). We found that the inhibition

subscales demonstrated the highest magnitude of discrepancy and were negative in valence, indicating that children report significantly more use of inhibition across emotion type than parents report. Further, discrepancy means varied significantly by emotion type, with children reporting significantly more use of sadness regulation strategies than their parents reported. An interaction effect emerged with the magnitude of negative discrepancy of sadness inhibition being significantly stronger than that of worry inhibition, meaning that whereas children reported more of both sadness and worry inhibition than did their parents, children reported significantly more sadness inhibition compared to their parents than they did worry inhibition. The discrepancy in anger inhibition was of a larger magnitude than the discrepancy score for either of the other two anger subscales, but it was not significantly different from either worry or sadness inhibition. Given that inhibition of emotion is covert and by definition “private,” these findings are consistent with research finding more agreement on concrete, observable behaviors than on behaviors that occurred outside of parents’ purview (Comer & Kendall, 2002; Herjanic & Reich, 1982). Thus the finding that the discrepancy between children and their parents is larger for inhibition than for any other subscale and in the direction of children reporting more inhibition than parents is consistent with previous research.

However, it is unclear why sadness inhibition emerged as the subscale with the largest discrepancy among the inhibition subscales. This finding appears somewhat at odds with the existing research on parent-child agreement for emotions. Levine and colleagues (1999) found the highest levels of concordance in parent-child agreement of situational details when asked to report on an event that evoked either sadness or

happiness and the lowest concordance when the event evoked anger. It is possible that when asked about a specific emotion eliciting event, parents and children are able to jointly identify situational triggers for sad situations, but parents and children do not share the same jointly held perceptions about children's regulation of that sadness when asked about regulation abilities without reference to a specific situational context.

It is also notable that the data do support a functionalist view of emotion. Anger, sadness, and worry were related to distinct patterns of discrepancies. Thus, these data suggest that whereas these emotions are all negative emotions, they do not behave identically and rather demonstrate distinct patterns of predictors and discrepancies.

There are a number of important caveats to this study. Broadly, the exploratory nature of this study dictates that all conclusions and inferences be drawn cautiously. The small sample size both limited power and increased the possibility for spurious sample effects. Further, methodological limitations related to method variance must be considered; we were limited to two reporters and conducting analyses with multiple measures provided by the same individual may inflate the strength of predictive relations. Individual reports of a trait reflect the observer's unique perception, which has elements of both bias and accuracy (Rowe & Kandel, 1997). For example, both parents and teachers are privy to unique facets of a child's behavior and are in a position to report on behavior that is outside of the purview of the other informant, and both informants carry with them their individual biases. Both the bias and the unique information provided by each informant contribute to the variance associated with the measurement of the trait of interest. Bias and "true" unique perspectives are extremely difficult to parse out, and

researchers frequently employ the use of multi-trait, multi-method model (Campbell & Fiske, 1959) to apportion the variance attributable to a specific trait or construct. This study examined composite score derived from the difference between two informant reports from reports of other constructs by those same informants, inflating the power of the source (informant) and method (paper and pencil other- and self-report) variance. This represents a methodological weakness in the study that may account for many of the findings, for example, congruence between parent reports of psychopathology and higher parent reports of sadness or anger regulation. This study would have been strengthened by the inclusion of observational data or reports from other informants. The inclusion of varied data from multiple sources and by multiple methods would further clarify the relation among parent and child discrepancies and other predictors thought to be related to child ER.

Additionally, whereas it may be tempting to extrapolate findings to clinical samples, it is important to recall that despite the use of clinical instruments to assess levels of psychopathology, this research utilized a community-based sample, thus findings may not be applicable to clinical populations. Similarly, the discrepancy scores under investigation are the differences between mothers' and children's report and thus are not generalizable to discrepancies that may occur between children and other reporters, such as fathers or teachers. Along these same lines, it is important to note that this research examined the discrepancy in mother and child report on the CEMS, which measure specific regulation strategies within specific emotions, it is possible that some variance in discrepancies is attributable to the measures themselves, which were not

specifically designed to examine discrepant informant reports. Finally, the data used for these analyses were taken from an existing dataset, eliminating the possibility to follow up with dyads to discuss discrepant scores after measures had been completed. A research program that incorporated this or a similar combination of quantitative and qualitative research might shed light on drivers of discrepant reporting.

Despite these shortcomings, the study revealed several interesting patterns of findings that warrant further investigation and may have clinical implications. First, the emerging patterns (e.g., parent reports related to discrepancy scores for *emotion* type, child reports related to discrepancy scores for *subscale* type) suggests that the way in which parents and children recall and interpret children's emotional experiences may differ systematically. Previous research suggests that disagreement about emotion related events is related to individual goals embedded within the environmental context (Levine et al., 1999), or in other words, disagreement is highest when parents do not understand or recognize either what the child is trying to accomplish or the source of his or her anger in the emotion eliciting situation. For example, a child who is crying and having a tantrum when told to leave a play-date may report anger as a result of not being able to finish a nearly-completed puzzle; however, her mother may attribute her behavior to sadness due to separation from friends. Thus, it may be that parents and children apply differing schemas about emotion to the interpretation of children's ER as a function of the actor-observer bias (De Los Reyes & Kazdin, 2005; Jones & Nisbett, 1971) or differences in memory and recall of emotional experiences (De Los Reyes & Kazdin, 2005), and these differences in parents' and children's interpretation and understanding

of emotion are reflected in discrepancy scores. Further, the presence of any bias or memory effect may have been exacerbated by the lack of situational context in the measures (De Los Reyes & Kazdin, 2005), which may contribute to the discrepancies as children are likely to believe their behaviors are caused by their context, whereas parents may be more likely to attribute the same behavior to the child's disposition.

One potential avenue for future exploration involves a mixed qualitative and quantitative research program directed toward understanding of parents' perceptions and attributions of children's emotional experiences. It is possible that emotionally competent parents who are better able to understand their children's emotional experiences will exhibit different patterns of ER discrepancies than less emotionally competent parents. Indeed, there is research suggesting that a high level of parental emotional competence is associated with skillful child regulation (Denham et al., 1997). Measurement of parental emotional competence, thus, represents an important future step. Future research might employ qualitative research methods with a small number of families who demonstrate large and small discrepancies between parent and child report to obtain a richer understanding of reasons for parent-child discrepancies and to develop methods for tapping discrepancies in future research.

The finding that children with lower self-reported emotion awareness had increased report of emotion regulation coping relative to their parents' report also has clinical implications. Many evidence-based treatment programs include interventions designed to teach children coping skills to deal with particular emotional or behavioral challenges (e.g., Chorpita, 2007). However, because poor emotional awareness was

associated with children's perception that they are already using good coping skills (relative to their mothers' report), treatment programs may need to include assessment for and training in missing emotional skills (e.g., Suveg, Southam-Gerow, Goodman, & Kendall, 2007; Southam-Gerow & Kendall, 2002). Without doing so, therapists may mistakenly assume either (a) that a child's report of coping is valid or (b) that a child's emotional awareness is adequate.

A final potentially clinically relevant pattern of findings warranting further research and clarification entails children's increased reporting of dysregulated or inhibited expression compared to their parents' report. First, children who reported increased levels of anxiety and depression also reported more dysregulated expression of their emotions (compared to their parents report). It is possible that this pattern characterizes children who may be highly sensitive to their own emotional arousal, and symptoms they perceive as distressing do not necessarily rise to the level of detection by their parents. This arousal sensitivity is convergent with literature proposing that sensitivity to biological sensations of anxiety is a risk factor for anxiety (McNally, 2002; Reiss, 1991) and emotional disorders (Allen, McHugh, & Barlow, 2008). If further research supports this pattern of findings, clinicians should be aware that children's report of dysregulation may be a good and understandable predictor of anxiety and/or depression problems. Second, disagreement was most pronounced between children and parents for sadness inhibition, with children reporting significantly more sadness inhibition than their parents report. This suggests that parents and children may differ in their ability to recognize and report on various aspects of potentially pathological or

troubling behavior. If future research supports the finding, clinicians would be wise to avoid the practice of ruling out mood problems based solely on parents' report. Instead, the "or rule" of diagnosis (Jensen et al., 1995) may be most appropriate, wherein a symptom is considered present if it is endorsed by either informant.

Overall, clinicians and researchers alike would benefit from developing an awareness of divergent parent and child reports of various behaviors or skills. This and other emerging research (e.g., De Los Reyes & Kazdin, 2006) suggests patterns of disagreements between informants are not random but rather may provide unique information that could elucidate the relation among ER, psychopathology, and other indices of functioning.

References

- Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin*, *101*, 213-232.
- Achenbach, T. M. & Rescorla, L.A. (2001). *Manual for the ASEBA School-Age Forms & Profiles*. Burlington, VT: University of Vermont Research Center for Children, Youth, & Families.
- Allen, L. B., McHugh, R. K., & Barlow, D. H. (2008). Emotional disorders: A unified protocol. In D. H. Barlow (Ed.) *Clinical Handbook of Psychological Disorders: A Step-By-Step Treatment Manual* (pp. 216-249). New York: Guilford.
- Angold, A., Weissman, M. M., John, K., Merikangas, K. R., Prusoff, B. A., Wickramaratne, P. et al., (1987). Parent and child reports of depressive symptoms in children at low and high risk of depression, *Journal of Child Psychiatry and Psychology*, *28*. 901–915.
- Anthony, J. L., Lonigan, C. J., Hooe, E. S. & Phillips, B. M. (2002). An affect-based, hierarchical model of temperament and its relations with internalizing symptomatology. *Journal of Clinical Child and Adolescent Psychology*, *31*, 480-490.
- Barrett, K. C., & Campos, J. J. (1987). Perspectives on emotional development II: A functionalist approach to emotions. In J. D. Osofsky (Ed.) *Handbook of Infant Development* (2nd ed., pp. 555-578). Oxford, England: John Wiley & Sons.
- Braaten, E. B., & Rosen, L. A. (2000). Self-regulation of affect in attention deficit-hyperactivity disorder (ADHD) and non-ADHD boys: Differences in empathic responding. *Journal of Consulting and Clinical Psychology*, *68*, 313-321.
- Bridges, L. J., Denham, S. A., & Ganiban, J. M. (2004). Definitional issues in emotion regulation research. *Child Development*, *75*, 340-345.
- Brody, L. R., & Hall, J. A. (2000). Gender, emotion, and expression. In M. Lewis & J. M. Haviland-Jones (Eds.), *Handbook of Emotions* (2nd ed., pp 338-349). New York: Guilford.
- Cadesky, E. B., Mota, V. L., & Schachar, R. J. (2000). Beyond words: How do problem children with ADHD and/or conduct problems process nonverbal information about affect? *Journal of the American Academy of Child & Adolescent Psychiatry*, *39*, 1160-1167.

- Calkins, S. D. (1994). Origins and outcomes of individual differences in emotional regulation. In N. Fox (Ed.), *The development of ER* (Vol. 59, pp. 53-72). *Monographs of the Society for Research in Child Development*.
- Calkins, S. D. & Hill, A. (2007). Caregiver influences on emerging emotion regulation: Biological and environmental transactions in early development. In J. J. Gross (Ed.), *Handbook of ER* (pp. 229-248). New York: Guilford.
- Campos, J. J., Campos, R. G., & Barrett, K. C. (1989). Emergent themes in the study of emotion development and emotion regulation. *Developmental Psychology*, *23*, 394-402.
- Campos, J. J., Frankel, C. B., & Camras, L. (2004). On the nature of emotion regulation. *Child Development*, *75*, 377-394.
- Casey, R. (1996). Emotional competence in children with externalizing and internalizing disorders. In M. Lewis & M. W. Sullivan (Eds.), *Emotional Development in Atypical Children*, (pp. 161-183). Mahwah, NJ: Lawrence Erlbaum Associates.
- Caspi, A. (2000). The child is the father of the man: Personality continuities from childhood to adulthood. *Journal of Personality and Social Psychology*, *78*, 158-172.
- Caspi, A., Henry, B., McGee, R. O., Moffitt, T. E., & Silva, P. A. (1995). Temperamental origins of child and adolescent behavior problems: From age three to age fifteen. *Child Development*, *66*, 55-68.
- Caspi, A., McClay, J., Moffitt, T. E., Mill, J., Martin, J., Craig, I. W., et al. (2002). Role of genotype in the cycle of violence in maltreated children. *Science*, *297*, 851-854.
- Cassano, M., Perry-Parrish, C., & Zeman, J. (2007). Influence of gender on parental socialization of children's sadness regulation. *Social Development*, *16*, 210-231.
- Chi, T. C., & Hinshaw, S P. (2002). Mother-child relationships of children with ADHD: The role of maternal depressive symptoms and depression-related distortions. *Journal of Abnormal Child Psychology*, *30*, 387-400.
- Chorpita, B. F. (2007). *Modular cognitive-behavioral therapy for childhood anxiety disorders*. New York: Guilford.
- Chorpita, B. F., Yim, L., Moffitt, C., Umemoto, L. A., & Francis, S. E. (2000). Assessment of symptoms of DSM-IV anxiety and depression in children: A revised child anxiety and depression scale. *Behaviour Research and Therapy*, *38*, 835-855.

- Choudhury, M. S., Pimentel, S. S., & Kendall, P. C. (2003). Childhood anxiety disorders: Parent-child (dis)agreement using a structured interview for DSM-IV. *Journal of the American Academy of Child and Adolescent Psychiatry, 42*, 957-964.
- Cicchetti, D., Ganiban, J., & Barnett, D. (1991). Contributions from the study of high-risk populations to understanding the development of emotion regulation. In J. Garber and K. A. Dodge (Eds.), *The Development of ER and Dysregulation* (pp. 15-48). New York: Cambridge University Press.
- Cole, P. M., Martin, S. E., & Dennis, T. A. (2004). Emotion regulation as a scientific construct: Methodological challenges and directions for child development research. *Child Development, 75*, 317-333.
- Cole, P. M., Michel, M. K., & Teti, L. O. (1994). The development of emotion regulation and dysregulation: A clinical perspective. *Monographs of the Society for Research in Child Development, 59*, 250-283.
- Comer, J. S., & Kendall, P. C. (2004). A symptom-level examination of the parent-child agreement in the diagnosis of anxious youth. *Journal of the American Academy of Child & Adolescent Psychiatry, 43*, 878-886.
- Dadds, M. R., Perrin, S., & Yule, W. (1998). Social desirability and self-reported anxiety in children: An analysis of the RCMAS Lie Scale. *Journal of Abnormal Child Psychology, 26*, 311-317.
- De Los Reyes, A., & Kazdin, A. E. (2004). Measuring informant discrepancies in clinical child research. *Psychological Assessment, 16*, 330-334.
- De Los Reyes, A., & Kazdin, A. E. (2005). Informant discrepancies in the assessment of childhood psychopathology: A critical review, theoretical framework, and recommendations for further study. *Psychological Bulletin, 131*, 483-509.
- De Los Reyes, A., & Kazdin, A. E. (2006). Informant discrepancies in assessing child dysfunction relate to dysfunction within mother-child interactions. *Journal of Child and Family Studies, 15*, 645-663.
- de Ross, R., Gullone, R., & Chorpita, B. F. (2002). The Revised Child Anxiety and Depression Scale: A psychometric investigation with Australian youth. *Behaviour Change, 19*, 90-101.
- Denham, S. A., Mitchell-Copeland, J., Strandberg, K., Auerbach, S., & Blair, K. (1997). Parental contributions to preschoolers' emotional competence: Direct and indirect effects. *Motivation and Emotion, 21*, 65-86.

- Derryberry, D., & Rothbart, M. K. (1997). Reactive and effortful processes in the organization of temperament. *Development and Psychopathology, 9*, 633-652.
- DiBartolo, P. M., Albano, A. M., Barlow, D. H., & Heimberg, R. G. (1998). Cross-informant agreement in the assessment of social phobia in youth. *Journal of Abnormal Child Psychology, 26*, 213-220.
- DiPietro, J. A., Costigan, K. A., & Gurewitsch, E. D. (2003). Fetal response to maternal stress. *Early Human Development, 2*
- Edelbrock, C., Costello, A.J., Dulcan, M. K., Conover, N. C., & Kala, R. (1986). Parent-child agreement on child psychiatric symptoms assessed via structured interview. *Journal of Child Psychiatry and Psychology, 27*, 181-190
- Eisenberg, N., Champion, C., & Ma, Y. (2004). Emotion-related regulation: An emerging construct. *Merrill-Palmer Quarterly, 50*, 236-259.
- Eisenberg, N., Cumberland, A., & Spinrad, T. L. (1998). Parental socialization of emotion. *Psychological Inquiry, 9*, 241-273.
- Eisenberg, N., Cumberland, A., Spinrad, T. L., Fabes, R. A., Shepard, S. A., Reiser, M., et al. (2001). The relations of regulation and emotionality to children's externalizing and internalizing problem behavior. *Child Development, 72*, 1112-1134.
- Eisenberg, N., Fabes, R. A., Guthrie, I. K., & Reiser, M. (2000). Dispositional emotionality and regulation: Their role in predicting quality of social functioning. *Journal of Personality and Social Psychology, 78*, 136-157.
- Eisenberg, N., Fabes, R. A., Shepard, S. A., Murphy, B. C., Guthrie, I. K., Jones, S., et al. (1997). Contemporaneous and longitudinal prediction of children's social function from regulation and emotionality. *Child Development, 68*, 642-664.
- Eisenberg, N., Hofer, C., & Vaughan, J. (2007). Effortful control and its socioemotional consequences. In J. J. Gross (Ed.), *Handbook of Emotion Regulation* (pp. 287-306). New York: Guilford.
- Eisenberg, N. & Spinrad, T. L. (2004). Emotion-related regulation: Sharpening the definition. *Child Development, 75*, 334-339.
- Ekman, P. (1994). All emotions are basic. In P. Ekman & R. J. Davidson (Eds.), *The Nature of Emotion: Fundamental Questions* (pp. 15-19). New York: Oxford University Press.

- Ekman, P., Friesen, W. V., & Ancoli, S. (1980). Facial signs of emotional experience. *Journal of Personality and Social Psychology, 39*, 1125-1134.
- Frank, S. J., Van Egeren, L. A., Fortier, J. L., & Chase, P. (2000). Structural, relative, and absolute agreement between parents' and adolescent inpatients' reports of adolescent functional impairment. *Journal of Abnormal Child Psychology, 28*, 395-402.
- Frick, P. J., Cornell, A. H., Bodin, S. D., Dane, H. A., Barry, C. T., & Loney, B. R. (2003). Callous-unemotional traits and developmental pathways to severe conduct problems. *Developmental Psychopathology, 39*, 246-260.
- Frick, P. J., & Morris, A. S. (2004). Temperament and developmental pathways to conduct problems. *Journal of Clinical Child and Adolescent Psychology, 33*, 54-68.
- Frick, P. J., Silverthorn, P., & Evans, C. (1994). Assessment of childhood anxiety using structured interviews: Patterns of agreement among informants and association with maternal anxiety. *Psychological Assessment, 6*, 372-379.
- Fox, N. A. (1994). Dynamic cerebral processes underlying emotion regulation. *Monographs of the Society for Research in Child Development, 59*, 152-166, 250-283.
- Fox, N. A., Henderson, H. A., Marshall, P. J., Nichols, K. E., & Ghera, M. M. (2005). Behavioral inhibition: Linking biology and behavior within a developmental framework. *Annual Review of Psychology, 56*, 235-262.
- Gable, S. & Isabella, R. A. (1992). Maternal contributions to infant regulation of arousal. *Infant Behavior and Development, 15*, 92-107.
- Garber, J., Van Slyke, D. A., & Walker, L. S. (1998). Concordance between mothers' and children's reports of somatic and emotional symptoms in patients with recurrent abdominal pain or emotional disorders. *Journal of Abnormal Child Psychology, 26*, 381-391.
- Garnefski, N., Kraaij, V., & van Etten, M. (2005). Specificity of relations between adolescents' cognitive emotion regulation strategies and internalizing and externalizing psychopathology. *Journal of Adolescence, 28*, 619-631.
- Garside, R. B., & Klimes-Dougan, B. (2002). Socialization of discrete negative emotions: Gender differences and links with psychological distress. *Sex Roles, 47*, 115-128.

- Grills, A. E., & Ollendick, T. H. (2002). Issues in parent-child agreement: The case of structured diagnostic interviews. *Clinical Child and Family Psychology Review*, 5, 57-83
- Grills, A. E., & Ollendick, T. H. (2003). Multiple informant agreement and the Anxiety Disorders Interview Schedule for Parents and Children. *Journal of the American Academy of Child & Adolescent Psychiatry*, 42, 30-40.
- Gross, J. J. (Ed.) (2007). *Handbook of Emotion Regulation*. New York: Guilford.
- Gross, J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 2, 271-299.
- Gross, J. J., & Thompson, R. A. (2007). Emotion regulation: Conceptual foundations. In J. J. Gross (Ed.), *Handbook of Emotion Regulation* (pp. 3-24). New York: Guilford.
- Halberstadt, A. G. (1986). Family socialization of emotional expression and nonverbal communication styles and skills. *Journal of Personality and Social Psychology*, 51, 827-836.
- Halberstadt, A. G., Denham, S., & Dunsmore, J. C. (2001). Affective social competence. *Social Development*, 10, 79-119.
- Halberstadt, A. G., Dunsmore, J. C., & Denham, S. (2001). Spinning the pinwheel, together: More thoughts on affective social competence. *Social Development*, 10, 130-136.
- Hawley, K. M., & Weisz, J. R. (2003). Child, parent, and therapist (dis)agreement on target problems in outpatient therapy: The therapist's dilemma and its implications. *Journal of Consulting and Clinical Psychology*, 71, 61-70.
- Henry, B., Caspi, A., Moffit, T. E., & Silva, P. A. (1996). Temperamental and familial predictors of violent and nonviolent criminal convictions: Age 3 to age 18. *Developmental Psychology*, 32, 614-623.
- Herjanic, B. & Reich, W. (1982). Development of a structured psychiatric interview for children: Agreement between child and parent on individual symptoms. *Journal of Abnormal Child Psychology*, 10, 307-324.
- Holm, S. (1979). A simple sequentially rejective multiple test procedure. *Scandinavian Journal of Statistics*, 6, 65-70.

- Izard, C., Fine, S., Schultz, D., Mostow, A., Ackerman, B., & Youngstrom, E. (2001). Emotion knowledge as a predictor of social behavior and academic competence in children at risk. *Psychological Science, 12*, 18-23.
- Jaccard, J. & Guilamo-Ramos, V. (2002). Analysis of variance frameworks in clinical child and adolescent psychology: Advanced issues and recommendations. *Journal of Clinical Child and Adolescent Psychology, 31*, 278-294.
- Jensen, P., Roper, M., Fisher, P., Piacentini, J., Canino, G., Richters, J., et al (1995). Test-retest reliability of the diagnostic Interview Schedule for Children (DISC 2.1). Parent, child, and combined algorithms. *Archives of General Psychiatry, 52*, 61-71.
- Jensen, P. S., Rubio-Stipec, M., Canino, G., Bird, H. R., Dulcan, M. K., Schwab-Stone, M. E., & Lahey, B. B. (1999). Parent and child contributions to diagnosis of mental disorder: Are both informants always necessary? *Journal of the American Academy of Child and Adolescent Psychiatry, 38*, 1569-1579.
- Jensen, P. S., Traylor, J., Xenakis, S. N., & Davis, H. (1988). Child psychopathology rating scales and interrater agreement: I. Parents' gender and psychiatric symptoms. *Journal of the American Academy of Child and Adolescent Psychiatry, 27*, 442-450.
- Jones, E. E. & Nisbett, R. E. (1971). The actor and the observer: Divergent perceptions of the causes of behavior. In E. E. Jones, D. Kanouse, H. H. Kelley, R. Nisbett, S. Valins, & D. Weiner (Eds.), *Attribution: Perceiving the causes of behavior* (pp. 79-94). Morristown, NJ: General Learning Press.
- Kiss, E., Gentzler, A. M., George, C., Kapornai, K., Tamas, Z., Kovacs, M., et al. (2007). Factors influencing mother-child reports of depressive symptoms and agreement among clinically referred depressed youngsters in Hungary. *Journal of Affective Disorders, 100*, 143-151.
- Kolko, D. J., & Kazdin, A. E. (1993). Emotional/behavioral problems in clinic and nonclinic children: correspondence among child, parent, and teacher reports. *Journal of Child Psychology and Psychiatry, 34*, 991-1006.
- Kraemer, H. C., Measelle, J. R., Ablow, J. C., Essex, M. J., Boyce, W. T., & Kupfer, D. J. (2003). A new approach to integrating data from multiple informants in psychiatric assessment and research: Mixing and matching contexts and perspectives. *American Journal of Psychiatry, 160*, 1566-1577.
- Krain, A. L., & Kendall, P. C. (2000). The role of parental emotional distress in parent report of child anxiety. *Journal of Clinical Child Psychology, 29*, 328-335.

- LeDoux, J. (1996). *The Emotional Brain*. New York: Simon and Schuster.
- Levine, L. J., Stein, N. L., & Liwag, M. D. (1999). Remembering children's emotions: Sources of concordant and discordant accounts between parents and children. *Developmental Psychology, 35*, 790-801.
- Lewis, M., & Sullivan, M. W. (Eds.) (1996). *Emotional Development in Atypical Children*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Maedgen, J. W., & Carlson, C. L. (2000). Social functioning and emotional regulation in the attention deficit hyperactivity disorder subtypes. *Journal of Clinical Child Psychology, 29*, 30-42.
- Malatesta, C. Z., & Wilson, A. (1988). Emotion cognition interaction in personality development: A discrete emotions, functionalist analysis. *British Journal of Social Psychology, 27*, 91-112.
- Maszk, P., Eisenberg, N., & Guthrie, I. K. (1999). Relation of children's social status to their emotionality and regulation: A short-term longitudinal study. *Merrill-Palmer Quarterly, 45*, 468-492.
- McNally, R. J. (2002). Anxiety sensitivity and panic disorder. *Biological Psychiatry, 52*, 938-946.
- Melnick, S. M., & Hinshaw, S. P. (2000). Emotion regulation and parenting AD/HD and comparison boys: Linkages with social behaviors and peer preference. *Journal of Abnormal Child Psychology, 28*, 73-86.
- Morris, A. S., Silk, J. S., Steinberg, L., Myers, S. S., & Robinson, L. R. (2007). The role of the family context in the development of emotion regulation. *Social Development, 16*, 361-388.
- Mullin, B. C., & Hinshaw, S. P. (2007). Emotion regulation and externalizing disorders in children and adolescents. In J. J. Gross (Ed.), *Handbook of ER* (pp. 523-541). New York: Guilford.
- Murphy, B. C., Eisenberg, N., Fabes, R. A., Shepard, S., & Guthrie, I. K. (1999). Consistency and change in children's emotionality and regulation: A longitudinal study. *Merrill-Palmer Quarterly, 45*, 413-444.
- Myers, J. L., & Well, A. D. (2003). *Research Design and Statistical Analysis (2nd Ed.)*. Mahwah, NJ: Lawrence Erlbaum Associates.

- National Research Council and Institute of Medicine (2000). *From Neurons to Neighborhoods: The Science of Early Childhood Development*. Washington, D.C.: National Academy Press.
- Norvilitis, J. M., Casey, R. J., Brooklier, K. M., & Bonello, P. J. (2000). Emotion appraisal in children with attention deficit/hyperactivity disorder and their parents. *Journal of Attention Disorders, 4*, 15-26.
- O'Connor, T. G., Heron, J., Golding, J., Bevrige, M., & Glover, V. (2002). Maternal antenatal anxiety and children's behavioural/emotional problems at 4 years: Report from the Avon Longitudinal Study of Parents and Children. *British Journal of Psychiatry, 180*, 502-508.
- Offord, D. R., Boyle, M. H., Racine, Y., Szatmari, P., Fleming, J. E., Sanford, M., et al (1996). Integrating assessment data from multiple informants. *Journal of the American Academy of Child and Adolescent Psychiatry, 35*, 1078-1085.
- Panksepp, J. (2000). Emotions as natural kinds within the mammalian brain. In M. Lewis & J. M. Haviland-Jones (Eds.), *Handbook of Emotions* (2nd ed., pp. 137-156). New York: Guilford Press.
- Penza-Clyve, S. & Zeman, J. (2002). Initial validation of the Emotion Expression Scale for Children (EESC). *Journal of Clinical Child and Adolescent Psychology, 31*, 540-547.
- Rapee, R. M., Barrett, P. M., Dadds, M. R., & Evans, L. (1994). Reliability of the DSM-III-R childhood disorders using structured interview: Interrater and parent-child agreement. *Journal of the American Academy of Child and Adolescent Psychiatry, 33*, 984-992.
- Raver, C. C., Blackburn, E. K., Bancroft, M., & Torp, N. (1999). Relations between effective emotional self-regulation, attentional control, and low-income preschoolers' competence with peers. *Early Education and Development, 10*, 333-350.
- Reiss, S. (1991). Expectancy model of fear, anxiety, and panic. *Clinical Psychology Review, 11*, 141-153.
- Renouf, A. G. & Kovacs, M. (1994). Concordance between mothers' reports and children's reports of depressive symptoms: A longitudinal study. *Journal of American Academy of Child and Adolescent Psychiatry, 33*, 208-216.
- Rothbart, M. K., & Bates, J. E. (1998). Temperament. In W. Damon (Series Ed) & N. Eisenberg (Vol. Ed.), *Social, emotional, and personality development: Vol. 3. Handbook of child psychology* (pp. 105-176). New York: Wiley.

- Rothbart, M. K., & Sheese, B. E. (2007). Temperament and ER. In J. J. Gross (Ed.), *Handbook of ER* (pp. 331-350). New York: Guilford.
- Saarni, C. (1988). Children's understanding of the interpersonal consequences of dissemblance on nonverbal emotional-expressive behavior. *Journal of Nonverbal Behavior, 12*, 275-293.
- Saarni, C. (1999). *The Development of Emotional Competence*. New York: Guilford.
- Salovey, P., Rothman, A. J., Detweiler, J. B., & Steward, W. T. (2000). Emotional states and physical health. *American Psychologist, 55*, 110-121.
- Schniering, C. A., Hudson, J. L., & Rapee, R. M. (2000). Issues in the diagnosis and assessment of anxiety disorders in children and adolescents. *Clinical Psychology Review, 20*, 453-478.
- Schwab-Stone, M., Fallon, T., Briggs, M., & Crowther, B. (1994). Reliability of diagnostic reporting for children aged 6-11 years: A test-retest study of the Diagnostic Interview Schedule for Children-Revised. *American Journal of Psychiatry, 151*, 1048-1054.
- Seiffge-Krenke, I., & Kollmar, F. (1998). Discrepancies between mothers' and fathers' perceptions of sons' and daughters' problem behaviour: A longitudinal analysis of parent-adolescent agreement on internalising and externalising problem behaviour. *Journal of Child Psychology and Psychiatry, 39*, 687-697.
- Silk, J. S., Shaw, D. S., Skuban, E. M., Oland, A. A., & Kovacs, M. (2006). Emotion regulation strategies in offspring of child-onset depressed mothers. *Journal of Child Psychology and Psychiatry, 47*, 69-78.
- Silk, J. S., Steinberg, L. & Morris, A. S. (2003). Adolescents' emotion regulation in daily life: Links to depressive symptoms and problem behavior. *Child Development, 74*, 1869-1880.
- Silverman, W. K., & Eisen, A. R. (1992). Age differences in the reliability of parent and child reports of child anxious symptomatology using a structured interview. *Journal of the American Academy of Child and Adolescent Psychiatry, 31*, 117-124.
- Sim, L., & Zeman, J. (2004). Emotion awareness and identification skills in adolescent girls with bulimia nervosa. *Journal of Clinical Child and Adolescent Psychology, 33*, 760-771.

- Sim, L., & Zeman, J. (2005). Emotion regulation factors as mediators between body dissatisfaction and bulimic symptoms in early adolescent girls. *Journal of Early Adolescence, 25*, 478-496.
- Shields, A., & Cicchetti, D. (1997). Emotion regulation among school-age children: The development and validation of a new criterion Q-sort scale. *Developmental Psychology, 33*, 906-916.
- Shipman, K. L., Zeman, J., Negin, A. E., & Fitzgerald, M. (2003). Children's strategies for displaying anger and sadness: What works with whom? *Merrill-Palmer Quarterly, 49*, 100-122.
- Solomon, R. C. (2002). Back to basic: On the very idea of 'basic emotions.' *Journal for the Theory of Social Behavior, 32*, 115-144.
- Sourander, A., Helstela, L., & Helenius, H. (1999). Parent-adolescent agreement on emotional and behavioral problems. *Social Psychiatry and Psychiatric Epidemiology, 34*, 657-663.
- Southam-Gerow, M. A., & Kendall, P. C. (2000). A preliminary study of the emotion understanding of youth referred for treatment of anxiety disorders. *Journal of Clinical Child Psychopathology, 29*, 319-327.
- Southam-Gerow, M. A., & Kendall, P. C. (2002). Emotion regulation and understanding: Implications for child psychopathology and therapy. *Clinical Psychology Review, 22*, 189-222.
- Spinrad, T. L., Eisenberg, N., Cumberland, A., Fabes, R. A., Valiente, C., Shepard, S. A., et al (2006). Relation of emotion-related regulation to children's social competence: A longitudinal study. *Emotion, 6*, 498-510.
- Stanger, C., & Lewis, M. (1993). Agreements among parents, teachers, and children on internalizing and externalizing behavior problems. *Journal of Clinical Child Psychology, 22*, 107-115.
- Stifter, C. A., & Moyer, D. (1991). The regulation of positive affect: Gaze aversion during mother-infant interaction. *Infant Behavior and Development, 14*, 111-123.
- Suveg, C., Kendall, P. C., Comer, J. S., & Robin, J. (2006). Emotion-focused cognitive-behavioral therapy for anxious youth: A multiple-baseline evaluation. *Journal of Contemporary Psychotherapy, 36*, 77-85.
- Suveg, C., Southam-Gerow, M. A., Goodman, K. L., & Kendall, P. C. (2007). The role of emotion theory and research in child therapy development. *Clinical Psychology: Science and Practice, 14*, 358-371.

- Suveg, C., & Zeman, J. (2004). Emotion regulation in children with anxiety disorders. *Journal of Clinical Child and Adolescent Psychology, 33*, 750-759.
- Tarullo, L. B., Richardson, D. T., Radke-Yarrow, M. & Martinez, P. E. (1995). Multiple sources in child diagnosis: Parent-child concordance in affectively ill and well families. *Journal of Clinical Child Psychology, 24*, 173-183.
- Thompson, R. (1994). Emotion regulation: A theme in search of definition. In N. Fox (Ed.), *The development of ER* (Vol. 59, pp. 25-52). *Monographs of the Society for Research in Child Development*.
- Trentacosta, C. J. & Izard, C. E. (2007). Kindergarten children's emotion competence as a predictor of their academic competence in first grade. *Emotion, 7*, 77-88.
- Walcott, C. M., & Landau, S. (2004). The relation between disinhibition and emotion regulation in boys with attention deficit hyperactivity disorder. *Journal of Clinical Child and Adolescent Psychology, 33*, 772-782.
- Werner, H. (1957). The concept of development from a comparative and organismic point of view. In D. B. Harris (Ed.), *The concept of development: An issue in the study of human behavior* (pp. 125-148). Minneapolis: University of Minnesota Press.
- Yeh, M., & Weisz, J. R. (2001). Why are we here at the clinic? Parent-child (dis)agreement on referral problems at outpatient treatment entry. *Journal of Consulting and Clinical Psychology, 69*, 1018-1025.
- Youngstrom, E., Loeber, R., & Southamer-Loeber, M. (2000). Patterns and correlates of agreement between parent, teacher, and male adolescent ratings of externalizing and internalizing problems. *Journal of Consulting and Clinical Psychology, 68*, 1038-1050.
- Zeman, J., Cassano, M., Perry-Parrish, C., & Stegall, S. (2006). Emotion regulation in children and adolescents. *Developmental and Behavioral Pediatrics, 27*, 155-168.
- Zeman, J., & Garber, J. (1996). Display rules for anger, sadness, and pain: It depends on who is watching. *Child Development, 67*, 957-973.
- Zeman, J., Klimes-Dougan, B., Cassano, M., & Adrian, M. (2007). Measurement issues in emotion research with children and adolescents. *Clinical Psychology: Science and Practice, 14*, 377-401.
- Zeman, J., & Shipman, K. L. (1996). Children's expression of negative affect: Reasons and methods. *Developmental Psychology, 32*, 842-849.

Zeman, J., & Shipman, K. L. (1998). Influence of social context on children's affect regulation: A functionalist perspective. *Journal of Nonverbal Behavior*, 22, 141-166.

Zeman, J., Shipman, K. L., & Penza-Clyve, S. (2001). Development and initial validation of the children's sadness management scale. *Journal of Nonverbal Behavior*, 25, 187-205.

Zeman, J., Shipman, K. L., & Suveg, C. (2002). Anger and sadness regulation: Predictions to internalizing and externalizing symptoms in children. *Journal of Clinical Child and Adolescent Psychology*, 31, 393-398.

Vita

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