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Running Head: PARENT-CHILD CONCORDANCE ON EMOTION REGULATION

Parent-Child Concordance on Children's Emotion Regulation:
Influence of Age, Gender, and Type of Emotion

A thesis submitted in partial fulfillment of the requirement
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by

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Abstract

This study examined whether concordance between children and parents, primarily mothers, exists when reporting on specific aspects (i.e., inhibition, dysregulation, coping) of children's management of sadness and anger. In addition, we investigated whether parent-child concordance differed as a function of child age (i.e., elementary school, middle school), child gender, and child psychological symptomatology. Participants were 310 children (154 boys, 66.4% Caucasian) and 177 parents (94% mothers). Children completed the Children's Emotion Management Scales (CEMS), the Children's Depression Inventory (CDI), and the Reynolds Child Manifest Anxiety Scale (RCMAS), while parents completed the parent version of the CEMS and the Child Behavior Checklist (CBCL). The results demonstrated that overall, there is little parent-child concordance on children's management of sadness and anger with the exception of middle school age girls where there was significant agreement. Symptomatology influenced the degree of agreement only for girls such that internalizing symptoms increased disagreement for younger girls whereas it only reduced the level of agreement for older girls.

Parent-Child Concordance on Children's Emotion Regulation:
Influence of Age, Gender, and Type of Emotion

Concordance, or inter-rater agreement, is the degree of agreement among raters concerning a particular behavior. There has been a recent re-emphasis in the literature on the need for multiple reporters of children's behavior when conducting research with children in order to obtain a complete picture of the behavior in question (Achenbach, McConaughy, & Howell, 1987; Duhig, Renk, Epstein, & Phares, 2000). A primary concern in child psychology arises, however, when obtaining information about a child's behavior from more than one source. Specifically, is concordance or agreement among informants necessary and to be expected, and if not, how is the diverse information integrated into a meaningful conceptualization? Furthermore, researchers have debated whether there is an optimal informant (i.e., parent, child, teacher, or peer) when diagnosing children and adolescents with particular behavior problems (Duhig et al., 2000). That is, can information obtained from one informant be considered the gold standard to which data from other reporters are compared? Some researchers have proposed that differences in opinion in terms of children's behavioral problems are undesirable (Duhig et al., 2000). They have focused on identifying the informant that they feel is providing the most accurate information about various characteristics of the child's problem. For example, some researchers have agreed that the informant who is reporting that the child has a specific problem is accurate, whereas the informant who does not report this same behavior or reports no problem at all is inaccurate (Loeber, Green, Lahey, & Stouthamer-Loeber, 1989).

An abundant amount of research has investigated concordance issues among parents, teachers, children, and their peers regarding children's general types of psychopathology or

particular behavior patterns (Achenbach et al., 1987; Duhig et al., 2000; Kadzin, 1988; Loeber et al., 1989). To our knowledge, no published research, however, has looked at inter-rater agreement among any informants regarding children's methods of emotion regulation, a key underlying component of psychological adaptation (Bradley, 2000). Further, very few researchers have studied parent-child concordance with regard to children's behavioral functioning. Studies have focused on gaining reports from multiple informants with whom the child interacts (i.e., mothers, fathers, and teachers), yet neglected to obtain information from the child directly. Obtaining information about emotion regulation processes from the child would seem to be a critical piece of information as emotional processes are often private and internalized.

Thus, the primary goal of the current study was to determine if agreement between parents, primarily mothers, and their children exists when they report on specific aspects of children's management of anger and sadness including the use of inhibition, dysregulation, and regulation coping methods. Given the research literature that indicates that developmental differences and child gender exert substantial influences on emotion processes, a related study goal was to examine whether parent-child concordance differs depending on child age (i.e., elementary school or middle school) and child gender. In order to better understand the sample under study and to replicate previous research, another goal of this study was to examine parent-child concordance on child psychopathology symptomatology (i.e., internalizing and externalizing symptoms). Finally, research has reported that parent psychopathology has exerted an influence on parental perceptions of child psychopathology that has affected concordance rates (Schaughency & Lahey, 1985). No one, however, has examined the role of child psychopathology on parent-child

agreement. Thus, the final goal of this research was to investigate whether child psychological symptomatology influenced parent-child concordance on child emotion regulation processes.

As previously mentioned, there has been no published research on the specific topic under study. Thus, it is helpful to become familiar with concordance research in related domains. The first section of the review will describe research in which the type of informant (i.e., mother, father, teacher, child) is considered when evaluating children's behavioral functioning. Finally, a brief summary of research providing a conceptual background of children's emotion regulation development will be provided, including a discussion of the utility of studying discrete emotions and specific aspects of emotion regulation strategies.

Types of Informants

Some researchers believe that parents are the most reliable reporters of their child's behavioral problems (Achenbach et al., 1987; Kadzin, 1988). Other researchers, however, have stated that both parents and teachers should be considered to be valuable informants because they allegedly have the greatest degree of knowledge as to why and under what circumstances behavior problems transpire (Fabrega, Ulrich, & Loeber, 1996). Numerous studies have provided established reasons as to why informant reports may not be highly correlated. For example, correlations may be low due to the type of informant and the situation in which the child is rated. Concordance may also be weak due to characteristics of the informant, with maternal depression being a well-studied factor (Fergusson, Lynskey, & Horwood, 1993; Schaughency & Lahey, 1985). Furthermore, characteristics of the child, such as age and gender, may cause inconsistencies between informants. For example,

informants may report different behavior problems at different frequencies for younger or older and for girls or boys as well. Each of these topics will be further developed in the following sections.

Maternal Report

Research has strongly indicated that information on child and adolescent behavior is often reported differently by mothers, fathers, teachers, and peers (Achenbach et al., 1987). Phares (1997) completed a study that established which informant (i.e., mother, father, peer, or teacher) was perceived by mothers and fathers as having the most accurate judgment of the child's psychopathology. Participants were 57 mothers and 43 fathers with the children who were rated in the study being on average 7.94 years old ($SD = 7.52$) although the age range was extensive from 1 to 29 years. Mothers and fathers were first given a list of problematic behaviors (i.e., internalizing, externalizing, hyperactive/inattentive, oppositional, conduct problems) and adaptive behavior items (i.e., politeness). The survey also consisted of questions that inquired about existing family problems. Parents were then subsequently told to rate each informant (i.e., mother, father, teacher, peer, or child) using a 3-point Likert scale (0 = not accurate, 3 = very accurate) on how accurate they thought they were at reporting on the child's behavior problems.

The findings indicated that overall, mothers were rated as being the most accurate informant reporting on children's behavioral problems in each behavior category, with the exception of hyperactivity and inattentive behaviors. Teachers were viewed as having the most accuracy when rating children on externalizing problems or hyperactivity/inattentive behaviors. Overall, fathers and teachers were thought of as being the next most accurate informants after mothers, then came children, and finally their peers when reporting on the

child's internalizing problems. Children themselves and their peers, however, were thought to be the least accurate when reporting on all behavioral problems.

With reference to oppositional behaviors, mothers were again thought of as the most accurate informant. Mothers, fathers, and teachers were also perceived as being the best at reporting on the child's adaptive behaviors. Finally, family problems were found to be better reported by individuals that interact with the family on a day-to-day basis (i.e., mothers, fathers, and children themselves). This study raised an interesting issue given the finding that younger children (6 to 11 years old) and adolescents (12 to 17 years old) received the same accuracy ratings. In other words, mothers and fathers thought that reports of emotional and behavioral problems from young children and adolescents held the same degree of reliability.

As such, it appears that mothers are generally thought by others to be the most accurate informant when reporting on their child's behavior problems (Loeber, Green, & Lahey, 1990; Phares, 1997). This is only natural because mothers often spend more time with their child compared to fathers (Cassano, Adrian, Veits, & Zeman, 2006). Mothers tend to know their child the best and as a result, recognize behaviors that are problematic or uncommon. There are instances, however, where mothers may not be the most desirable informant. Specifically, maternal report can be negatively affected by maternal psychopathology (Breslau, Davis, & Prabucki, 1988; Schaughency & Lahey, 1985). Maternal depression, for example, is considered an informant characteristic and may serve to alter perceptions and reduce agreement between informants (Fergusson, Lynskey, & Horwood, 1993). Some researchers have noted that depressed mothers tend to report exaggerated numbers of behavior problems for their child (Briggs-Gowan, Carter, &

Schwab-Stone, 1996; Friedlander, Weiss, & Traylor, 1986; Rickard, Forehand, Wells, Griest, & McMahon, 1981). In particular, depressed mothers tend to label their children with high frequencies of externalizing problems, or deviant behavior that the child does not have by clinician report (Schaughency & Lahey, 1985).

Schaughency and Lahey (1985) completed a study that examined how parental characteristics and parental perception of the child can influence how the parent rates the child's problematic behavior. Participants were 29 boys and 12 girls between the ages of 5 to 14 years who had documented home or school behavior problems and were subsequently referred to an outpatient treatment clinic. Sixty-one mothers, 41 fathers, and the children's teachers took part in the study. Parents completed the Beck Depression Inventory (BDI; Beck, 1972), a self-report survey that measures depressive mood. Teachers and parents completed the Conners Parent Rating Scale (PRS; Conners, 1973) to assess perceptions of the children's behavior along the following dimensions: Conduct Problem, Anxiety, Impulsive-Hyperactive, Learning Problem, Psychosomatic, Perfectionism, Antisocial, and Muscular Tension. Given the primary focus on externalizing behaviors, the Conduct Problem and Hyperactivity scales were combined (Lahey, Green, & Forehand, 1980). Results established that maternal depression was a significant independent predictor of mothers' ratings of externalizing behavior problems. Schaughency and Lahey (1985) based their conclusions on the threshold model of maladaptive parenting behavior (Lahey, Conger, Atkeson, & Treiber, 1984), which suggested that depressed mothers have a lower tolerance for even the slightest child misconduct. As a result, depressed mothers may over-exaggerate the amount of deviance a child actually exhibits (Schaughency & Lahey, 1985).

Alternatively, maternal depression could also directly affect the child's psychological functioning and has been known to increase behavior problems, such as Conduct Disorder, Attention Deficit Hyperactivity Disorder, and Depression as the mother is a primary role model for the child (Fergusson et al., 1993). Fergusson and colleagues (1993) completed a study to determine the effects of maternal depression on the reporting accuracy of early adolescent (ages 12-13) behavior. The youth's adjustment was first evaluated by reports and questionnaires gathered from the child's mother, teacher, and the child. Maternal depression was measured by a survey that was derived from the Levine-Pilowsky depression inventory (Pilowsky & Boulton, 1970; Pilowsky, Levine, & Boulton, 1969). Fergusson et al. (1993) theorized three possibilities concerning how maternal depression could be related to reporting accuracy of child's behavior. First, maternal depression did not affect her ability to report the child's behavior accurately. Second, maternal depression caused mothers to report behaviors that were inaccurate, over-exaggerated, or not present at all. Lastly, maternal depression and reporting inaccuracies were correlated with one another as a function of external factors (i.e., personality traits, aspects of family life) that acted on both maternal depression and reporting and caused correlations between the two. The results yielded support for the third hypothesis that maternal depression and reporting errors were correlated, and not causally related. Three primary explanations of the results were offered. First, depressed mothers were more likely to over-report behavior problems for their children, perhaps because maternal depression distorted maternal reporting behaviors. Depressed mothers may form perceptions of their child's behavior that are skewed or inaccurate due to issues they may be dealing with as a result of their own psychopathology. This is commonly referred to as the depression-distortion hypothesis (Grietens, Onghena, Prinzie, Gadeyne,

Assche, Ghesquiére et al., 2004). Secondly, it was suggested that maternal depression and reporting behaviors may be subject to outside factors, such as social background, maternal education, or personality traits (i.e., neuroticism). These factors could potentially be correlated with both maternal depression and reporting behaviors and may also explain their correlated nature. For example, a mother may become depressed who is subject to an underprivileged social background. The fact that the mother is depressed about her living conditions and status may provoke her to notice and thus over-report small signs of deviance from her children. Finally, it was also proposed that children may act out in a situation-specific manner. In other words, children may only exhibit behavior problems in front of their depressed mother. Teachers or fathers would not report such behavioral issues because they were not evident in their presence.

Paternal Report

As discussed previously, mothers are usually considered to be the most accurate informant when reporting on their child's behavior problems (Loeber et al., 1990; Phares, 1997). For this reason, fathers have rarely been included in research that evaluates behavior problems in children (Cassano et al., 2006; Phares, Fields, Kamboukos, & Lopez, 2005). Fathers, however, are an extremely important source of information when gathering information on their child's behavior as their report is from a different perspective. There are a few important issues, however, to take into consideration when assessing reports from fathers. The thought that mothers are the most accurate informant is based mainly on the idea that mothers often spend more time with the child and are more involved in everyday child care. In other words, if fathers are not as involved in the child's development processes they may not be as able to readily recognize problematic behaviors.

Christensen, Margolin, and Sulloway (1992) completed a study that addressed inter-parental accord on child behavior problems. The researchers assumed that fathers did not spend as much time with the children as compared to mothers and, therefore, hypothesized that fathers would rate their children with fewer negative behavioral issues due to fewer opportunities to witness incidences of deviant conduct. Participants included parents from 137 families. Mothers and fathers completed the Becker Bipolar Adjective Checklist (BBACL; Becker, 1960) and the behavior problems section of the Child Behavior Checklist (CBCL; Achenbach et al., 1987; Achenbach & Edelbrock, 1979, 1983) to report on deviant behavior of children who were 3 to 13 years of age. Results confirmed that fathers do in fact report fewer behaviors as being problematic, in which mother discrepancies ($M = 15.5$) surpassed father discrepancies ($M = 10.6$). Discrepancies refer to the mean differences between each informant on behavioral categories and which informant reported more child behavior problems. Parents agreed about one-third of the time when evaluating the child's behavior (mean kappa = .34). The fact that fewer misconduct issues were reported by fathers when compared to ratings made by mothers could be due to the lack of the father's involvement in the actual discipline or care of the child. Christensen et al. (1992) also suggested that these results potentially underestimate how much agreement or how many deviant behaviors the father actually observes. In other words, the father may be reporting negative behaviors for their child simply because the mother informs the father about the child's abnormal behavior, not because the father actually witnessed the behavior. Clearly, information from multiple informants is extremely valuable when evaluating a child's psychopathology. If relying solely on the father in this situation, the child's behavioral problems may be under-reported.

Teacher Report

Teachers are another informant who can provide information on the child's behavior within the school setting, which is an environment where parents usually do not observe their child. Researchers agree that teachers may be more able to recognize and report disruptive or hyperactive behaviors that the child expresses than parents (Hinshaw, Han, Erhardt, & Huber, 1992; Loeber et al., 1990; Phares, 1997; Youngstrom, Loeber, & Stouthamer-Loeber, 2000). In contrast, parents tend to identify depression or anxiety, or behaviors that may be internalized within the child (Youngstrom et al., 2000). Researchers have hypothesized that teachers may not recognize behaviors that tend to be internalized because these behaviors do not interrupt the flow of the classroom (Achenbach et al., 1987). If a child were to exhibit behaviors that were bothersome to the other students in the class, however, the teacher would not be able to teach effectively. As a result, the teacher would be prone to report on the disruptive behaviors rather than internalizing types of behavior. Loeber et al. (1990) confirmed these predictions with a study that surveyed clinicians on which informants (i.e., mothers, fathers, teachers, children themselves, and peers) were best at reporting on particular problem behaviors that children exhibited. Clinicians thought that overall, teachers were more accurate when reporting on the child's hyperactivity and inattentiveness. Mothers, however, were best at evaluating deviant or conduct problem behaviors and internalizing problems (i.e., introverted or depressed behavior).

In response to these findings, it was established that informants that interact in similar settings (i.e., mothers and fathers) have higher concordance as compared to informants that interact in dissimilar environments (i.e., parents and teachers, or parents and children; Achenbach et al., 1987). For example, through a meta-analysis, Achenbach and colleagues

(1987) established that informants in similar situations, such as parent-parent informant pairs or teacher-teacher pairs, had a significant average agreement correlation of $r = .60$. The parent-child and teacher-child informant pairs had significant but low levels of concordance with average correlations at $r = .22$. The average agreement correlations for parent-teachers pairs was also significant but weak at $r = .28$. In other words, the fact that teachers and parents do not demonstrate a high level of agreement on exhibited behaviors of the children does not mean that teachers' reports or parents' reports are inaccurate. Low levels of correspondence may be due to the fact that parents and teachers do interact and see the child in different situations. Children also may feel more comfortable displaying certain behaviors in each environment.

Child Report

Since situational specificity does cause informants to report differently on the child's problematic behavior, some researchers contend that in addition to the parent or the teacher, the child or adolescent is also a key informant on his or her behavioral functioning and is capable of describing their symptoms effectively (Weisz, Weiss, Wasserman, & Rintoul, 1987). Researchers have established that the elementary school years are when the child is able to provide valid reports, particularly on internalizing problems, such as depression (Ialongo, Edelsohn, & Kellam, 2001). Although observation of the child is imperative for a complete evaluation, the child is the informant who displays the behavior and could provide reasons as to why he or she does so. The majority of researchers agree that children are the best at reporting on internalizing behavior problems, such as depression or worrying (Loeber et al., 1990; Luby, Belden, Sullivan, & Spitznagel, 2007; Youngstrom et al., 2000). For example, Luby et al. (2007) evaluated 110 preschool children who were 4-6 years of age.

Childhood depression was examined with the Berkeley Puppet Interview (BPI; Alblow & Measelle, 1993). Parents participated as informants of their child's behavior and completed the Child Behavioral Checklist (CBCL; Achenbach & Edelbrock., 1983). Overall, the results indicated that children were effective when reporting on the main symptoms of depression and anxiety. In order to evaluate highly complex symptoms of these behaviors, however, parents report became extremely useful (Luby et al., 2007).

In another study, Ialongo et al. (2001) examined the concurrent and predictive validity of child report. Participants included 1,197 children in the first grade with follow up evaluations in the fourth, sixth, and eighth grades. Children were first asked to complete the Children's Depression Inventory (CDI; Kovacs, 1983) in the first grade to evaluate the child's depressive symptoms. Parents were recruited when the child was in the fourth and sixth grades to report on any signs of depression the child expressed and how frequently, if at all, the child went to mental health professionals. The Mood and Feelings Questionnaire-Parent Short Form (MFQ-PS; Angold, Costello, Pickles, Winder, & Silver, 1987) was utilized to gather reports of child and adolescent depression. Teacher reports on the child's behavioral and emotional problems were also collected when the child was in the sixth grade. Finally, the Composite International Diagnostic Interview-University of Michigan Version (CIDI-UM; Kessler, McGonagle, Zhao, Nelson, Hugues, Eshleman et al., 1994) was used to measure the level of depression in the eighth grade children. Results demonstrated that self-reports given by the first grade participants significantly predicted later thoughts of suicide, academic success, how frequently they received clinical advice as evident from parental report, and a future diagnosis of a depressive disorder. It has further been postulated that children as young as 5 or 6 years of age are able and should be considered as an informant

when evaluating their behaviors and emotions (Edelsohn, Ialongo, Werthamer-Larsson, Crockett, & Kellam, 1992; Ialongo et al., 2001)

Other viewpoints exist, however, on the extent to which child report should be included when behavior problems are evaluated. For example, the well-known meta-analysis study done by Achenbach et al. (1987) suggested that child report should be viewed cautiously and used only in certain situations. Achenbach et al. (1987), stated, “When a child reaches the point of an actual clinical evaluation, he or she also serves as a third source of data [along with the parent and teacher], usually obtained via interviews with mental health workers” (p. 228). In this case, parents were ultimately considered to be the most important informant when evaluating the child’s behavior. Teachers were used for further support and to gather information about behaviors that occur within the school environment. Lastly, child report was used only when a behavior problem had reached clinically significant levels.

Variables that influence concordance

Numerous studies have provided established reasons as to why informant reports may not be highly correlated. For example, as already discussed, correlations may be low due to the type of informant and the situation in which the child is rated. Concordance may also be weak due to characteristics of the informant, with maternal depression being a well-studied factor as described above. Furthermore, characteristics of the child, such as age and gender, may cause inconsistencies between informants.

Age

Another factor that may cause inconsistencies among informants is the age of the child. Achenbach et al. (1987) completed a meta-analysis of 119 studies that were completed between the years of 1967 through 1985 that used multi-informant ratings and self-report

from children and adolescents. The purpose of this study was to analyze reports from informants that interact with the child in different settings and establish why certain factors (i.e., child age) may cause low inter-rater agreement. Children ranged from 1.5 to 19 years of age and ratings from parents, teachers, mental health workers, observers, peers, and the children themselves were considered. Collectively, Achenbach and colleagues (1987) showed significant concordance when informants rated younger (6-11 years) children compared to adolescents (12 to 19 years). In other words, there was more agreement among raters, particularly between parents, on the presence of child's psychopathology when the child was younger ($r = .51$) than when the child was older ($r = .41, p < .0001$). Unfortunately, the preschool age group was not examined (Achenbach et al., 1987). Overall, Achenbach et al. (1987) emphasized a multi-axel assessment of the child's psychopathology in order to explore perceived differences between young child and adolescent functioning.

Only few studies have focused on younger children, particularly under the age of six, when analyzing inter-rater agreement (Duhig et al., 2000). According to Koot, Van Den Oord, Verhulst, and Boomsma (1997), studies on psychopathology in young children have not been conducted because it is difficult to ascertain which behaviors are problematic. Children at this age are constantly developing and discovering new ways to exhibit certain behaviors, thus making it difficult to determine deviant behavior. One study, however, did examine parental concordance rates in children who were two to three years old (Achenbach, 1992). Achenbach found that agreement between parents for this age group was moderate when behavior problems exhibited by the child were reported.

Gender

Gender is another factor that could potentially cause inconsistencies between informants on child psychopathology. Thurber and Osborn (1993) completed a study that addressed inter-parent and parent-child rating concordance as a function of gender for both parents and children. Participants were 57 girls, 46 boys (ages 11 to 17), and their mothers and fathers. Measures included the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983) and the Youth Self Report (YSR; Achenbach & Edelbrock, 1987). Both measures assessed the same types of behavior problems. Results demonstrated that mothers tended to rate their children, regardless of their gender, with a larger number of total behavior problems as compared to ratings from fathers. This finding again may be due to the idea that mothers usually spend more time interacting and taking care of the child. Furthermore, there was a parent gender by child gender interaction where both mothers and fathers tended to rate the boys with a significantly higher number of both internalizing and externalizing problems as compared to the girls. The researchers also reported an interesting finding in which girls in fact reported more internalizing and externalizing problems on the YSR than did boys. Achenbach (1991) also established that the gender of the parent and the gender of the child influenced the degree of agreement primarily between parents and children.

Influence of Situational Specificity on Concordance

In summary, concordance may not be a realistic goal given that situational specificity should be considered when reports from multiple informants are evaluated (Duhig et al., 2000). In other words, each informant interacts with the child under different circumstances, in different environments, and ultimately has a unique relationship with that child. It is no surprise that a mother may rate her child's behavior differently from a teacher. Parents or

guardians that interact with their child in a similar environment are likely to agree upon the child's degree of behavioral functioning (Duhig et al., 2000). There are various factors that do not allow for inter-parental agreement. Informants that observe the child in different environments (i.e., parent and teacher), however, don't usually describe the child's behavior in the same way (Achenbach et al., 1987; Greenbaum, Dedrick, Prange, & Friedman, 1994). Reports from informants that see the child in different settings and subsequently rate the child's behavioral functioning differently may provide information vital to the diagnosis of a behavior problem and how this problem will affect the child long-term (Stanger, McConaughy, & Achenbach, 1992). Each report from an informant has a particular predictive usefulness for the child's developmental outcome, hence why situational specificity and multiple informants are important to consider (Duhig et al., 2000; Stanger & Lewis, 1993). Low agreement between informants may imply that the child's behavior is different in each situation, not that the informants are unreliable and unknowledgeable of the child's displayed behavior. Many researchers find it imperative to take advantage of the wealth of information that is accessible through the use of multiple informants, in order to get a wider view of the child's mental health state. Further, no research has examined concordance on a key developmental task that is thought to underlie the development, maintenance, and exacerbation of childhood psychopathology (Bradley, 2000); that is, the role of emotion regulation processes in children's adaptation.

Conceptual Background for Emotion Regulation

The field of emotion research has struggled with defining the various terms that encompass this domain (see Cole, Martin, & Dennis, 2004 for special issue on this topic). As such, emotion regulation has been defined in many different ways and is interpreted

differently by different researchers. One generally accepted definition is offered by Thompson (1994) who characterizes emotion regulation as consisting of the “extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one’s goals” (p. 27-28). In other words, emotion regulation is a way to respond to one’s emotions in a constructive, adaptive manner that takes into account the demands present in the social environment. It is important to note that the goal of emotion regulation is not to suppress or deny one’s emotional experience or arousal but to express emotions in a constructive fashion that allows for optimal functioning on a day-to-day basis.

To expand upon the definition provided above, Thompson (1994) provided four additional explanations of emotion regulation that serve to bolster his primary definition. First, emotion regulation is the ability to gauge the degree of emotion expressivity (i.e., inhibition or arousal), that is appropriate for a particular situation. Second, emotion regulation is the ability not only to self-regulate emotions, but also to be able to take in cues for proper emotion regulation from the external environment. The environment, specifically our culture, influences how we should act and what emotions we should convey to our family, peers, and other adults. For example, parents often regulate their child’s emotions by helping them calm down from a stressful situation. In this example, parents are acting as an outside regulator of their children’s emotions and are thus teaching them to express emotion in a socially and culturally acceptable ways. Third, emotion regulation skills also serve to affect how much and how long you feel or express a particular emotion. Lastly, Thompson (1994) further theorized that, “emotion regulation must be regarded functionally, that is, in terms of the regulator’s goals for a particular situation” (p. 29). In other words, emotion

regulation should be defined by what the person wants to accomplish and what emotions would be appropriate for the situation. The definition of emotion regulation is complex and many processes, such as “physiological arousal, neurological activation, cognitive appraisal, attention processes, and response tendencies” (Thompson, 1994, p. 30) are involved in its regulation. It is important to recognize, however, that individual differences exist in emotion regulation capabilities. Regulation of emotions depends on the person’s immediate environment, the goals of that person, and the greater demands of the situation.

The functionalist theory (Campos, Mumme, Kermoian, & Campos, 1994) provides an important conceptual framework to understand the role of emotion development and regulation in psychosocial functioning. This theory states that each emotion serves a unique function and purpose and assists individuals in realizing their particular interpersonal and intrapersonal goals. According to Campos and colleagues (1994), “Functionalism...[is] the link between emotion and what a person is trying to do” (p. 285). Thus, you can not simply assume that the goals and function of each emotion are the same. Furthermore, functionalism emphasizes socialization as a primary factor in teaching children how and when to express and regulate emotions in socially and culturally acceptable fashions (Zeman & Shipman, 1998). For example, emotion cultural display rules are learned by children through interaction with peers and adults taking into account the constraints of a particular situation, or the expectations from the external environment. Socialization thus ensures that children will learn how to regulate their emotions in a way that will allow them to achieve their goals in a world full of social and cultural expectations.

The Current Study

Justification of Independent Variables

Type of emotion. For the current study, the common childhood experiences of anger and sadness were chosen because although both are negative valence emotions, each are used to achieve different goals and in different contexts. Anger typically occurs when one's goals are blocked whereas sadness is typically the result of an experience of loss (Campos, 1989). From a functionalist approach, when feelings of anger and sadness are properly channeled or regulated at these ages, socially accepted goals are more readily achieved (Barrett & Campos, 1987; Zeman & Shipman, 1997). In other words, children who manage their anger or sadness expression appropriately will be able to achieve their goals and function effectively in comparison to children in which emotional experiences may result in disorganization and dysregulation and have a negative impact on functioning. For example, children who have not learned adaptive regulation skills for anger or sadness may experience emotion dysregulation issues, such as the over- or under-control of emotions. Research has documented that the dysregulation of anger and sadness is associated with different forms of psychopathology (Bradley, 2000; Cole, Michel, & O'Donnell Teti, 1994a) and poor social functioning (Saarni, 1999).

Researchers have also suggested that anger and sadness are socialized differently for boys and girls starting at a young age (Brody & Hall, 1993). Further, the outcomes of expressing anger and/or sadness in maladaptive ways has different outcomes for boys versus girls (Zeman, Cassano, Perry-Parrish, & Stegall, 2006). Thus, anger and sadness are important emotions to study when examining parent-child concordance because of their

direct links to broader emotion regulation processes and their associations with internalizing and externalizing symptoms.

Emotion regulation strategies. Three different emotion regulation skills were of interest for this study. One of the central variables associated with internalizing psychopathology is the over-control of emotional expression (Zeman, Shipman, & Suveg, 2002). Thus, the inhibition of emotion was examined which refers to the degree to which children report restraining the display of anger or sadness to others (Zeman, Shipman, & Penza-Clyve, 2001). According to Gross and Levenson (1997), excess inhibition of negative emotions, such as sadness, is undesirable as it does not necessarily help one deal with that emotion effectively. For example, if one continually inhibits his or her emotions, this may damage cognitive performance associated with emotion regulation and would not allow for parents and peers to understand our emotions or goals (Gross & Levenson, 1997).

A second emotion management factor examined in this research was the constructive control of emotion or emotion regulation coping. Children who are able to constructively respond to anger or sadness arousal with moderate levels of control have been found to be more psychologically healthy than those children who either over- or under-control their emotional arousal (Suveg & Zeman, 2004; Zeman et al., 2001).

The third emotion management skill examined the under-control of emotional expressivity or the dysregulation of anger and sadness. When children display an emotion in a dysregulated fashion, they are expressing themselves in a culturally unacceptable and often times, destructive way (Zeman et al., 2001). As mentioned previously, lack of control over one's emotions has been linked to many forms of internalizing and externalizing psychopathology (Bradley, 2000; Cole et al., 1994a).

Age group. The current research investigated developmental differences in parent-child agreement of emotion management because robust age differences have been found throughout emotion regulation research and in the parent-child concordance literature (Fuchs & Thelen, 1988; Saarni, 1999; Zeman et al., 2006; Zeman & Shipman, 1998). For example, older children have generally been socialized by their parents and peers for a longer period of time as compared to younger children and have had extensive practice in regulating their emotions (Saarni, 1979). For this reason, older children are thought to be more aware, contextually, of how to communicate their emotions and are also attentive to the social and cultural expectations for effective emotion regulation (Zeman & Shipman, 1998). Along those same lines, older children are thought to have more flexibility when using emotion regulation strategies whereas younger children tend to follow a rule-based emotion regulation schema (Saarni, 1989).

Researchers have also established that the relationship between parents and children often changes towards less parental involvement as the child grows older (i.e., when puberty emerges; Collins & Russell, 1991). Since the adolescent years are characterized by numerous developmental tasks and adaptations, it is important that this population receives more research attention than it has been given, particularly in the domain of emotional development. As adolescents experience a series of changes (i.e., physical, cognitive, emotional development), parent-child concordance may decline as adolescents become more independent and parent involvement decreases. Thus, two age groups were recruited for participation to determine whether the child's age would affect the degree of agreement between parents' and children's report of emotion management. As such, data from

elementary school children (grades 3 and 4) and early adolescents (grade 6 and 7) were compared.

Gender. Results were also reported as a function of gender because researchers have established that boys and girls express and regulate emotions differently (Denham, 1998; Zeman & Garber, 1996). Furthermore, boys and girls of all ages tend to differ in emotional expression even if they are exhibiting the same general emotion (Zeman & Shipman, 1997). Since boys and girls express emotions in different contexts, we projected that this would have an effect on agreement between parents and their children.

Hypotheses. Considering the previous research, we formulated four overarching hypotheses. First, we hypothesized that older children would have more agreement with parents than younger children. Although adolescence is characterized as a time of interpersonal change where parental involvement decreases (Collins & Russell, 1991), it has been established that older children are more aware of how to communicate their emotions effectively (Zeman & Shipman, 1998). Second, we thought that we would find more parent-child agreement for dysregulation and coping because these emotions regulation strategies are more overt than inhibitory strategies. Third, we theorized that parents would agree more so with their daughters than with their sons given the shared gender experience. Finally, we hypothesized that symptoms of child psychopathology will interfere with agreement, specifically causing less agreement.

Method

Participants

Participants were 310 children (154 boys, 156 girls). Of those children, 177 of their parents (94% mothers) participated in the study. Mothers ($N = 167$) were the primary

participants aside from eight fathers and two grandparents that served as informants.

Participants were recruited from four public schools in the greater Williamsburg, Virginia area. When placing participants into younger and older age groups, there were 92 boys ($M = 9.41$ years old, $SD = .74$) and 72 girls ($M = 9.41$ years old, $SD = .65$) in the elementary school group (3rd and 4th grades). No significant age difference was found as a function of gender, $t(162) = .01$, $p = .99$. Parental participation rate was documented at 50% for elementary school age children such that 84 parents took part. Parents of girls (49%) and parents of boys (51%) participated in the study. Concerning the middle school age group (6th and 7th grades), there were 62 boys ($M = 12.34$ years old, $SD = .90$) and 84 girls ($M = 12.35$ years old, $SD = .74$). No significant age difference was found as a function of gender for middle school age children $t(144) = -.10$, $p = .93$. Middle school parents attained a 62% participation rate, in which 93 parents (54% for daughters, 46% for sons) took part.

Concerning the racial composition of the sample, 66.4% were Caucasian, 16.1% African American, 8.8% biracial, 3.6% Hispanic, 3.3% Asian, and 1.6% Native American. Socio-economic status (SES) was calculated using the Hollingshead (1975) system with information (i.e., level of education and current occupation) provided by the parents who chose to participate in the study. The SES calculation system is based on a 5-point scale where a score of one signifies the highest SES status and a score of five represents the lowest SES status. Overall, the parental sample was considered to be upper-middle class ($M = 2.29$, $SD = 1.01$). Specific breakdowns included 35 parents (20.6%) with a score of one, 71 parents (41.8%) with a score of two, 44 parents (25.9%) with a score of three, 14 parents (8.2%) with a score of four, and 6 parents (3.5%) with a score of five. There was a significant main effect as a function of age group for SES, $F(1,173) = 6.42$, $p < .01$ such that

elementary school age children were from a slightly lower SES ($M = 2.49$, $SD = .99$) when compared to middle school aged children ($M = 2.12$, $SD = .10$).

Measures

Child-report

Children's Emotion Management Scale: Anger and Sadness (CAMS, CSMS). The Children's Emotion Management Scale (CEMS; Zeman, et al., 2001) was utilized in the current study as a primary measure of child self-report that assessed children's perceptions of their anger and sadness management styles. The CEMS is comprised of three subscales that measure inhibition, dysregulated expression, and emotion regulation coping. The Inhibition scale assesses the suppression or over-control of outward emotional expression. In other words, the child may feel a certain emotion (i.e., angry or sad) but does not exhibit it externally. The Dysregulation scale assesses the under-control or overt, non-constructive expression of emotion (i.e., screaming and carrying on). The emotion regulation Coping scale measures the child's ability to regulate and respond to emotions in a calm, controlled, healthy manner.

Children respond to the CAMS (anger management) using a 3-point Likert rating scale (1 = hardly ever, 2 = sometimes, 3 = often) and includes 11 questions overall. Children are asked to think of a time when they felt angry and rate their behavior during that instance. Four questions measured the reported inhibition of emotion (i.e., "I hold in my anger"), three items evaluated the dysregulated demonstration of emotion (i.e., "I cannot stop myself from losing my temper when I'm mad"), and four questions explore the child's coping response (i.e., "I try to calmly deal with what is making me mad"). Research has provided evidence that the CAMS is a valid measure through a study that used 225 boys and girls in the 4th and

5th grades ($M = 8.88$ years, $SD = 2.04$) (Zeman et al., 2002). Strong internal consistency and significant test-retest reliability existed for Anger Inhibition, Anger Dysregulation, and Anger Coping. In the current study, internal consistency was moderate with alphas ranging from .55-.70 for elementary school age children and .65-.80 for middle school age children on the CAMS. See Table 1 for internal consistencies.

The CSMS (sadness management) is similar in structure and content to the CAMS as it uses the same 3-point response scale and measures the same three types of emotion management (i.e., inhibition, dysregulation expression, and emotion regulation coping). The CSMS, however, includes a total of 10 questions. The distribution for each type of subscale is as follows: four questions measure Sadness Inhibition (i.e., “I get said inside by don’t show it”), three questions assess Sadness Dysregulation (i.e., “I cry and carry on when I’m sad”), and five questions measure Sadness Coping or ability to control emotions (i.e., “I stay calm and don’t let sad things get to me”). The CSMS was validated through a study that analyzed self-report of emotional expressivity, maternal report ($N = 171$) of child psychological functioning, and peer ratings of aggressive behavior ($N = 227$) in a sample of 4th and 5th grade student (Zeman et al., 2001). Internal consistency established moderately strong indicators for the Inhibition scale, the Sadness Dysregulation, and the Sadness Coping scales ($\alpha = .59-.79$). For the current study, internal consistency was moderately strong with alphas ranging from .53-.71 for elementary school age children and .45-.80 for middle school age children on the CSMS scale. See Table 1 for internal consistencies.

Reynolds Child Manifest Anxiety Scale (RCMAS). The Reynolds Child Manifest Anxiety Scale (Reynolds & Richmond, 1985) was used in this study to assess the degree of anxiety experienced by the child. The questionnaire was intended for researchers, clinicians,

and teachers to evaluate the level of anxiety in children and adolescents that were 6 to 19 years of age (Reynolds & Richmond, 1985). The scale includes 37 items divided into four sub-scales. The Worry/Over-sensitivity subscale is comprised of 11 items (i.e., “I worry about what is going to happen,”), the Physiological Anxiety subscale has 10 items (i.e., “Often I feel sick to my stomach.”), the Social Concerns/Concentration subscale has 7 items (i.e., “A lot of people are against me.”), and the Lie subscale is made up of 9 items (i.e., “I never get angry.”). Participants were asked to circle “yes” or “no” to indicate the presence or absence of the symptom. Only the total score was used for the present study.

The RCMAS was successfully validated and found to be a reliable measure. Reynolds, Bradley, and Steele (1980) found that the RCMAS has a strong internal consistency ($\alpha = .82$). Furthermore, Wisniewski, Jack, Mulick, Genshaft, and Coury (1987) documented that the RCMAS has strong test-retest reliability. The internal consistency for the current sample was strong ($\alpha = .98$ for elementary school age children; $\alpha = .85$ for middle school age children). The Lie items were not included to determine internal consistency for the current study.

Children's Depression Inventory (CDI). The CDI (Kovacs, 1983) is a self-report questionnaire for children aged 7 to 17 years and is comprised of 27 items. This scale measures the severity of self-reported depressive symptoms in children. The CDI evaluates five different aspects of depression (i.e., Negative Mood, Ineffectiveness, Negative Self-Esteem, Interpersonal Problems, or Anhedonia). Participants are given a set of three statements and are asked to notate which one best depicts him or her in the past two weeks. Higher scores on the CDI (i.e., greater than or equal to 13) signify that the child a clinically

significant number of symptoms of depression, whereas lower scores (i.e., below 13) signify that the child does not have many depressive symptoms.

A sample of 1,266 public school students (592 boys, 674 girls) were divided into groups based on age (e.g., 6-11, 12-17) and gender (Kovacs, 1983). Students were in grades 2 through 8. With this sample, internal consistency (.71 to .89) and test-retest reliability (.74 to .83) was established. The internal consistency of the current sample was strong (alpha = .89 for elementary school age children, alpha = .87 for middle school age children).

Parent-report

Parent version of the Children's Emotion Management Scales (P-CEMS). The P-CEMS is a parallel version to the children's CEMS scales, and contains both the P-CAMS and the P-CSMS. Parents are asked to report on how frequently their child manages anger and sadness through inhibition, dysregulation, and constructive coping methods. Internal consistencies for the current sample ranged from .73 to .78 for elementary school age children and .73 to .82 for middle school age children on the P-CAMS. For the P-CSMS, internal consistencies ranged from .63 to .77 for elementary school age children and .40 to .80 for middle school age children. See Table 3 for internal consistencies.

Child Behavior Checklist (CBCL). The Child Behavior Checklist (Achenbach, 1991) is comprised up of 113-items and is a parent report about their 6 to 18 year old children's psychological and behavioral functioning. Using a 3-point Likert scale (i.e., "not true" (0), "somewhat or sometimes true" (1), or "very true or often true" (2)), parents base their responses on child's behavior within the past six months.

The CBCL was derived from a factor analysis of 4,994 parent reports of children with clinical problems (Achenbach, 1991). The sample was then compared to 1,753 healthy

children. The children were 6-18 years old and represented a diverse set of backgrounds, ethnicities, and SES. The CBCL generates three broad-band scores (i.e., Total Behavior Problems, Internalizing Problems, Externalizing Problems) and eight narrow-band scales (i.e., anxious/depressed, withdrawn/depressed, somatic complaints, social problems, thought problems, attention problems, rule breaking behavior, and aggressive problems). Only the Internalizing, Externalizing, Anxious/Depressed, and Withdrawn/Depressed scales, however, were used for the present study. For the current study, the internal consistencies ranged from .62 to .85 for elementary school age children and .67 to .91 for middle school age children. See Table 2 for internal consistencies.

Procedure

After gaining entry into the public schools, permission letters were sent home with each child. Parents or guardians were to indicate whether or not their child could participate and if they themselves were also willing to participate in the study. Children with parental permission then completed the study within their regularly scheduled class times. Children were read a standardized set of instructions and further instructed to fill out the CAMS, CSMS, RCMAS, and CDI questionnaires, which took approximately 15-20 minutes. Questions were read aloud to the children by participating research assistants to assure their understanding of each question. Children were asked to follow along with the assistant and answer each question honestly. They were told that there was no right or wrong answer and thus asked to mark the statement that best reflected their emotions. Children who demonstrated comprehension difficulties were administered the protocol individually. Once children were finished with the questionnaire packet, the children received a pencil for their participation or a slurpee drink with their cafeteria lunch. A packet that contained the P-

CEMS and the CBCL was sent home to the parents who agreed to participate in the study. Parents then mailed their forms back to the research team and received a \$5 gift Target or gas card or they could elect to donate their money to their child's grade team.

Results

Data Analytic Strategy

Descriptive statistics were calculated for all variables. See Table 4 for means, standard, deviations, and range of scores. Then, a series of 2 (age group) x 2 (gender) analyses of variance (ANOVAs) were first conducted to detect the presence of any age or gender differences on the primary dependent variables. Given the finding of significant age and gender differences on the CAMS and CEMS, all subsequent data was analyzed separately by age group and gender. That is, concordance data were examined separately for younger boys, younger girls, older boys, and older girls. Following the ANOVAs, a series of correlations were conducted to determine parent-child concordance for the emotion scales (*CAMS* and *P-CAMS*, *CSMS*, and *P-CSMS*, *CEMS* and *P-CEMS* collapsed across emotions). To replicate previous findings in the literature and to better understand the nature of this data set, concordance on child internalizing symptoms were examined through correlation analyses. Thus the CDI was compared to the CBCL Withdrawn-Depressed scale and the RCMAS was correlated with the CBCL Anxious-Depressed scale.

Finally, to better understand the nature of the emotion management concordance data, child internalizing and externalizing symptomatology scores were used to determine whether child symptomatology influenced the degree of parent-child agreement on anger and sadness management. To test these hypotheses, children were placed into high and low scoring groups based on their scores on the CDI, RCMAS, or CBCL. Then, correlations between the

CAMS and *P-CAMS*, and the *CSMS* and *P-CSMS* were calculated. Specific details on the clinical versus non-clinical divisions are included in the Results section for these analyses.

ANOVAs for Emotion Management Strategies

Children's Anger Management Scale

The ANOVA completed for the CAMS subscales yielded no significant findings for the Anger Inhibition scale. There was a significant gender main effect for the Dysregulation scale, $F(1, 306) = 4.09, p \leq .05$. Boys reported exhibiting a greater frequency of Anger Dysregulation ($M = 1.84, SD = .60$) when compared to girls ($M = 1.72, SD = .52$). There was a significant age group by gender interaction for the Cope scale $F(1, 306) = 7.79, p \leq .01$. When age differences within each gender were analyzed, middle school age girls reported coping with anger more constructively ($M = 2.20, SD = .55$) when compared with elementary school age girls ($M = 2.02, SD = .52$). No significant differences between younger and older boys were found.

Children's Sadness Management Scale

The results of the ANOVA demonstrated that there was a significant main effect as a function of gender for Sadness Inhibition, $F(1, 306) = 7.21, p \leq .01$. Boys ($M = 2.02, SD = .56$) reported a greater frequency of Sadness Inhibition when compared to girls ($M = 1.85, SD = .53$). Results for Sadness Dysregulation indicated that there was a significant gender main effect, $F(1, 306) = 5.69, p \leq .05$, in which girls reported expressing sadness in a dysregulated manner ($M = 1.70, SD = .49$) more frequently than boys ($M = 1.56, SD = .48$). There was a significant gender main effect as a function of Sadness Coping, $F(1, 306) = 9.51, p \leq .01$. Girls reported coping less well with sadness ($M = 2.05, SD = .39$) when compared to boys ($M = 2.19, SD = .45$).

Children's Anger Management Scale: Parent Version

The ANOVA completed for the P-CEMS: Anger subscales yielded a significant age main effect for the Inhibition scale, $F(1, 306) = 7.61, p \leq .01$. Parents reported that their middle school age children displayed greater Anger Inhibition ($M = 1.49, SD = .43$) when compared to elementary school age children ($M = 1.31, SD = .39$). There were no significant findings for the Anger Dysregulation scale. There was a significant gender main effect for the Cope scale, $F(1, 173) = 5.19, p \leq .05$, in which parents perceived their daughters to exhibit more frequent coping skills when feeling angry ($M = 2.13, SD = .56$) when compared to their sons ($M = 1.95, SD = .46$).

Children's Sadness Management Scale: Parent Version

The ANOVA indicated that there was a significant age main effect for the Sadness Inhibition scale, $F(1, 172) = 8.27, p \leq .01$. Parents reported that middle school age children ($M = 1.57, SD = .47$) inhibited their sadness more so than their elementary school age children ($M = 1.37, SD = .41$). For the Dysregulation scale there was a significant age main effect, $F(1, 173) = 5.74, p \leq .05$, in which parents reported that elementary school age children ($M = 1.80, SD = .51$) exhibited more dysregulation when experiencing sadness when compared to middle school age children ($M = 1.63, SD = .42$). There was a significant age main effect for the Cope scale, $F(1, 173) = 7.61, p \leq .01$. Parents reported that middle school age children ($M = 2.06, SD = .38$) cope with sadness more effectively than elementary school age children ($M = 1.90, SD = .38$).

ANOVA for Measures of Psychological Symptomatology

Child-report Depression and Anxiety Symptoms

There were no significant main effects or interactions as a function of gender or age group for the CDI or RCMAS total score.

Parent-report of Internalizing and Externalizing Symptomatology

No significant main effects or interactions as a function of gender or age existed for the CBCL Anxious/Depressed, Withdrawn/Depressed, and Externalizing subscales. There was a significant age by gender interaction for the Internalizing subscale $F(1, 173) = 4.06, p \leq .05$. No significant differences between the elementary and middle school age girls for the Internalizing subscale were found. For boys, parents reported more internalizing symptoms for middle school age boys ($M = 52.66, SD = 8.23$) than elementary school age boys ($M = 49.77, SD = 9.32$).

Concordance on Child Internalizing Symptomatology

Depression symptoms

Concordance between the anxious and depressive symptomatology was first examined collapsed across age group and gender. The results indicated that the CDI was highly, significantly correlated with the CBCL Anxious/Depressed scale ($r = .31, p \leq .01$), the CBCL Withdrawn/Depressed scale ($r = .36, p \leq .01$), the Internalizing scale ($r = .36, p \leq .01$), and the Externalizing scale ($r = .30, p \leq .01$). See Table 5 for correlations. These results were then examined within each age group by gender grouping. See Table 6 for correlations.

Elementary school age children. Neither boys' nor girls' CDI score correlated significantly with the Anxious/Depressed scale. For boys, the CDI was significantly correlated with the CBCL Withdrawn/Depressed scale ($r = .40, p \leq .01$). For girls, the CDI

was positively correlated with the CBCL Withdrawn/Depressed scale ($r = .32, p \leq .05$). For boys and girls, their CDI scores did not correlate significantly with the CBCL Internalizing or Externalizing subscales. See Table 6 for correlations.

Middle school age children. For boys, the CDI was significantly correlated with the CBCL Anxious/Depressed scale ($r = .33, p \leq .05$) but not with the Withdrawn/Depressed scale. For girls, the CDI was significantly correlated with both the CBCL Anxious/Depressed scale ($r = .45, p \leq .01$) and the Withdrawn/Depressed scale ($r = .46, p \leq .01$). Boys' CDI scores were significantly correlated with the CBCL Internalizing ($r = .34, p \leq .05$) and the Externalizing ($r = .39, p \leq .01$) subscales. Girls' CDI scores were also highly correlated with the CBCL Internalizing ($r = .55, p \leq .01$) and Externalizing ($r = .41, p \leq .01$) subscales. See Table 6 for correlations.

Anxious symptoms

When the data was collapsed across age and gender, the RCMAS was found to be highly, significantly correlated with the CBCL Anxious/Depressed scale ($r = .22, p \leq .01$), the Internalizing scale ($r = .21, p \leq .01$), and the Externalizing scale ($r = .20, p \leq .01$). See Table 5 for correlations.

Elementary school age children. No significant correlations existed between the RCMAS and the CBCL Anxious/Depressed subscale for boys or girls. See Table 6 for correlations.

Middle school age children. For boys, no significant correlations existed between the RCMAS and the CBCL subscale. For girls, however, the RCMAS was significantly correlated with the CBCL Anxious/Depressed scale ($r = .44, p \leq .01$), the Internalizing scale ($r = .47, p \leq .01$), and the Externalizing scale ($r = .36, p \leq .01$). See Table 6 for correlations.

Concordance between Children and Parents on Child Emotion Management Scales

CEMS collapsed across emotions

Scores on the CEMS subscales were combined for anger and sadness in order to increase power and to determine whether a general pattern of concordance between parents and children existed. No significant correlations were found for elementary school age children and middle school age boys. For middle school girls, significant correlations were found between the child and parent Inhibition subscales ($r = .38, p \leq .01$) and the child and parent Coping subscales ($r = .46, p \leq .01$). See Table 7 for correlations. The following analyses are based on each of the age group by gender groupings.

Anger

Elementary school age children. For boys and girls, no significant correlations between the child and parent CAMS Inhibition, Dysregulation, and Coping subscales were found. See Table 8 for correlations.

Middle school age children. For boys, no significant patterns of correlations were found between child and parent report on the CAMS and P-CAMS. For girls, however, CAMS Inhibition was positively correlated with P-CAMS Inhibition ($r = .30, p \leq .05$), Child-reported Dysregulation was significantly, positively correlated with parent-reported Dysregulation ($r = .28, p \leq .05$), and the child-reported Cope subscale was significantly, positively correlated with parent report of Anger Cope ($r = .49, p \leq .001$). See Table 8 for correlations.

Sadness

Elementary school age children. There were no significant correlations between child and parent report of sadness management for either boys and girls. See Table 9 for correlations.

Middle school age children. No significant parent-child correlations were found for boys. For girls, a significant association between the Inhibition subscale and the parent-reported Inhibition scale ($r = .34, p \leq .05$) as well as the CSMS Coping and P-CSMS Coping scale ($r = .28, p \leq .05$) were found. No significant correlations were found between CSMS Dysregulation and P-CSMS Dysregulation for girls. See Table 9 for correlations.

Influence of Child Psychopathology Symptomatology on Emotion Management Concordance

To better understand the pattern of correlations found particularly for the middle school age female sample, we examined whether child psychological symptomatology may influence the degree of parent-child agreement for emotion management strategies. There were no significant findings for boys, so the following analyses only reports on the younger and older girls.

For each measure of symptomatology, a clinically significant group was formed and a healthy group was formed based on the clinical cut-offs for each scale. For depression, girls were placed in the high group if their CDI score was greater than or equal to 13. Girls were placed in the low group if their CDI score was less than 13. For the RCMAS, high scores were those over a T-score of 60 with low scores below 60. Regarding the CBCL Internalizing and Externalizing scores, high scores were those in which the T-score was greater than or equal to 60 and low scores were those less than 60.

Influence of Clinically Elevated CDI and RCMAS Scores with CAMS and CSMS

Concordance

Elementary school age girls. No significant parent-child correlations were found for elementary school age girls who had high CDI scores. For girls with high anxiety (i.e., RCMAS) scores, a significant negative correlation was found between Sadness Inhibition and P-CSMS Inhibition ($r = -.73, p \leq .05$). This was also the case for Sadness Dysregulation and parent-reported Dysregulation ($r = -.71, p \leq .05$). See Table 10 for correlations.

Middle school age girls. For girls with high CDI scores correlation analyses revealed a significant association between CAMS Inhibition and P-CAMS Inhibition ($r = .56, p \leq .05$). CAMS Coping and P-CAMS Coping were also correlated in a positive direction ($r = .54, p \leq .05$). No significant parent-child correlations were found for elevations on the RCMAS scale. See Table 10 for correlations.

Influence of Clinically Elevated CBCL Internalizing and Externalizing Scores with CAMS and CSMS Concordance.

Elementary school age girls. No significant parent-child correlations were found for elementary school age girls who were in the clinical range of the CBCL Internalizing scale. For girls, in the clinical range on the CBCL Externalizing scale, significant negative correlations were found between girl- and parent-reported Sadness Inhibition ($r = -.56, p \leq .05$), and girl- and parent-reported Anger Inhibition ($r = -.65, p \leq .05$). See Table 11 for correlations.

Middle school age girls. No significant parent-child correlations were found for girls who were in the clinical range on the CBCL Internalizing scale. For girls with elevations on

the Externalizing scale, a significant negative correlation was found between girl- and parent-reported Anger Dysregulation ($r = -.69, p \leq .05$). See Table 11 for correlations.

Influence of Non-clinical Range CDI and RCMAS Scores with CAMS and CSMS

Concordance

Elementary school age girls. No significant parent-child correlations were found for elementary school age girls who were in the non-clinical range on the CDI scale.

Concordance between child and parent Sadness Coping was found to be significant ($r = .46, p \leq .01$) for girls who were in the non-clinical range on the RCMAS scale. See Table 12 for correlations.

Middle school age girls. For girls in the non-clinical range on the CDI scale, significant correlations were found between girl- and parent-reported Sadness Inhibition ($r = .35, p \leq .05$) and girl- and parent-reported Anger Coping ($r = .42, p \leq .05$). For middle school age girls who were non-clinical on the RCMAS scale, significant correlations were found between girl- and parent-reported Sadness Inhibition ($r = .36, p \leq .05$), and girl-and parent-reported Anger Coping ($r = .49, p \leq .01$). See Table 12 for correlations.

Influence of Non-clinical Range CBCL Internalizing and Externalizing Scores with CAMS and CSMS Concordance

Elementary school age girls. No significant parent-child correlations were found for elementary school age girls who were in the non-clinical range on the Internalizing and Externalizing scales. See Table 13 for correlations.

Middle school age girls. For girls with non-clinical level internalizing scores, significant correlations were found between girl- and parent-reported Sadness Inhibition ($r = .33, p \leq .05$), Anger Inhibition ($r = .33, p \leq .05$), and Anger Coping ($r = .45, p \leq .01$).

For girls with non-clinical levels of externalizing symptoms, concordance between girl-and parent-reported Anger Coping was found to be significant ($r = .43, p \leq .01$). See Table 13 for correlations.

Discussion

The primary goal of this study was to determine if concordance between parents, primarily mothers, and their children exists when reporting on specific aspects of children's management of anger and sadness including the use of inhibition, dysregulation, and regulation coping methods. In addition, this study examined whether parent-child concordance differed depending on child age (i.e., elementary school or middle school) and child gender. A secondary goal of this study was to replicate previous research that examined parent-child concordance on child psychopathology symptomatology (i.e., internalizing and externalizing symptoms). Finally, this study examined how symptoms of child psychopathology may influence parent-child agreement on emotion regulation strategies. The literature has established that parent psychopathology influences parental perceptions of child psychopathology and ultimately effects parent-child concordance (Schaughency & Lahey, 1985) but no research has examined the effects of child symptomatology on parent-child concordance of emotion management. As such, the results of this study contribute in novel ways to the child assessment and emotion development literature by providing new information concerning the degree of agreement between parents and children on emotion processes.

When considering the plethora of findings that emerged from this research study, several interesting patterns emerged. The degree of agreement between parents and children varied depending on whether the topic under consideration was emotion regulation skills,

such as inhibition, dysregulation and coping, or symptoms of internalizing disorders, such as anxiety and depression. The findings concerning agreement for psychological symptoms will be discussed first because there is a body of literature to which the present results can be compared. Then, the findings from the emotion regulation concordance results will be discussed.

Agreement for Psychological Symptoms

Although the majority of previous research has focused on inter-parental, and to some extent parent-teacher concordance, there is a small body of research examining parent-child agreement for internalizing problems (Achenbach et al., 1987; Stanger & Lewis, 1993). Considering the current study's findings on parent-child concordance for psychological symptoms, the results added further consensus to previous research that has found parent-child concordance for internalizing symptoms (Achenbach et al., 1987; Duhig et al., 2000; Stanger & Lewis, 1993).

For parent-child concordance in the current study, significant agreement on depressive types of internalizing symptoms was found. Specifically, the CDI was highly correlated with the CBCL Withdrawn/Depressed scale for elementary age boys and girls, and middle school age girls. The CDI was also significantly correlated with the CBCL Internalizing scale for middle school boys and girls. The agreement, however, for anxious symptomatology (RCMAS and CBCL Anxious/Depressed) was found only for middle school girls. Further, the CBCL Anxious/Depressed scale and the CDI were highly correlated for middle school boys. These findings are roughly consistent with previous research (Stanger & Lewis, 1993) that found significant agreement on internalizing behavior problems between mother-father, mother-child, or father-child relationships. Other studies have supported there

to be moderate parent-child agreement for internalizing problems (Achenbach et al. 1987; Seiffge-Krenke & Kollmar, 1998; Verhulst & Van der Ende, 1992). Specifically, Achenbach and colleagues (1987) found parent-child and teacher-child informant pairs to have significant but low levels of concordance on internalized problems with average correlations at $r = .22$. The current study, however, surpasses this correlation in strength. Seiffge-Krenke and Kollman (1998) found that agreement between parents and children was greater for internalizing symptoms, than for externalizing and that mothers' ratings of their children's behavior were significantly correlated with their child's rating. For fathers, this was not the case. Future research should examine father-child concordance to further understand this discrepancy

In addition, our data was consistent with others that indicated that parent-child agreement was higher for adolescent daughters than sons (Seiffge-Krenke & Kollmar, 1998). As documented through out the findings in the current study, parents and middle school girls had extensive agreement between the pertinent scales of the CBCL and the questionnaires that measured child-report of depression and anxiety (i.e., CDI and RCMAS). Other research, however, (Verhulst & Van der Ende, 1992) has found contradictory findings stating that more disagreement existed between parents and daughters than for sons with the degree of disagreement increasing with age.

Inter-parental concordance has generally been found to be greater for externalizing than internalizing behavior problems (Duhig et al., 2000; Sourander, Helstea, & Helenius, 1999). Externalizing behaviors may also have been more readily observable and more likely to cause emotion regulation problems which make it more salient to the observer.

Information on externalizing emotion problems, however, was not gathered by both informants in the current study.

Concordance for Emotion Regulation Variables

The degree of agreement for emotion regulation variables, however, was much less frequent than agreement on psychological symptoms. In fact, the only significant concordance was between parents and middle school age girls, specifically for the Inhibition and Coping scales for both anger and sadness and the Dysregulation scale for anger. Even when the scale scores were combined for anger and sadness, creating a general negative emotion scale, significant correlations only emerged for parents and middle school girls. Although this is an unexpected series of findings, several explanations are possible.

We found it interesting that it was the adolescent girls who tended to have the highest agreement with their parents given that adolescence is often thought of as a time of stress and storm (Holmbeck & Hill, 1988) and relations with parents are often marked by increased conflict and less parental involvement as the child seeks more independence (Collins & Russell, 1991). As such, adolescence is a time of interpersonal change in all domains including physical, cognitive, social, and emotional development.

As has been found in the concordance literature for behavioral symptoms (Achenbach et al., 1987; Duhig et al., 2000), stage of development appears to be an important factor that influences agreement. Through socialization, children learn socially acceptable emotion regulation skills that allow them to achieve interpersonal goals (Thompson, 2004). This primary vehicle of emotion socialization is through the parent-child relationship (Klimes-Dougan & Zeman, 2007; Malatesta & Haviland, 1982). Furthermore, socialization, particularly with parents, provides children with opportunity to “form expectancies or scripts

regarding the likely outcome of expressing emotion within specific contexts that subsequently influence their emotion regulation decisions.” (Cassano, Perry-Parrish, & Zeman, 2007, p. 211). Children then use these “scripts” to guide their emotion regulation efforts (Zeman & Shipman, 1997). Research has established that older children have more sophisticated emotion skills including better emotional understanding, clearer emotion decoding and encoding skills, and more flexible use of emotion regulation skills (Saarni, 1989). In other words, older children have been socialized from their parents, peers, and the external environment for a greater length of time as compared to younger children. As such, older children have had more practice using the emotion regulation “scripts” they were taught as a child and their parents have had more experience decoding and understanding their older child’s emotion expressivity than for their younger child. Further as children get older, they inevitably are more able to understand and internalize why they should manage and potentially alter emotional expressions in particular situations (Gnepp & Chilamkurti, 1988). If children have a greater understanding of the cause and effect of a particular emotion expression, they are more likely to express themselves in a way that their parents will understand.

Although the parent-child relationship changes towards less parental participation as the child gets older (Collins & Russell, 1991), it seems that even if adolescents, particularly girls, don’t spend as much time with their parents, they still express their emotions effectively so that parents recognize the cues that indicate their emotional state. Older children are able to manipulate and understand the emotion regulation “scripts” more readily than younger children and therefore are able to communicate their emotions effectively to achieve their goals. Middle school age children, particularly the girls, did in fact agree more

with their parents on anger and sadness as evident through the significant correlations on five out of six CEMS variables (i.e., Anger Inhibition, Anger Dysregulation, Anger Coping, Sadness Inhibition, and Sadness Coping).

Another explanation for the surprising parent-child concordance findings concerns the role of child gender. The previous argument claimed that developmental processes partially accounted for the higher agreement with the older age group. This supposition, however, did not hold for middle school age boys, suggesting that child gender plays a role in how parents and their sons and daughters view emotion processes. Research has also established that parents' responses to emotion displays are part of the socialization processes and help to create gender differences in emotion regulation and expression (Fuchs & Thelen, 1988). Girls are thought to be more expressive emotionally because they anticipate greater support from their parents and report feeling better if they expressed their feelings, especially sadness (Zeman & Shipman, 1997). In contrast, boys conceal their emotions, particularly, sadness, because they report that they would receive little to no support from their peers or parents (Zeman & Shipman, 1997).

Research has also established that from a very young age, boys and girls are exposed to different emotion socialization processes (Brody & Hall, 1993; Cassano et al., 2007). Mothers discuss feelings of sadness more with their daughters as compared to their sons (Cassano et al., 2007) and it is generally more socially acceptable for girls to express internalizing types of emotions (i.e., sadness) than boys (Brody & Hall, 1993; Zeman & Shipman, 1998). In general, girls are socialized to inhibit anger expression (Brody & Hall, 2000). Furthermore, Fivush (1998) found that girls tended to discuss their feelings with others and had a greater vocabulary of emotion words. Taken together, these findings

suggest that middle school girls as compared to boys are likely to be more emotionally competent than boys, which includes more self-awareness concerning how and when to express their emotions in a culturally appropriate manner. Further, given that girls are more verbal, they tend to discuss emotional states more frequently with others to explain how they feel (Fivush, 1998). Therefore, it may be that girls are more adept at sending clear emotional signals that parents are better able to detect, thus explaining the higher levels of concordance between parents and girls than parents and boys.

Another alternate reason as to why we saw more agreement between middle school age girls and parents is that mothers (94%) were the primary reporters in the current study. Mothers may understand and affiliate with daughters more so than their sons. That is, mothers may have a “home-team” advantage in that they recognize and understand their daughter’s emotional responses and expressions to events whereas they may not resonate to their adolescent sons’ efforts to communicate emotionally with them as the emotion language and behavior is foreign. Future research should investigate the concordance between fathers and their children on emotion regulation as this may provide further illumination in gender differences in emotion processes.

Effect of Child Psychopathology on Concordance

Maternal depression has been established to be an important informant characteristic to consider when interpreting concordance results as the depression symptoms potentially skew the mother’s perception (Breslau, Davis, & Prabucki, 1988; Fergusson, Lynskey, & Horwood, 1993; Schaughency & Lahey, 1985). In the current study, we explored the possibility that child psychopathology symptoms may play a role in parent-child agreement. As such, symptoms of child psychopathology did seem to influence the degree of agreement

between parents and children; child gender but not age group appeared to be particularly sensitive to this effect. Little to no parent-boy agreement was found for boys who were either in the healthy or clinical ranges for both age groups. As a result, we analyzed the patterns of significant correlations for only the elementary and middle school age sample of girls.

Two general sub-themes emerged within these findings. First, for younger girls, more disagreement between parents and daughters about emotion regulation strategies emerged if the girls had clinical elevations for depression. As reflected by the negative correlations, clinically elevated levels of depression influenced parent-child agreement for the elementary school age girls on almost every emotion regulation skill, except for Anger Coping. Younger girls with clinical elevations on the RCMAS scale also exhibited significant disagreement with their parents on the sadness regulation skills with correlations for the other emotion regulation skills in the negative but non-significant direction. This relationship also held for parent report of child symptomatology on the CBCL. That is, parent-child concordance was in the negative direction, albeit non-significant, when parents viewed their daughters as having a sufficient number of symptoms on the CBCL Internalizing scale to result in clinical elevation.

On the CBCL Externalizing scale, elementary school girls and their parents also evidenced disagreement as reflected by significant negative correlations for Sadness Inhibition and Anger Inhibition. Agreement correlations for the other emotion regulation strategies for the elementary school girls were also in the negative direction. It may be that when parents view their daughter as behavior in externalized, aggressive and/or inattentive manners, it is difficult for them to notice any inhibitory behaviors. Thus, the girls may

actually be inhibiting anger or sadness but their efforts at this are not as noteworthy as their externalized behaviors. It is interesting that agreement for Anger Dysregulation did not occur.

For non-depressed elementary school age girls, correlations were moderate, non-significant but in the positive direction. For elementary school age children who were in the non-clinical range on the RCMAS, parent-child concordance was significant for the Sadness Coping scale. Elementary school age girls who were non-clinical on the CBCL Internalizing and Externalizing scales had positive direction, non-significant correlations with their parents. Thus, it appears that psychopathology symptoms reported by either the child or the parent exacerbated difficulties with parent-child concordance for emotion processes, which clearly has implications when making diagnoses based on both child and parent report for this particular age group.

Second, regardless of the symptomatology level, there were still agreement between parents and adolescent girls, which adds further support for our finding that older girls and parents have a better, mutual understanding of adolescent girls' emotion processes that is superior to younger age groups and older boys. Specifically, adolescent girls with clinically elevated CDI scores had significant agreement with their parents for Anger Inhibition and Anger Coping. Symptoms associated with clinical level of anxiety did not influence agreement for adolescent girls and their parents with non-significant correlations but in the positive direction. Furthermore, when middle school girls were rated by their parents on the CBCL, parent-child agreement correlations for middle school girls were in the positive direction for internalizing symptoms. On the other hand, for girls whose parents viewed them as having elevated externalizing symptom scores, they disagreed on their perceptions of

Anger Dysregulation. It may be that parents are more sensitive to examples of exaggerated and non-constructive displays of anger from their daughters who have externalizing types of problems and/or the daughters do not “own up” to these behaviors and downplay their significant, a symptom of externalizing issues (i.e., lack of responsibility of behavior).

Middle school age girls with non-clinical range CDI scores agreed with their parents on Anger Coping and Sadness Inhibition regulation skills. Furthermore, for older girls with no clinically significant anxiety, parent-child concordance was significant for the Anger Coping and Sadness Inhibition scale. When considering parent-child concordance for children that were non-clinical on the CBCL, agreement was found to be significant for the Anger Inhibition and Sadness Inhibition scales whereas agreement for the Anger Cope scale was highly significant for internalizing symptoms. As for the agreement between parents and middle school girls who were non-clinical on the CBCL Externalizing scale, concordance was found to be significant for the Anger Cope scale. Therefore, middle school girls and their parents agreed on particular emotion regulation skills regardless of whether the child was in the healthy or clinical range on psychopathology measures. This is dissimilar to what was found for the elementary school age and further demonstrates the middle school girls, perhaps due to their age and gender, have a better understanding of their emotions and are thus able to convey emotion regulation skills that are recognizable to their parents. Certainly more research is needed to better understand this preliminary and intriguing set of findings. Further, it is interesting that no significant findings emerged for boys, which warrants more detailed empirical inquiry.

Limitations

Although an interesting set of findings emerged from this research, there are several limitations that must be considered when interpreting the results. First, the sample size was not large enough to adequately test differences in agreement for those children with elevated clinical symptomatology scores. Thus, this limitation reduced the power to detect differences. With a larger sample size, it may have been possible to document more robust parent-child concordance findings and potentially determine whether child psychopathology has a greater effect on agreement than indicated in this study. Second, our parent sample was comprised predominantly of mothers. Previous research has established that fathers make unique contributions when reporting on the child's emotion problems (Cassano et al., 2006). Future research should examine whether paternal report differs from maternal report for children's emotion regulation as has been found in the behavioral symptomatology literature (Phares, 1997). Third, only a small subset of emotion skills was examined in this study. It would also have been beneficial to examine other emotion skills such as regulation or management of positive emotions, emotional understanding, emotion awareness, etc. Finally, some of the CEMS scales (i.e., CSMS Dysregulation, P-CSMS Dysregulation, and P-CSMS Cope) had low internal consistency.

Conclusion

When considering the available research, it appears that there is no overarching standard as to who (i.e., parent, child, teacher, or peer) should be considered the "best" informant of a child's emotion regulation skills. A wealth of information is necessary to obtain a unique and complete view of the child's emotion regulation skills repertoire. Multiple informants are important to obtain so that differences in how the child or adolescent

describes his or her emotion problems, displays emotion regulation skills, and how the other informants rate the child's problems can be detected. In other words, it is evident that no single informant is best at reporting on the wide spectrum of emotion skills and/or problems. Multiple informants are essential because it allows for the comparison of parents, teachers, and child ratings and therefore, bolsters the ability to assess the child's emotion regulation abilities and mental health in a more complete manner. To this end, future research efforts should focus on identifying why the differences exist, particularly for boys, and how to best use the information that is gleaned. In the meantime, it is important for researchers investigating emotion regulation processes to carefully consider how to use both parent and child data as they appear to provide distinct perceptions of emotion regulation skills.

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Table 1

Internal Consistencies for CEMS scales

	Age	
	Elementary	Middle
CAMS Inhib	.70	.76
CAMS Dys	.55	.65
CAMS Cope	.66	.80
CSMS Inhib	.71	.72
CSMS Dys	.53	.45
CSMS Cope	.66	.80

Note. CAMS = Children's Anger Management Scale; CSMS = Children's Sadness Management Scale; Inhib = Inhibition subscale; Dys = Dysregulation subscale.

Table 2

Internal Consistencies for the Child Behavior Checklist

	Age	
	Elementary	Middle
CBCL(Anx/Dep)	.65	.67
CBCL(Wi/Dep)	.62	.72
CBCL(Internalizing)	.76	.77
CBCL(Externalizing)	.85	.91

Note. Anx = Anxious; Wi = Withdrawn; Dep = Depression.

Table 3

Internal Consistencies for P-CEMS scales

	Age	
	Elementary	Middle
P-CAMS Inhib	.78	.77
P-CAMS Dys	.73	.73
P-CAMS Cope	.78	.82
P-CSMS Inhib	.77	.80
P-CSMS Dys	.72	.42
P-CSMS Cope	.63	.40

Note. P-CAMS = Children's Anger Management Scale: Parent version; P-CSMS = Children's Sadness Management Scale: Parent version; Inhib = Inhibition subscale; Dys = Dysregulation subscale.

Table 4

Descriptive Statistics for all Variables

<i>Variable</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Observed Range</i>
Child-Report				
AngInhib	310	1.74	.54	1-3
AngDys	310	1.78	.57	1-3
AngCope	310	2.08	.55	1-3
SadInhib	310	1.93	.55	1-3
SadDys	310	1.63	.49	1-3
SadCope	310	2.12	.42	1-3
CEMSInhib	310	3.68	.91	2-6
CEMSDys	310	3.41	.85	2-6
CEMSCope	310	4.20	.77	2-6
Parent-Report				
PAngInhib	177	1.40	.42	1-3
PAngDys	177	1.69	.55	1-3
PAngCope	177	2.04	.52	1-3
PSadInhib	176	1.47	.45	1-2.75
PSadDys	177	1.71	.47	1-3
PSadCope	175	1.98	.39	1-2.80
PInhib	176	2.87	.75	2-5.25
PDys	177	3.40	.85	2-6
PCope	175	4.02	.79	2-5.80

Table 5

Correlations of the Child Behavior Checklist, Children's Depression Inventory, and

Revised Children's Manifest Anxiety Scale collapsed across age and gender

	CDI	RCMAS
CBCL		
CBCL(Anx/Dep)	.31**	.22**
CBCL(Wi/Dep)	.36**	.08
CBCL(Internalizing)	.36**	.21**
CBCL(Externalizing)	.30**	.20**

Note. * $p < .05$, ** $p < .01$; Anx = Anxious; Wi = Withdrawn; Dep = Depression.

Table 6

Correlations between the Child Behavior Checklist, Children's Depression Inventory, and the Revised Children's Manifest Anxiety Scale

CBCL			CDI	RCMAS
<i>Gender</i>	<i>Age Group</i>			
Boy	Elementary	CBCL(Anx/Dep)	.22	.06
		CBCL(Wi/Dep)	.40**	.13
		CBCL(Internalizing)	.29	.04
		CBCL(Externalizing)	.19	.07
	Middle	CBCL(Anx/Dep)	.33**	.20
		CBCL(Wi/Dep)	.25	-.05
		CBCL(Internalizing)	.34*	.11
		CBCL(Externalizing)	.39*	.16
Girl	Elementary	CBCL(Anx/Dep)	.25	.03
		CBCL(Wi/Dep)	.32*	.07
		CBCL(Internalizing)	.25	.04
		CBCL(Externalizing)	.21	.17
	Middle	CBCL(Anx/Dep)	.45**	.44**
		CBCL(Wi/Dep)	.46**	.12
		CBCL(Internalizing)	.55**	.47**
		CBCL(Externalizing)	.41**	.36**

Note. * $p < .05$, ** $p < .01$; Anx = Anxious; Wi = Withdrawn; Dep = Depression.

Table 7

Correlations for CEMS and P-CEMS collapsed across Anger and Sadness

Child			Inhib	Parent Dys	Cope
<i>Gender</i>	<i>Age Group</i>				
Boy	Elementary	Inhib	.07		
		Dys		.13	
		Cope			.09
	Middle	Inhib	-.04		
		Dys		.09	
		Cope			.07
Girl	Elementary	Inhib	-.16		
		Dys		.10	
		Cope			.16
	Middle	Inhib	.38**		
		Dys		.26	
		Cope			.46**

Note. * $p < .05$, ** $p < .01$; CEMS = Children's Emotion Management Scale; P-CEMS = Children's Emotion Management Scale: Parent version; Inhib = Inhibition subscale; Dys = Dysregulation subscale.

Table 8

Correlations between CEMS and P-CEMS for Anger

Child			Inhib	Parent Dys	Cope
<i>Gender</i>	<i>Age Group</i>				
Boy	Elementary	Inhib	.01		
		Dys		.13	
		Cope			.03
	Middle	Inhib	-.08		
		Dys		.22	
		Cope			.19
Girl	Elementary	Inhib	-.10		
		Dys		.08	
		Cope			.11
	Middle	Inhib	.30*		
		Dys		.28*	
		Cope			.49**

Note. * $p < .05$, ** $p < .01$; CEMS = Children's Emotion Management Scale; P-CEMS = Children's Emotion Management Scale: Parent version; Inhib = Inhibition subscale; Dys = Dysregulation subscale.

Table 9

Correlations between CEMS and P-CEMS for Sadness

Child			Inhib	Parent Dys	Cope
<i>Gender</i>	<i>Age Group</i>				
Boy	Elementary	Inhib	.05		
		Dys		.11	
		Cope			.08
	Middle	Inhib	.20		
		Dys		.03	
		Cope			-.13
Girl	Elementary	Inhib	-.21		
		Dys		.02	
		Cope			.23
	Middle	Inhib	.34*		
		Dys		.03	
		Cope			.28*

Note. * $p < .05$, ** $p < .01$; CEMS = Children's Emotion Management Scale; P-CEMS = Children's Emotion Management Scale: Parent version; Inhib = Inhibition subscale; Dys = Dysregulation subscale.

Table 10

Correlations between CAMS, CSMS and P-CAMS, P-CSMS with Clinically Elevated Children's Depression Inventory and Revised Children's Manifest Anxiety Scale sample

			Parent					
			AInhib	ADys	ACope	SInhib	SDys	Scope
CDI								
Child								
<i>Gender</i>	<i>Age Group</i>							
Girl	Elementary	AInhib	-.09					
		ADys		-.09				
		ACope			.18			
		SInhib				-.43		
		SDys					-.12	
		Scope						-.01
Girl	Middle	AInhib	.56*					
		ADys		.27				
		ACope			.54*			
		SInhib				.27		
		SDys					.25	
		Scope						.16
RCMAS								
Child								
<i>Gender</i>	<i>Age Group</i>							
Girl	Elementary	AInhib	-.45					
		ADys		.05				
		ACope			-.44			
		SInhib				-.73*		
		SDys					-.71*	
		Scope						-.36
Girl	Middle	AInhib	.39					
		ADys		.34				
		ACope			.36			
		SInhib				.21		
		SDys					-.21	
		Scope						.36

Note. * $p < .05$, ** $p < .01$; CAMS = Children's Anger Management Scale; CSMS = Children's Sadness Management Scale; P-CAMS = Children's Anger Management Scale: Parent version; P-CSMS = Children's Sadness Management Scale: Parent version; AInhib = Anger Inhibition subscale; ADys = Anger Dysregulation subscale; ACope = Anger Cope subscale; SInhib = Sadness Inhibition subscale; SDys = Sadness Dysregulation subscale; Scope = Sadness Cope subscale.

Table 11

Correlations between CAMS, CSMS and P-CAMS, P-CSMS with Clinically Elevated Child Behavior Checklist

			Parent					
			AInhib	ADys	ACope	SInhib	SDys	Scope
CBCL(Int)								
Child								
<i>Gender</i>	<i>Age Group</i>							
Girl	Elementary	AInhib	-.55					
		ADys		.06				
		ACope			-.09			
		SInhib				-.40		
		SDys					-.19	
		Scope						.08
Girl	Middle	AInhib	.05					
		ADys		.02				
		ACope			.46			
		SInhib				.42		
		SDys					.43	
		Scope						.42
CBCL(Ext)								
Child								
<i>Gender</i>	<i>Age Group</i>							
Girl	Elementary	AInhib	-.65*					
		ADys		-.19				
		ACope			.03			
		SInhib				-.56*		
		SDys					-.42	
		Scope						-.05
Girl	Middle	AInhib	.28					
		ADys		-.69*				
		ACope			.56			
		SInhib				.50		
		SDys					.35	
		Scope						.50

Note. * $p < .05$, ** $p < .01$; CAMS = Children's Anger Management Scale; CSMS = Children's Sadness Management Scale; P-CAMS = Children's Anger Management Scale: Parent version; P-CSMS = Children's Sadness Management Scale: Parent version; AInhib = Anger Inhibition subscale; ADys = Anger Dysregulation subscale; ACope = Anger Cope subscale; SInhib = Sadness Inhibition subscale; SDys = Sadness Dysregulation subscale; Scope = Sadness Cope subscale.

Table 12

Correlations between CAMS, CSMS and P-CAMS, P-CSMS with Non-Clinically Elevated Children's Depression Inventory and Revised Children's Manifest Anxiety Scale sample

			Parent					
			AInhib	ADys	ACope	SInhib	SDys	Scope
CDI								
Child								
<i>Gender</i>	<i>Age Group</i>							
Girl	Elementary	AInhib	-.05					
		ADys		.24				
		ACope			.01			
		SInhib				.11		
		SDys					.05	
		Scope						.32
Girl	Middle	AInhib	.18					
		ADys		.27				
		ACope			.42*			
		SInhib				.35*		
		SDys					-.05	
		Scope						.27
RCMAS								
Child								
<i>Gender</i>	<i>Age Group</i>							
Girl	Elementary	AInhib	.03					
		ADys		.09				
		ACope			.20			
		SInhib				-.13		
		SDys					.12	
		Scope						.46**
Girl	Middle	AInhib	.28					
		ADys		.23				
		ACope			.49**			
		SInhib				.36*		
		SDys					.03	
		Scope						.25

Note. * $p < .05$, ** $p < .01$; CAMS = Children's Anger Management Scale; CSMS = Children's Sadness Management Scale; P-CAMS = Children's Anger Management Scale: Parent version; P-CSMS = Children's Sadness Management Scale: Parent version; AInhib = Anger Inhibition subscale; ADys = Anger Dysregulation subscale; ACope = Anger Cope subscale; SInhib = Sadness Inhibition subscale; SDys = Sadness Dysregulation subscale; Scope = Sadness Cope subscale.

Table 13

Correlations between CAMS, CSMS and P-CAMS, P-CSMS with Non-Clinically Elevated Child Behavior Checklist

			Parent					
			AInhib	ADys	ACope	SInhib	SDys	SCope
CBCL(Int)								
Child								
<i>Gender</i>	<i>Age Group</i>							
Girl	Elementary	AInhib	.08					
		ADys		.02				
		ACope			.21			
		SInhib				-.06		
		SDys					.09	
Girl	Middle	SCope						.27
		AInhib	.33*					
		ADys		.20				
		ACope			.45**			
		SInhib				.33*		
		SDys				-.03		
		SCope					.22	
CBCL(Ext)								
Child								
<i>Gender</i>	<i>Age Group</i>							
Girl	Elementary	AInhib	.20					
		ADys		.36				
		ACope			.14			
		SInhib				-.06		
		SDys					.25	
Girl	Middle	SCope						.07
		AInhib	.24					
		ADys		.31				
		ACope			.43**			
		SInhib				.31		
		SDys				-.22		
		SCope					.30	

Note. * $p < .05$, ** $p < .01$; CAMS = Children's Anger Management Scale; CSMS = Children's Sadness Management Scale; P-CAMS = Children's Anger Management Scale: Parent version; P-CSMS = Children's Sadness Management Scale: Parent version; AInhib = Anger Inhibition subscale; ADys = Anger Dysregulation subscale; ACope = Anger Cope subscale; SInhib = Sadness Inhibition subscale; SDys = Sadness Dysregulation subscale; SCope = Sadness Cope subscale.