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Emotion Management Skills of School-Age Children in the Context of Risk: The Role of Parent Socialization Strategies

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EMOTION MANAGEMENT SKILLS OF SCHOOL-AGE CHILDREN IN THE CONTEXT OF RISK: THE ROLE OF PARENT SOCIALIZATION STRATEGIES

by

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ABSTRACT

EMOTION MANAGEMENT SKILLS OF SCHOOL-AGE CHILDREN IN THE CONTEXT OF RISK:
THE ROLE OF PARENT SOCIALIZATION STRATEGIES

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Exposure to risk in childhood can disrupt social and emotional processes (Leventhal & Brooks-Gunn, 2000) and lead to the development of physical and mental health issues across the lifespan (Flouri, 2008). This study sought to better understand the associations between contextual risk, parent socialization of emotion, and children's emotion regulation skills in an at-risk sample. Information about risk was obtained from U.S. Census data and a family questionnaire. Parent socialization strategies and children's ER skills were measured using self-report and interview methods. Though not to the degree that was expected, results indicate that contextual risk relates to both parent socialization strategies and children's ER skills. Higher levels of neighborhood risk were associated with less use of adaptive ER skills (e.g., Coping) in girls and less use of positive socialization strategies by parents (e.g. less Reward, more Override). Parental incarceration was associated with a number of negative socialization strategies used by parents for boys and girls. Parent socialization strategies of Reward were related to more Anger Inhibition, and Override strategies were related to more Anger Dysregulation. Interaction analyses indicated that risk moderated the relations between parent socialization strategies and ER. Relations differed in low and high risk contexts, with the impact of parent socialization strategies diminishing at higher levels of risk.

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CHAPTER I

INTRODUCTION

Contextual and environmental risk has been studied extensively in the psychological literature because of the well-documented link between risk factors and the development of physical and mental health issues across the lifespan (e.g., Flouri, 2008). Risk factors can include many variables that interact with and influence a correspondingly large range of outcomes. Similarly, emotion regulation (ER) is a topic in the child development literature that has been observed and theorized to impact a range of other child outcomes and areas of functioning (e.g., Zeman, Cassano, Perry-Parrish, & Stegall, 2006). It is often viewed as a mediating variable and potential protective factor that can affect relations between environmental factors, such as contextual risk or parenting behaviors, and child outcomes, such as academic or behavioral outcomes. In this paper, relations between risk factors and children's ER are examined directly by studying ER as an outcome rather than as a mediating variable. Parent socialization of ER is instead examined as a mediating variable between risk and ER outcomes.

The mechanisms by which risk can affect outcomes can be direct or indirect, especially when considering the ways in which risk impacts child development and ER. Risk factors experienced during childhood, such as low socioeconomic status (SES), exposure to violence, negative life events, family conflict, and child maltreatment, among others, can affect children not only through direct exposure and learning experiences, but also indirectly by way of how risk might affect their parents, families, schools, and communities (Leventhal & Brooks-Gunn, 2000). Parent education status, SES, and employment, among other factors, may affect parents' resources, physical health, and

psychological well-being as well as parenting practices and the type and quality of interactions they engage in with their children (Burchinal, Vernon-Feagans, Cox, & Key Family Life Project Investigators, 2008; Dallaire et al., 2008; Morris, Silk, Steinberg, Myers, & Robinson, 2007). Risk can therefore affect the ways in which parents socialize their children to regulate their emotions, which subsequently can affect children's functioning. In addition to studying the relationship between risk and ER, this study utilizes an ecological framework to examine how parent socialization of emotion might serve as a mediator between contextual risk and the ER skills of children.

The following literature review will summarize the research conducted on the topic of risk and how it relates to child ER and parent socialization of emotion. The review will highlight the need for closer examination of the relation between risk as a predictor, ER as an outcome, and the process of parent socialization of emotion as a potential mediator of this relation.

The Study of Risk

It has been well established in the developmental literature that exposure to risk is associated with negative child outcomes (e.g., Flouri, 2008; Masten, 2001). Researchers have investigated the influence of a variety of risk factors, including low SES, minority status, and residential instability (Leventhal & Brooks-Gunn, 2000), exposure to violence, child maltreatment, negative life events, and marital discord (Appleyard, Egeland, van Dulmen, & Sroufe, 2005), parent criminality, substance abuse, and mental health (Ackerman, Izard, Schoff, Youngstrom, & Kogos, 1999), and large family size, single-parent households, low parental education, and parental unemployment (Burchinal et al., 2008; Schoon, Sacker, & Bartley, 2003). Many risk factors have been established

as statistical predictors of developmental problems and difficulties ranging from mental health problems to academic difficulties (Xue, Leventhal, Brooks-Gunn, & Earls, 2005; Gutman, Sameroff, & Cole, 2003).

Exposure to risk has also been associated with physiological outcomes in children. Evans (2003) investigated the effects of multiple risk factors on the allostatic load of rural children. Allostatic load is defined as a function of physical and social demands, genetic predisposition, and lifestyle choices. Based on these multiple components, allostatic load has the potential to affect not only physical functioning, but socioemotional and cognitive processes as well. The risk factors measured in this study included sociodemographic risk factors, such as poverty, environmental risk factors, such as housing problems, and psychosocial risk factors, such as family turmoil. As the number of risk factors increased, mothers reported more psychological distress in their children. Physiological changes were observed in stress activity indicators, such as blood pressure and cortisol levels, and body mass index. In general, as exposure to risk increased, overall "wear and tear" on the body also increased. These findings are noteworthy due to the idea that the accumulation of small changes in physiological functioning can lead to serious physical and psychological morbidity (Evans, 2003). These observed associations between risk and outcomes in children highlight the importance of continuing to investigate the impact of risk factors and the potential mechanisms by which they may operate.

Long-term Effects

In addition to its effects on proximal child outcomes, early exposure to risk in childhood can contribute to long-term difficulties in adolescence and adulthood. In a

2005 study, Appleyard and colleagues investigated the impact of multiple risk factors experienced in early and middle childhood on child outcomes and behavior in adolescence. At-risk status was established based on the presence of certain factors, including child maltreatment, inter-parental violence ratings, family disruption, stressful life events, and SES. Outcomes included children's internalizing and externalizing behavior problems as measured by parent, teacher and child reports. Results showed that children with more risk factors were more likely to experience a greater number of internalizing and externalizing behavior problems throughout their development. The authors highlighted not only the long-term impact of risk, but also the influence of accumulated risk. Children who experienced more risk had worse outcomes through adolescence (Appleyard et al., 2005).

Risk has also been associated with negative outcomes that persist into adulthood. Much attention has been given to risk factors known as adverse child experiences, or ACEs. Common ACEs include abuse, domestic violence, and other forms of household dysfunction experienced during childhood. Studies have shown that ACEs are highly inter-related and are associated with health problems and depression (Anda et al., 2001; Chapman, Whitfield, & Felitti, 2004; Dube et al., 2001). For example, in a sample of 9,460 adult respondents, 20.8% of women and 14.0% of men reported experiencing three or more ACEs up until the age of 18. Women who reported five or more ACEs had a five-fold increase for a history or recent episode of depression, and for men, most ACEs were also associated with depression (Chapman et al., 2004).

Socioeconomic risk has also been associated with poor long-term outcomes. In a longitudinal study conducted in Great Britain that followed a sample of about 30,000

individuals from ages 7 through 42, disadvantaged SES experienced in childhood was found to be associated with poor adjustment in adult psychological functioning (Schoon et al., 2003). Disadvantaged status in childhood was defined based on factors of parental social class, including job status, education, prestige, and lifestyle, as well as material conditions such as overcrowding, lack of household amenities, housing tenure, and state benefits. Results of the study found that behavior adjustment in childhood and adolescence, including emotional problems and conduct problems, is affected by socioeconomic disadvantage. These effects persisted and were reflected in adult functioning. Authors proposed the idea that experiencing socioeconomic disadvantage during childhood increases the probability of risk accumulation throughout the lifespan.

Based on evidence from these studies, risk experienced in childhood seems to have an enduring impact and can affect psychosocial adjustment from birth into adulthood. The implication is that efforts aimed at understanding and reducing risk factors, especially those experienced early in childhood, can have potentially dramatic effects on mental and physical health and well-being throughout development.

Quantifying Risk

There is a growing recognition in the developmental literature that risk factors do not occur in isolation (Flouri, 2008). Risk factors tend to co-occur and the accumulation of risk is acknowledged as an important contributor to child outcomes (Leventhal & Brooks-Gunn, 2000). Cumulative risk models offer an approach for quantifying risk that recognizes the natural co-occurrence and cumulative effects of risk factors. Rutter first suggested this approach in 1979, and it has since come to be known as the cumulative risk hypothesis. This hypothesis states that the accumulation of multiple risk factors will

lead to a greater prevalence of clinical problems throughout development. Less focus is placed on the presence or absence of specific risk factors and more on the accumulation of factors (Rutter, 1979). In his 1979 Isle of Wight study, Rutter identified a variety of risk factors, including severe marital discord, low social status, large family size, paternal criminality, maternal mental disorder, and foster placement. Another well-known study, known as the Rochester Longitudinal Study, examined the effects of accumulated risk factors. These included history of maternal mental disorder, high maternal anxiety, rigid parental attitudes, beliefs, and values about child development, observations of few positive parent-child interactions, unskilled occupational status, low maternal educational status, disadvantaged minority status, single parenthood, stressful life events, and large family size (Sameroff, Seifer, Zax, & Barocas, 1987). Although these factors vary and represent specific domains, cumulative risk models focus on the number of factors rather than the type of specific factors that contribute to child maladaptation (Ackerman et al., 1999).

A study by Ackerman and colleagues (1999) provides an example of the use of a cumulative risk approach. In this study, a cumulative risk index was calculated by examining the number of contextual risk factors derived from a demographic interview, a family history interview, and the Life Events Survey. Eleven risk indicators and their inclusion criteria were identified in order to compute a score of overall risk for each family. Seven of the indicators were associated with increased likelihood of behavioral problems: (a) antisocial behavior by biological parent, (b) alcohol or drug abuse by biological parent, (c) child having lived with more than one family, (d) psychiatric episodes of biological parent, (e) primary caregiver being a high school dropout, (f)

family currently contains single adult parent, and (g) family currently on welfare. Four additional indicators were continuous variables identified as occurring in 25% to 30% of the sample. These included: (a) Four or more children in the family, (b) sum of four or more negative life events, (c) three or more changes in caregiver intimate relationships during child's lifetime, (d) four or more changes of family residence. After evaluating these risk indicators and computing overall scores, researchers were able to examine the relationship between accumulated risk and problem behaviors in children. Findings suggested that the cumulative risk index was a useful representation of risk and that the accumulation of risk factors was associated with increased child problem behaviors (Ackerman et al., 1999). Other studies in the risk literature also provide support for the use of a cumulative risk approach (e.g., Burchinal, Roberts, Hooper, & Ziesel, 2000; Burchinal et al., 2008; Greenberg et al. 1999).

Contextual frameworks for considering risk

When determining the types of risk factors to include in a cumulative risk model, it is important to consider the relationships between an individual and his or her environment in order to incorporate the different levels of risk that may be present. The person-context interactions between children and their families with peers, schools, neighborhoods, and communities are important to consider when studying human development and outcomes (Bronfenbrenner, 1979, 1989). Bronfenbrenner's ecological model provides a framework by which one can examine the different contextual levels that may influence children's development. This model emphasizes the need to view an individual within different contexts, the bidirectional effects of person-context

interactions, and the need for researchers to more closely examine these contexts and relations.

Dallaire et al. (2008) utilized a contextual framework for considering risk factors to study the relationship between risk and children's depressive symptoms. Following Bronfenbrenner's model, community-level and individual-level risk factors were examined. Community-level risk factors included neighborhood risk variables, such as poverty and unemployment, whereas individual-level risk factors were further broken down to include demographic, familial, personal, and biological or genetic risk variables and characteristics. Demographic risk variables included parental income and education, familial risk variables included negative parenting behaviors and stressful life events, and personal risk variables included children's cognitions and self-perceptions. Results from the study showed that the community-level risk factors related significantly to children's symptoms of depression, even after accounting for demographic and familial risk factors (Dallaire et al., 2008). These findings point to the importance of examining the complex relationships between individuals and their context and recognizing that neighborhood factors appear to have an influence on outcomes above and beyond that which is explained by individual-level factors.

Community and Neighborhood Level

Researchers have become more aware of the importance of community and neighborhood level factors when considering the accumulation of risk. The inclusion of multiple levels of contextual risk, including neighborhood and community effects, has become more common in the developmental psychology literature (Leventhal & Brooks-Gunn, 2000). These factors lay at the most peripheral level and can be difficult to analyze

based on the need to define appropriate units of study. Defining a neighborhood or a community level factor can be more arbitrary than defining individual and family level factors, which have more clearly defined boundaries. To address this issue, many studies utilize census tract data to define neighborhood units. Based on a review conducted by Leventhal and Brooks-Gunn (2000) of studies using census tract data, commonly used dimensions obtained from census data include income or SES and racial and ethnic composition. SES variables are typically focused on income, job status, and education levels. Measures of ethnic composition assess the percentage of African-Americans, Latinos, and foreign-born residents.

Researchers have studied how neighborhood variables affect specific child and adolescent domains, including school readiness, achievement, and behavioral and emotional functioning. High neighborhood SES seems to have strong and beneficial effects on IQ, verbal ability, and reading scores for young and early school-age children (Brooks-Gunn, Duncan, Klebanov, & Sealand, 1993; Chase-Lansdale, Gordon, Brooks-Gunn, & Klebanov, 1997; Duncan, Brooks-Gunn, & Klebanov, 1994; Klebanov, Brooks-Gunn, Chase-Lansdale, & Gordon, 1997; Klebanov, Brooks-Gunn, & Duncan, 1994; Klebanov, Brooks-Gunn, McCarton, & McCormick, 1998). Similarly, high neighborhood SES has shown other positive associations with achievement in math, testing skills, and GPA for adolescents, with the effects for older adolescents seeming to be more salient for European-American over African-American students (Dornbusch, Ritter, & Steinberg, 1991; Entwisle, Alexander, & Olson, 1994; Halpern-Felsher et al., 1997).

In general, results have shown that living in a poor and economically stressed neighborhood is associated with poor outcomes for children (McLoyd, 1998). Findings

regarding behavior problems in particular are not consistent, but there is evidence that low SES neighborhoods have an adverse effect on children's and adolescents' mental health, with a seemingly stronger association with externalizing rather than internalizing behaviors (see Leventhal & Brooks-Gunn, 2000, for a review). In a 1996 study conducted by Chase-Lansdale and Gordon, African-American children, ages five through six, living in a low SES neighborhood exhibited more externalizing behavior problems than those living in a higher SES neighborhood. In the same sample, male joblessness, a factor that often contributes to measures of SES, was also positively associated with internalizing and externalizing behavior problems (Chase-Lansdale & Gordon, 1996).

Living in an impoverished neighborhood and exposure to community violence has also been associated with the development of depressive symptoms in African-American youth (Fitzpatrick, Piko, Wright, & LaGory, 2005). In addition, neighborhood context has been associated with the development of maladaptive behaviors over time. In a 2010 study, Vanfossen and colleagues examined the longitudinal effects of neighborhood context on the development of aggression in children. Neighborhood factors, including violence, income levels, employment, and percentage of single males and female-headed household, were examined while controlling for the impact of family level factors. Results showed that neighborhood context can have an impact on development of aggression, with levels of violence, median income, and employment having the strongest impact. Interestingly, these effects were not manifested in first grade, but between first and seventh grades, indicating that risk factors can become more prevalent at different stages of development, such as the time of transition into middle school (Vanfossen, Brown, Kellam, Sokoloff, & Doering, 2010).

It is important to note that neighborhood factors, such as low SES, have been associated with children's problem behaviors even after accounting for family and individual level variables (e.g., Dallaire et al., 2008; Kalff et al., 2001). Neighborhood conditions have also been shown to affect children's development above and beyond genetic level variables. In a study using a twin design, researchers found that neighborhood disadvantage was associated with increased risk for emotional and behavioral problems after accounting for genetic influence (Caspi, Taylor, Moffitt, & Plomin, 2000). These studies suggest the importance of focusing on neighborhood level variables, how they may interact with variables at other contextual levels, and how interventions might focus not only on individual level but also neighborhood level characteristics.

Based on the research literature, it is evident that neighborhood and community level risks are often associated with negative child outcomes. The mechanisms by which community and neighborhood factors influence outcomes, however, are varied, and more research is needed that explores the mechanisms by which neighborhood characteristics influence child development (Dallaire et al., 2008; Vanfossen et al., 2010). Careful examination of different levels of contextual risk as well as potential mediators and protective factors is important to help better understand these relations.

School Level

Schools represent a context in which children spend a considerably large portion of time throughout their development. At school, children engage in child-peer and child-teacher relationships that impact their development. In addition, the bidirectional influences between the social environments of the home, school, and neighborhood are

important to consider when exploring how contextual factors affect development (Lochman, 2004).

Classrooms and schools with poor academic performance and high levels of aggression and violence can pose risks to children's developmental outcomes. In a study examining classroom and school environments on children's behaviors, poor classroom environments were associated with higher levels of student aggression and lower levels of academic focus. Children's aggressive behaviors were found to increase when placed in classrooms with high percentages of aggressive children (Barth, Dunlap, Dane, Lochman, & Wells, 2004). Other studies have shown that school and neighborhood safety are strongly associated with academic performance in urban environments (Millam, Furr-Holden, & Leaf, 2010). Findings such as these highlight the importance of considering influences of school level factors, such as safety and academic performance, on children's outcomes, recognizing that the effects are often bidirectional.

Family and Individual Level

In addition to community and neighborhood variables, it is important to consider the influence of demographics risk factors, familial risk factors, and personal level factors on child outcomes. Many of these variables are similar to those measured at the neighborhood level, including family income, parent education levels, and race and ethnicity. Additional variables that are commonly considered at this level include maternal age at birth, family structure, and family size (Leventhal & Brooks-Gunn, 2000). For example, in the 2005 study conducted by Appleyard and colleagues, at-risk status of participants was based on family factors which included low maternal education attainment, single motherhood, high levels of stress, and low levels of social support

(Appleyard et al., 2005). Other studies have included additional family level demographic risk factors such as number of children in the household, stressors or negative life events, receipt of public assistance, and mental health status (Burchinal et al., 2008; Xue et al., 2005).

Due to the common notion that risk factors inevitably affect not just children, but also their families, the impact of risk on parenting is important to consider. Parenting variables have been identified as mediators that have the potential to serve as additional family-level risk factors or as possible protective factors between risk and child outcomes (Burchinal et al., 2008). For example, when considering neighborhood factors, the implicit premise is that neighborhood factors act as indirect influences, operating through more proximal behaviors, such as parenting (Leventhal & Brooks-Gunn, 2000).

In a 2008 study, Burchinal and colleagues sought to investigate the direct relationship between risk and parenting variables. Authors were interested in examining how this relationship subsequently impacted development of early cognitive development in infants living in low-income rural settings. In general, children with more social risks tended to experience more negative parenting, and the severity of risk was found to be negatively related to the specific parenting variables of maternal warmth, maternal language input, and cognitive stimulation and positively related to maternal harshness (Burchinal et al., 2008). This study provides an example of how social risk affects parenting, which in turn can affect child outcomes such as cognitive development.

Though individual variables are not as often calculated into risk composites, personal factors such as gender, age, ethnicity, biology, genetics, and personality attributes may also be considered (Dallaire et al., 2008). These factors often may have

indirect effects on outcomes. For example, age, race, and gender may have indirect effects on health outcomes based on their impact on socioeconomic position or other factors (Robert, 1999). This idea highlights the importance of considering the interactions between the different contextual levels of risk, including community, family, and individual levels. Individual factors are often conceptualized as potential moderators that may increase or decrease the impact of other risk factors, such as poverty and SES (Robert, 1999). Gender and age, for example, are often considered as factors that may affect the impact of risk experiences.

Vanfossen and colleagues (2010) were interested in examining the effect of neighborhood context on the development of aggression by gender, expecting to see different outcomes for boys and girls. Results suggested that in general, boys exhibited higher levels of aggression at all time points and increased in their aggressive behaviors between grades one through seven. Neighborhood characteristics of violence, median income, and employment, however, had similar relations to the development of aggression in both boys and girls (Vanfossen et al., 2010). Age and ethnicity have also been identified as moderators of the association between cumulative risk exposure and harsh parenting. In a study examining infants living in a low-income rural area, cumulative risk became less of a predictor of harsh parenting when infants were between the ages of six and 15 months. This was found to be especially true for African-American mothers in the sample (Burchinal et al., 2008).

Similar to these studies, by investigating the individual factors that interact with other family or community-level factors and processes, such as parenting, we might better understand the impact of risk and develop targeted interventions to reduce risks for

specific populations. More specifically, examining the relationship between risk and ER can help elucidate the ways in which risk affects the social and emotional development of children, which subsequently affects functioning in other areas.

Emotion Regulation

Similar to the topic of risk, the topic of ER has recently received a burgeoning amount of attention in the child development literature based on its theoretical and observed relations with a number of child outcomes. Emotion-related capacities in children have been implicated in the development of social competence (Eisenberg & Fabes, 1992; Hubbard & Coie, 1994; Saarni, 1990) as well as impaired functioning and psychological disorders (e.g., Casey, 1996). Children who regulate their emotions well are viewed as able to respond in flexible and socially appropriate ways and to deal with ongoing demands (Cole, Michel, & Teti, 1994). In contrast, poor ER abilities have been associated with most forms of psychopathology in children (Bradley, 2000). Children who have difficulty with ER might show inappropriate reactivity to emotional situations or emotional deficits, such as constricted emotions, low levels of empathy, and emotional displays that are not congruent to context (Kim & Cicchetti, 2010).

A 2009 study by Adrian and colleagues highlights the central role of ER skills in the development of adaptive and maladaptive patterns of functioning. The study sample consisted of 140 adolescent participants who had a history of psychiatric hospitalization. Participants completed self-report measures about their ER skills and behaviors. Results showed that ER skills differentiated among the different types of pathology exhibited by the adolescents, including externalizing, internalizing, dual diagnoses, or the absence of clinical symptoms. In addition, ER skills were associated with severity of pathology.

More specifically, adolescents reporting less emotional control had more pervasive psychological symptoms. The study also examined the role of contextual factors, including family and peer relationships. Family cohesion was found to be associated with adaptive ER skills, but only for girls, whereas peer victimization was associated with poor ER for all adolescents in the study (Adrian et al., 2009). This study highlights the impact of contextual factors on ER skills and the subsequent role ER abilities play in adaptive and maladaptive functioning.

Although the implications of ER skills are significant, ER is difficult to define and measure as a unique concept. Nevertheless, researchers have stressed the importance of finding appropriate measures and methods to test theories and predictions about the relations among ER processes and outcomes (Cole & Deater-Decker, 2009). A commonly used definition of ER, proposed by Thompson (1994), asserts: "Emotion regulation consists of internal and external processes involved in initiating, maintaining, and modulating the occurrence, intensity, and expression of emotions" (p. 27). The ability to regulate these processes competently is considered characteristic of adaptive psychosocial functioning (Zeman et al., 2006). Based on this idea, it is important to explore how children differ in their levels of ER skills and what factors influence these differences.

Individual and Family Level Influences

Different groups of children have been shown to display varying levels of ER skills. Researchers have explored gender and age differences in ER abilities. In general, girls have been found to better control their negative emotional displays than boys throughout preschool and elementary school years (Davis, 1995) and preschool boys are

more likely than girls to incorrectly identify the emotional displays of others as anger (Schultz, Izard, & Ackerman, 2000). During the school age years, boys and girls display similar levels of anger and sadness when describing peer conflicts, but girls are more friendly and positive than boys in their responses and reports of social goals (Murphy & Eisenberg, 2002).

ER skills have also been related to differential outcomes in boys and girls. In a study by Cunningham, Kliewer, and Garner (2009), ER was related to grades, internalizing and externalizing behaviors, and social skills for boys but not girls. The authors suggest that in this sample of urban, African-American youth, ER seemed to serve as a protective factor for boys based on the findings that boys' abilities to regulate their emotions impacted their grades, internalizing behaviors, externalizing behaviors, and social skills (Cunningham et al., 2009). Similar patterns did not hold for girls, which suggests that gender differences play a role in ER skills and development.

It has been well-established in the literature that family factors play a large role in the development of ER in children (e.g., Adrian et al., 2009). ER is strongly influenced by the home environment and parenting behaviors, especially in the early years of development (Kim & Cicchetti, 2010). The family environment provides children with information about how to express emotions based on what is observed and taught in the home. For example, children with parents who show little emotional expressiveness have been shown to have more difficulty reading emotional cues and also tend to exhibit less emotional expression (Halberstadt, 1991). Children who receive non-supportive reactions to their emotional displays and who come from families lacking in cohesion and support tend to become more emotionally aroused and dysregulated, especially in response to

negative emotions (Davies & Cummings, 1998; Eisenberg, Fabes, & Murphy, 1996). Families that are generally high in conflict and low in warmth tend to produce children who are at a greater risk for developing emotional and behavioral problems (Repetti, Taylor, & Seeman, 2002), whereas families with warm and responsive parents seem to produce children with good ER skills (Fabes, Leonard, Kupanoff, & Martin, 2001).

Social and Contextual Influences

In addition to individual and family level influences, researchers assert that it is important to consider how social environments impact ER. This includes examining the impact of social relationships with caregivers, family members, and peers on the development of emotion understanding and skills (Cole & Deater-Deckard, 2009). These social relationships are also nested within other social contexts, including neighborhoods and communities, which might also be examined for their own unique influences on ER and development. Processes occurring at these multiple levels that can influence ER skills include parent socialization, peer socialization, and broader cultural influences (Zeman et al., 2006). For example, researchers have suggested that attachment, neglect, and rejection from social groups can influence the behavioral strategies and ER skills of children (Cole & Deater-Deckard, 2009).

Looking more closely at the influence of social relationships, Morris and colleagues (2007) reviewed and analyzed the impact of family relationships on children's development and functioning. In their review, the authors cited ER as the mechanism through which these social relationships within the family affect the psychosocial functioning of children throughout development. The authors proposed the Tripartite Model of the Impact of the Family on Children's Emotion Regulation and Adjustment,

which asserts that there are three important ways that family relationships influence the development of ER. First, children learn about ER by observing and modeling how their parents and family members respond to situations that involve emotions. Second, parenting practices and behaviors that are related to the socialization of emotion affect the ways in which children will develop and utilize ER skills. In this model, authors make the distinction between parenting practices, which they consider actual behaviors, and parenting style, which are more reflective of parents' attitudes. Finally, ER is affected by what is termed the *emotional climate* of the family. This is reflected in attachment relationships, parenting styles, family expressiveness, and the emotional quality of the relationship between parents.

This three-part model proposes a mediational process involving family context, ER, and children's adjustment. The model suggests that family context can directly affect a child's adjustment based on inherited traits, child characteristics, parenting practices, and what the child observes in the home. In addition, the impact of these factors is thought to be mediated by a child's ER skills. Other studies have also shown ER as a link between parenting and child adjustment (e.g., Eisenberg, Gershoff et al., 2001). Based on these theoretical and observed relations between family context, ER, and subsequent child outcomes, the impact of other contextual levels and their effects on ER are important to also consider, such as peers, school, neighborhood, and cultural factors (Morris et al., 2007). Different types of risk factors are likely to affect the relations, processes, and functioning that occur at each of these levels.

By focusing on contextual levels of risk and influence, we might better understand how contextual risk factors contribute to the development of ER, which is

implicated in many other child outcomes. In examining this relations, it is also crucial to consider how risk affects the other processes, such as parenting, that also play an important role in the development of ER abilities.

Parent Socialization of Emotion

Emotion socialization is considered a process by which parents and other socializing agents affect children's understanding, experience, and expression of emotion (Eisenberg, Cumberland, & Spinrad, 1998). Researchers have asserted that the process of emotion socialization and the development of ER is dynamic and integrative (e.g., Adrian et al., 2009), meaning that it is influenced by a number of individual and contextual factors throughout development. For example, it is important to recognize bidirectional influences, examining not only how parents impact their children, but how children also influence their parents (e.g., Michalik et al., 2007). These bidirectional relationships are also embedded within larger social and cultural contexts, which are impossible to ignore when examining the development of emotion socialization (Klimes-Dougan & Zeman, 2007). Parents are guided by their own upbringing and the larger culture and, in turn, serve as the primary guides and agents of socialization for their children (Halberstadt, 1991; Saarni, 1998). These parental emotion socialization practices continue throughout development, but may weaken as children become influenced by other social relationships and contexts, including peers and school (Klimes-Dougan & Zeman, 2007). Although there is mounting research regarding the influence of other socializing agents throughout emotional development, this section will focus on parental socialization of emotion. In particular, the goal is to better understand the contextual influences that

impact the process of parental emotion socialization so that we may better understand how these processes may vary in the context of risk.

Modes of Influence

As mentioned, culture is often considered a fundamental ingredient in the socialization of emotion. Parents operate within the broader cultural context and direct their children toward different settings and experiences that influence each child's emotional profile (Lutz, 1985). The dynamic interactions involved in this process are difficult to observe and define. Expectations and definitions of what is socially and culturally acceptable emotional expression and behavior may vary based on child characteristics, specific emotions, or different social and cultural contexts. For example, parents may view negative emotions, such as sadness, as "bad" and may expect their children to ignore and suppress the expression of sadness (Eisenberg et al., 1998). These differing views, often driven by individual experiences, family upbringing, or other sociocultural influences, create complex strategies by which parents socialize their children's emotions.

Increasing our understanding of the specific ways in which parents socialize emotion in their children is an important first step in studying the factors that influence the overall process of emotion socialization. Eisenberg, Cumberland, and Spinrad (1998) have proposed a model of emotion socialization that highlights three important ways in which parents socialize emotion in their children. According to this model, mechanisms of parental socialization include modeling how they react to their own emotions, coaching and discussing emotions with their children, and responding to the emotional expressions of their children. Empirical evidence has provided support for these views

that children's developing emotional competence is influenced by indirect (i.e., modeling) and direct (i.e., coaching and discussing) modes of parental emotion socialization (Klimes-Dougan & Zeman, 2007).

Specific studies provide concrete examples of how parent emotion socialization practices influence children's development of ER and functioning. In a longitudinal study by Michalik and colleagues (2007), parents' expression of positive emotion was related to sympathy in childhood and adolescence, reflecting transmission of emotional expression based on modeling. Furthermore, the relationship in adolescence was accounted for by the sympathy learned in childhood, which indicates that sympathy remained stable over time (Michalik et al., 2007). Parental sympathy has also been associated with vicarious emotion responding in children, as measured by physiological variables of heart rate and skin conductance (Eisenberg, Fabes, Schaller, Carlo, & Miller, 1991).

In another study, researchers examined the associations between parental behaviors, children's emotional reactivity and regulation, and children's social competence. The sample included 103 fourth-grade children and their families, ranging from lower- to upper-middle class SES. Mothers' and fathers' emotion socialization activities were observed via parent-child interactions, children provided reports on their emotion coping strategies, teachers assessed children's likability and behavioral attributes, and peers rated peers via sociometric interviews. Results showed that children's ER was related to parental relationship qualities, including warmth, positive responsiveness, inductive reasoning, and parental control. In addition, children whose parents exhibited more negative relationship qualities provided more negative coping

strategies, providing evidence for the idea that children learn about ER and coping strategies by observing interactions and relationships within the home (McDowell, Kim, O'Neil, & Parke, 2002).

With regard to responsiveness, a parent's responses to their children's expression of emotion can be categorized as non-supportive or supportive. Empirical evidence supports the relations between supportive parental emotion socialization practices and positive adjustment. In contrast, unsupportive and dismissing strategies have been related to difficulties in psychosocial functioning (Klimes-Dougan & Zeman, 2007). Non-supportive parental responses to children's negative emotions include reactions that are punitive, minimizing, or indicative of parental distress. These types of reactions are generally associated with low levels of emotional and social competence in children (e.g., Eisenberg et al., 1996; Gottman, Katz, & Hooven, 1996). In contrast, supportive parental interactions (e.g., comforting, teaching positive coping strategies) are associated with positive outcomes for children, but research findings are not as strong for those of non-supportive responses.

Contextual Levels of Influence

Socialization of emotion can be influenced by individual level factors, including the gender of the parent and the child. Cunningham, Kliewer, and Garner (2009) sought to better understand whether maternal emotion socialization practices predict children's understanding of emotions, ER ability, and psychosocial adjustment. In a sample of urban, African-American families, 69 maternal caregivers and their school-age child pairs were studied over a 6-month period. Emotion socialization was measured using an open-ended meta-emotion philosophy interview. This scale measures a caregiver's awareness

and acceptance of their own and their child's emotions as well as how they coached their child to handle emotions (Gottman, Katz, & Hooven, 1997). Outcomes included emotional, social, behavioral, and academic functioning. In this sample, emotion socialization practices did not change based on the child's gender, but boys and girls were impacted differently. For example, boys were better adjusted when they had caregivers who were more accepting, aware, and able to coach them through their emotions. Similar relations were not found for girls, but this may have been due to differences in mediating factors including emotion understanding and ER (Cunningham et al., 2009). Gender differences in emotion socialization have also been attributed to culture. Cultural and societal expectations emphasize and place pressure on girls to be more kind, compassionate, and sensitive than boys. These expectations are often reinforced through parenting practices, family and peer influence, and social institutions (Zahn-Waxler, Robinson, & Emde, 1992).

Studies have explored the impact of contextual risk factors and influences on parenting variables and subsequent child outcomes (e.g., Burchinal et al., 2008). However, there seems to be a lack of studies exploring the specific relations between contextual risk and the specific process of parent socialization of emotion. Eisenberg, Cumberland, and Spinrad (1998) suggested culture affects parents' directly through their emotion socialization behaviors and indirectly through influences on individual beliefs and socialization goals. This model, however, does not incorporate the influence of contextual risk. Other models, such as those discussed below, do not directly incorporate the process of emotion socialization. Nevertheless, it is useful to review the literature

regarding how contextual influences and risk affect general parenting practices and child outcomes.

Garcia Coll et al. (1996) proposed a model highlighting the importance of considering contextual risk on children's development. This integrative model stresses the importance of considering social position variables, such as race, social class, ethnicity, and gender. These variables are thought to affect subsequent variables, including residential, economic, social and psychological segregation, and influence the culture of families, neighborhoods, schools, and other social institutions. Children's development is considered an interactional process between each child's own characteristics, family processes, and contributions from these other social and cultural influences (García Coll et al., 1996). Although this model does not directly address the process of emotion socialization, it can be considered as a family process consistent with what they describe as family socialization (Dunsmore & Halberstadt, 2009).

Studies examining the influence of neighborhoods on specific parenting behaviors are limited (Klebanov et al., 1997). However, research has shown that living in a disadvantaged neighborhood can have negative effects on family functioning and parenting behaviors, such as decreased warmth and positive discipline and increased harsh parenting methods (Furstenberg, 1993). A study by Pinderhughes et al. (2001) examined the relationship between a number of factors, including race, neighborhood characteristics, family context, parenting behaviors, and child outcomes. Results showed that race, neighborhood characteristics, family context, and child outcomes explained a significant portion of the variance in parenting behaviors. More specifically, parental warmth and appropriate consistent discipline were associated with less neighborhood

poverty and danger whereas harsh parenting interactions were associated with more neighborhood poverty and danger (Pinderhughes, Nix, Foster, & Jones, 2001). Neighborhood risk indicators have also been associated with parental warmth and subsequent adolescent psychopathology in other studies (e.g., Gonzalez et al., 2011). These studies highlight the importance of examining the interactional influence of contextual risk factors on parenting and child outcomes.

Socialization Strategies

Although parental responses to children's emotions are often generally categorized as supportive or non-supportive, specific emotion socialization strategies have been identified. Malatesta-Magai developed a tool, known as the Emotions as a Child inventory (EAC; 1996), to assess the direct methods of parental emotion socialization strategies of Sadness, Anger, Fear, and Shame. This tool identifies five core socialization strategies that encourage and discourage emotional expression in children: Reward, Punish, Override, Neglect, and Magnify. Reward strategies are those that provide comfort, empathy, and problem solving strategies for the child. Punishment strategies are those in which a parent discourages his or her child's emotional expression by showing disapproval or making fun of the child. Override is operationalized as a parent being dismissive of a child's emotions or trying to distract him or her. Neglect involves a parent ignoring his or her child's expression or not being available. Finally, Magnify strategies involve parental behaviors that match a child's expression with equal or greater intensity (O'Neal & Magai, 2005).

Factor analyses have been conducted examining these different socialization strategies. Results have suggested that Reward and Override are generally beneficial and

supportive strategies whereas Neglect and Punish are strategies that might be considered unsupportive, punitive, and inhibiting. Magnify was found to be a punitive strategy for Sadness, but not for Fear (Garside, 2004; Klimes-Dougan, Brand, & Garside, 2001). In addition to examining unique socialization strategies, certain approaches also differentiate between treatment of different emotions. Whereas some approaches propose that parents either support and foster or hinder emotional expression in their children without emphasizing differences between separate emotions (e.g., Gottman et al., 1996; Eisenberg et al., 1998), alternative theories and empirical approaches emphasize the importance of distinguishing among discrete emotions, the unique functions they may serve, and the different ways they are socialized (e.g., Campos, Campos, & Barrett, 1989). O'Neal and Magai (2005) conducted a study comparing what they termed global and emotion-specific socialization models. Their findings suggest that a mixture of both strategies can be useful.

Summary

Based on a review of the literature, it is evident that there are complex direct and indirect relations between contextual factors and child outcomes. Researchers have increasingly incorporated neighborhood and community level risk variables to examine their influence on family practices and child outcomes (e.g., Dallaire et al., 2008; Vanfossen et al., 2010). Interest in the topic of ER has grown based on research and theory suggesting that the ability to regulate emotions is an important component of healthy social and emotional development (Morris et al., 2007; Zeman et al., 2006) and parent socialization practices are considered critical components in shaping a child's emotional development (Klimes-Dougan & Zeman, 2007). Despite the growing body of

research in these areas, more research is needed examining the contextual influences on parent emotion socialization practices and ER in at-risk samples. A review of the risk, ER, and emotion socialization literature confirms the need for more research that investigates the complex relations between individuals and their environmental contexts as well as the potential mediators of adaptive outcomes for children living in high-risk settings.

CHAPTER II

CURRENT STUDY

The current study examines ER and parent socialization of emotion in the context of risk. Unlike other studies in which ER is examined as a mediating variable (e.g., Cunningham et al., 2009; McDowell et al., 2002; Walton, & Flouri, 2010), ER was examined as a direct outcome and was measured by use of self-report with children, which is the most common method of assessment for ER (Zeman et al., 2007). Because the development of children's emotional competence is complex and is impacted by both direct and indirect influences (Klimes-Dougan & Zeman, 2007; Thompson & Calkins, 1996), both contextual risk and parent emotion socialization strategies were examined as influences on ER. The inclusion of neighborhood and multi-level variables is considered an important step in broadening our understanding of how structural features impact families and child development. Finally, the current study included a minority sample living in areas with high crime and poverty rates, which helps address the need for more research with at-risk populations.

The objective of this study was to better understand the relations between contextual risk, parent emotion socialization, and ER in at at-risk, predominantly minority racial sample. In general, it was expected that higher levels of contextual risk would be related to what are generally conceived of as more negative parent socialization practices and less adaptive ER skills in children. These relations were tested using a meditational model (see Figure 1). Greater levels of contextual risk were expected to impact children's development of emotional competence, in part by influencing parent's capacity to promote positive emotion socialization. Careful attention and consideration

were given to how these relations might vary in the context of risk. This was based on the idea that emotion socialization and ER are complex constructs and that the use and effectiveness of strategies are likely to differ based on interactions between functional goals and situational demands (Thompson & Calkins, 1996).

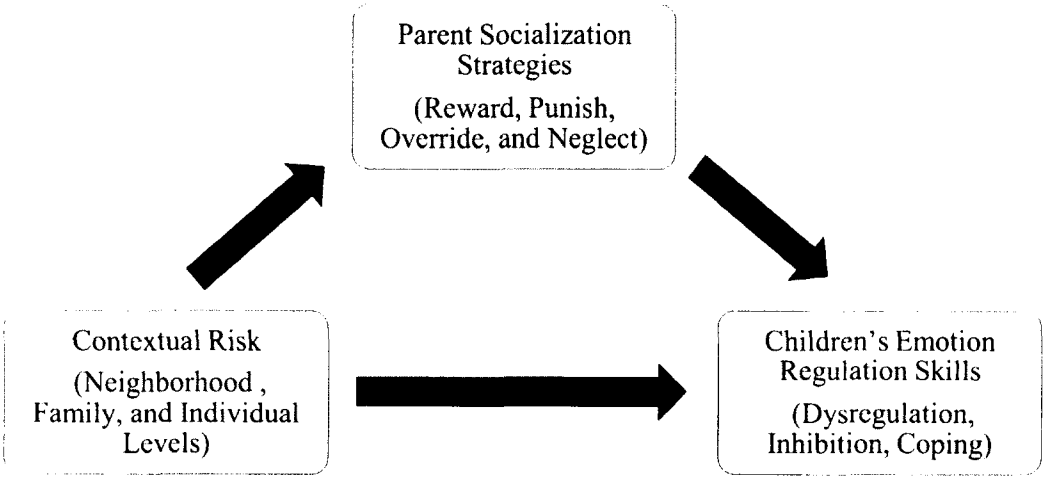

Figure 1. Proposed mediational model

Hypotheses

To examine the proposed model and address the goals of this study, several specific hypotheses were tested. First, it was expected that risk would be directly related to children's ER skills. More specifically, it was expected that a larger accumulation of risk factors would be associated with more Dysregulation and Inhibition ER skills and less Regulation Coping ER skills. In addition, it was expected that neighborhood risk

would explain a significant amount of variance above and beyond what was explained by family, individual, and school level risk factors. Second, risk was expected to be related to parents' emotion socialization strategies such that greater risk would be related to less Reward emotion socialization strategies and more Punish, Neglect, and Override emotion socialization strategies. Third, parents' emotion socialization strategies were expected to be related to their children's ER skills. In particular, Reward strategies would be associated with more Regulation Coping ER skills whereas Punish, Neglect, and Override strategies would be associated with more Dysregulation and Inhibition ER skills and behaviors. Fourth, emotion socialization strategies were expected to mediate the relationship between risk and children's ER skills.

CHAPTER III

METHOD

Participants

Participants were recruited as part of a larger study from grades two through five at two urban elementary schools located in the mid-Atlantic region. The participating school district and schools were chosen based on high crime and poverty rates. Consent forms were distributed at school for children to bring home to their parents. The total sample size for the present study consists of 188 children and their parent/guardian who provided consent and completed all child and parent measures. Few significant differences were found between children in this sample, (whose parents completed all measures) and the remainder of children in the sample (whose parents did not complete parent measures). The only significant difference was that children whose parents did not complete measures reported experiencing more dysregulated Worry than did children whose parents did complete measures ($t = 1.99$, $p = .04$). A power analysis using G*power software (Faul, Erdfelder, Lang, & Buchner, 2007) indicated that a multiple regression design using seven predictors and a sample of 188 is sufficient to achieve an effect size of $f^2 = .08$. Thus, we had enough power to detect between small ($f^2 = .02$) and medium ($f^2 = .15$) effect sizes.

Child participants' ages ranged from 7 to 12 years ($M_{age} = 9.03$, $SD = 1.08$). In total, 40% of the children were male ($n = 76$). With regard to racial and ethnic background, 79% of the children were African American ($n = 147$), 11% reported being Caucasian ($n = 21$), 9% reported being of multiple ethnicities ($n = 16$), and 1% chose the "other" category ($n = 2$). Compared to the general populations of Virginia (20%

Black/African-American, 72% White) and the United States (12% Black/Africa-American, 75% White), the study sample represents a considerably larger proportion of the Black/African-American racial group (U.S. Census Bureau, 2000). The study sample more closely reflected the racial and ethnic backgrounds of each of the schools. In School A, 69% of the students were Black/African-American and 19% were White. In School B, 98% of the students were Black/African-American and 1% were white. The sample is therefore considered diverse in comparison to the general populations of the state of Virginia and of the U.S., but is considered more homogeneous in relation to the populations of each school.

The majority of participating parents/guardians were children's mothers (86%, n = 156), and other caregivers included children's grandmothers (6%, n = 11), fathers (4%, n = 8) or others (4%, n = 6; e.g., stepmother, aunt, guardian, or foster parent). Family incomes for the sample ranged under $10,000 (19%) to over $100,000 (0.5%), with 60% of the sample reporting an income of $30,000 or less. With regard to parent education level, 56% of the sample (n = 102) reported obtaining some education past the high school level, with education levels ranging from 8th grade or less (1%, n = 2) to some education after a Master's degree (1%, n = 2) (see Table 1).

Table 1

Demographics for Race, Parent Education, and Family Income

Variables	*n*	%
Race/Ethnicity		
Black or African American	147	79.0
American Indian/Native American	1	.5
White or Caucasian (not Hispanic)	21	11.3
Mixed/Multiple	16	8.6

Table 1 (Continued)

Variables	*n*	%
Race/Ethnicity		
Other/not listed	1	.5
Parent Education		
8th grade or lower	2	1.1
Some high school	19	10.4
Completed high school	28	15.4
Some education after high school	102	56.0
Received Bachelor's degree	15	8.2
Some education after Bachelor's degree	8	4.4
Received Master's degree	6	3.3
Some education after Master's degree	2	1.1
Family Income		
Less than $10,000	36	20.5
$10,000 - $30,000	70	39.8
$30,000 - $50,000	35	19.9
$50,000 - $80,000	31	17.6
$80,000 - $120,000	4	2.3

Materials and Measures

Neighborhood/Community Level Risk Variables

Using addresses provided by parents, neighborhood racial/ethnic composition, education levels, employment rates, and poverty levels were assessed with data gathered from the U.S. Census (U.S. Census Bureau, 2000). These variables were chosen based on previous studies utilizing similar variables as indicators of risk (e.g., Chase-Lansdale & Gordon, 1996; Dallaire et al., 2008; Vanfossen et al., 2010). Variables such as SES and racial/ethnic composition are two of the most common dimensions used in studies that use census track data (Leventhal & Brooks-Gunn, 2000) and were included as risk factors based on important observed relations with negative child outcomes (e.g., McLoyd, 1998; Caspi et al., 2000).

The variables from the U.S. Census were obtained using data from census tracts, which are divisions representing small geographic regions (U.S. Census Bureau 1997). Each tract has an average of 4,000 individuals and can range from 1,000 to 8,000 people. Census tracts are further divided into block groups, which represent the smallest geographic unit with available Census data. In the current study, each participant's address was cross-referenced with the Census database to obtain census track and block information. Similar processes have been utilized by other researchers and are often referred to as geocoding (e.g., Chase-Lansdale & Gordon, 1996). Once track and block information was identified for each participant, neighborhood racial/ethnic composition, education levels, employment rates, and poverty levels were obtained from the census database and linked with each child's additional data.

Family and Individual Level Risk Variables

Family and individual level risk variables were assessed using a family background questionnaire (developed by PI Dallaire). This questionnaire asks parents about their race/ethnicity, relationship to the child, level of education, family income, and family composition. Based on risk factors identified and utilized in previous studies (e.g., Ackerman et al., 1997; Appleyard et al., 2005; Burchinal et al., 2008; Dallaire et al., 2008), risk factors for the current study included ethnic minority status, low parental educational attainment (less than high school education), teen mom status, low household income (less than $30,000), large family size (more than four children in the home), single parenthood status, and parental incarceration. The current study counted the total number of risk factors present using a cumulative approach.

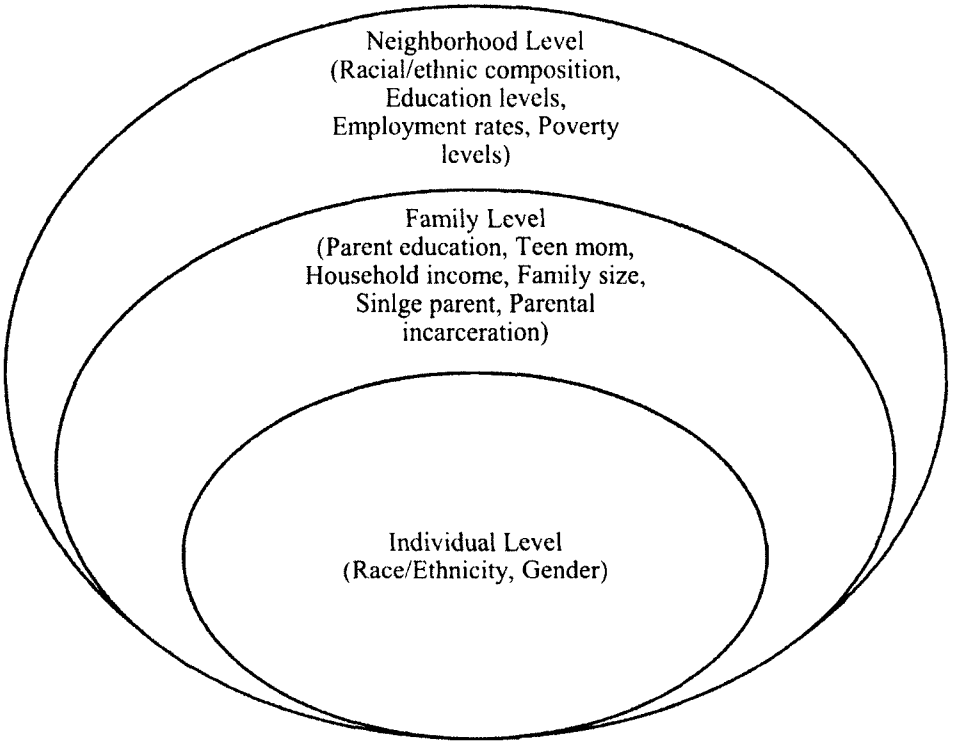

Figure 2. Depiction of neighborhood, family, and individual risk factors to be considered

Parent Emotion Socialization

Parent emotion socialization practices were assessed using a questionnaire based on the Emotions as a Child Inventory (EAC; Magai, 1996). The EAC inventory can be used as an interview or self-report questionnaire and can be administered to a child or parent (O'Neal & Magai, 2005). The full inventory contains scales that assess Emotion Socialization, focusing on strategies of Reward, Punish, Neglect, Override, and Magnify, as well as Emotion Regulation Strategies for Sadness, Anger, Fear, and Shame. The present study included the Emotion Socialization scales of the EAC for all strategies, with the exception of Magnify, and focused on the emotions of Sadness, Anger, and Fear. The measure asks parents, "When your child has been (sad, angry, or anxious), what did you do?" Using a 5-point scale, parents reported how well subsequent statements

described their reactions to their children's emotions (1 = *Not at all like me*, 2 = *A little like me*, 3 = *Somewhat like me*, 4 = *Like me*, 5 = *A lot like me*). For example, one statement from the Override scale reads, "When my child has been (sad, angry, anxious), I told him/her to grow up." Parents responded to nine statements regarding each of the three emotions. Averaging across the three emotions yields sub-scores for each of the emotion socialization strategies: Reward (e.g., "When my child has been sad, I comforted her/him"), Punish (e.g., "When my child has been angry, I gave him/her a disapproving look"), Override (e.g., "When my child has been anxious, I told him/her to grow up"), and Neglect (e.g., "When my child has been sad, I ignored him/her").

Although some varieties of the EAC are recently developed and studies often use different versions of the measure, most scales have demonstrated evidence of acceptable levels of reliability and validity (e.g., Garside, 2004; Garside & Klimes-Dougan, 2002; Klimes-Dougan et al., 2001; Magai, 1997; O'Neal & Magai, 2005). Past research has also shown adequate test-retest reliability after one week for Reward and Neglect (.72 to .86). Findings were more variable for Override (.67 to .79), Punish (.53 to .71) and Magnify (.49 to .78), but were still considered adequate (Klimes-Dougan et al., 2001). Internal consistencies for the current study are also considered adequate. The alpha coefficients were .93 for Reward, .68 for Punish, .71 for Neglect, and .69 for Override. Many of the EAC variables exhibited non-normal distributions based on measures of skewness. Reward of Sadness had a skewness of -2.26 (*SD* = .19), Reward of Anger had a skewness of -1.66 (*SD* = .18), and Reward of Worry had a skewness of -2.26 (*SD* = .18). Punish of Sad had a skewness of 4.16 (*SD* = .18), Punish of Anger had a skewness of 1.79 (*SD* = .18), and Punish of Worry had a skewness of 5.62 (*SD* = .18). For Neglect, skewness

measures were 4.90 (*SD* = .19) for Neglect of Sad, 3.98 (*SD* = .18) for Neglect of Anger, and 4.84 (*SD* = .19) for Neglect of Worry. Override variables exhibited less skewness. Override of Sad had a skewness of -0.18 (*SD* = .18), Override of Anger had a skewness of -0.20 (*SD* = .18), and Override of Worry had a skewness of -0.18 (*SD* = .18). Statistical corrections for skewness were not made for the current study.

Emotion Regulation

Children's ER was assessed using the Children's Emotion Management Scales (CEMS; Zeman, Shipman, & Penza-Clyve, 2001; Zeman, Cassano, Suveg, & Shipman, 2010). The CEMS is a self-report instrument that has three subscales, each of which assesses children's management of their emotional experiences. There are 12 items measuring Sadness (CSMS), 11 items measuring Anger (CAMS), and 10 items measuring Worry (CWMS). Using a 3-point Likert scale, children's strategies for regulating Sadness, Anger, and Worry are assessed. Children rate how often they respond in certain ways to each emotion (1 = *Hardly Ever*, 2 = *Sometimes*, and 3 = *Often*). Each scale includes three subscales: Inhibition, Dysregulation, and Emotion Regulation Coping. The Inhibition subscale contains items that reflect children's tendency to suppress or over-control emotions and emotional expression, (e.g., "I'm afraid to show my sadness"). The Dysregulation subscale contains items that reflect exaggerated or inappropriate ways of expressing emotions (e.g., "I do things like slam doors when I am mad"), and the Emotion Regulation Coping subscale contains items reflecting adaptive methods of down-regulating or managing emotional arousal (e.g., "I try to calmly deal with what is making me worried").

Studies using the CEMS have demonstrated construct validity, adequate alpha coefficients, and good test-retest reliability. Initial validation of the Sadness (CSMS) and Anger (CAMS) scales on a sample of Caucasian, middle-class 4th and 5th grade children demonstrated alpha coefficients of .62 to .77 and test-retest reliability of .61 to .80 (Zeman et al., 2001). Subsequent studies using the CSMS and CAMS have also provided evidence of validity and reliability in samples of children in their early elementary school years (Cassano, Zeman, & Perry-Parrish, 2007; McAuliffe, Hubbard, Rubin, Morrow, & Dearing, 2007), adolescents (Wills, Walker, Mendoza, & Ainette, 2006), African-American youth samples (Perry-Parrish & Zeman, 2011), and children with psychiatric disorders (Sim & Zeman, 2004, 2006). There is also evidence of discriminant validity and reliability for the more recently developed Worry scales (CWMS), with internal consistencies of .69 for Worry Coping, .72 for Worry Dysregulation, and .74 for Worry Inhibition. There were no gender differences for Coping and Dysregulation, but girls reported significantly more Inhibition of their Worry than boys (Zeman et al., 2010).

For the current study, internal reliability statistics for scales ranged from poor to adequate. For Anger scales, the alpha coefficients were adequate, with .63 for Anger Inhibition, .58 for Anger Dysregulation, and .58 for Anger Coping. Internal reliability measures for Worry scales were lower, with internal consistencies of .40 for Worry Inhibition, .43 for Worry Dysregulation, and .26 for Worry Coping. For Sadness scales, internal consistencies were also low, with alpha coefficients of .55 for Sadness Inhibition, .38 for Sadness Dysregulation, and .34 for Sadness Coping.

Procedure

Institutional review board approval was received from the College of William and Mary and the participating school district as part of a larger research study being conducted by Dr. Danielle H. Dallaire and Dr. Janice L. Zeman. Children and their families were then recruited from two elementary schools in an urban area of a mid-Atlantic region that was chosen based on the city's high crime and poverty rates. Letters were sent to all teachers for grades 2-5 to be sent home with children. Children were encouraged to bring back consent forms and were given pencils as small gifts for bringing consent forms back to their teachers. Overall, 68% of children returned consent forms and, of those returned forms, 88% of parents ($N = 450$) consented to allow their children to participate. In addition, 66% of parents consented to participate by completing a questionnaire packet that was mailed to them. The final sample size of 188 reflects cases for which all child and parental measures were completed and returned.

Parents were asked to complete an assessment battery that was mailed to them. The packet of questionnaires included a variety of measures regarding demographics, family background, child characteristics, and parenting practices that were part of a larger study conducted by the College of William and Mary. Measures in the current study include a family background questionnaire, which includes demographic and family background information, and the Emotions as a Child questionnaire (EAC; Magai, 1996), which addresses emotion socialization practices by asking parents how they respond to their children's emotions. Parents completed questionnaires at home and returned them in a self-addressed stamped envelope. Parents who did not return packets were contacted by phone and given the option of completing packets with research assistants by phone.

Upon completion or receipt of completed parental questionnaires, parents were mailed a $20 gift card for their participation.

After parents returned consents for their children to participate, children were interviewed at school on two separate occasions. Children were interviewed during non-academic periods (e.g., gym class, homeroom) in order to reduce disruption of their school day. During the first interview session, 3-5 children were escorted by a research assistant to a quiet location (e.g., art room, empty classroom) and were seated facing away from each so as to avoid distraction. After giving assent to participate, each child completed one-on-one interviews with research assistants that took approximately 30 minutes to complete. Research assistants read each question aloud to the children and provided visual aids to assist with the selection of response options. The first interview session included several questionnaires and behavioral assessments of empathy and prosocial behavior. A second interview session was held approximately one month following the initial interview. During this session, larger groups of children completed group-administered peer sociometric ratings. One research assistant read items aloud to the group while other assistants walked around the room to provide any needed assistance. The CEMS, which is the only child measure being used in the current study, was administered during the first session of individual interviews. Upon completion of their interview sessions, children received an activity book and pencil to thank them for their assistance and participation.

CHAPTER IV

RESULTS

Preliminary Analyses

Preliminary data analyses and data reduction procedures were conducted prior to analyses of the main hypotheses. First, data reduction procedures were used to create aggregate risk variables at both the individual/family and neighborhood level. Second, correlations, t-tests, and Analyses of Variance (ANOVAs) were conducted to investigate any systematic differences between independent and dependent variables on dimensions of child gender, child age, and school. Finally, analyses were conducted to determine the appropriateness of a global or discrete approach for examining both the emotion socialization practices of parents and the emotion regulation strategies of children.

Aggregation of risk variables

Composite risk variables were computed based on methods used in prior research (e.g., Chase-Lansdale & Gordon, 1996; Dallaire et al., 2008; Vanfossen et al., 2010). Based on variables commonly used in prior studies, the following four neighborhood level variables were examined based on data obtained from the U.S. census (U.S. Census Bureau, 2000): proportion of black individuals in the neighborhood, proportion of individuals in the neighborhood with less than a high school education, proportion unemployed, and proportion below the poverty line. All of the correlations between these variables were significant at the $p < .01$ level (see Table 2). The four neighborhood variables were then summed to create the neighborhood risk composite. The resulting 4-factor neighborhood risk composite variable has good internal reliability ($\alpha = .81$) and is significantly correlated with each neighborhood risk factor, including proportion black (*r*

= .896, $p < .01$), proportion with less than a high school education (r = .879, $p < .01$), proportion unemployed (r = .821, $p < .01$), and proportion below the poverty line (r = .924, $p < .01$) (see Table 2).

Table 2

Correlations Between Neighborhood Risk Variables

	Risk Variables	1	2	3	4	5
1	Proportion Black	-	-	-	-	-
2	Proportion Less than High School Education	.686**	-	-	-	-
3	Proportion Unemployed	.613**	.700**	-	-	-
4	Proportion Below Poverty Level	.680**	.818**	.836**	-	-
5	Neighborhood Risk Composite	.896**	.879**	.821**	.924**	-

** $p < .01$.

An individual/family risk composite variable was also created based on variables identified and utilized in previous studies (e.g., Ackerman et al., 1997; Appleyard et al., 2005; Burchinal et al., 2008; Dallaire et al., 2008). The seven dichotomous variables used in the current study include children's race, low parental educational attainment (less than high school education), teen mom status, low household income (less than $30,000), large family size (more than four children in the home), single parent status, and parental incarceration. Each participant received a "1" if the risk factor was considered present (i.e., Black, parent had less than high school education, teen mom, etc.) or a "0" if the risk factor was not present (i.e., income more than $30,000, less than four children in the home, etc.). The linear correlations between each of these variables are shown in Table 3. Although not all the variables were significantly correlated, a composite risk variable was

created combining each of the variables based on theory and previous research. The resulting 7-factor family/individual level risk composite has relatively low internal reliability ($\alpha = .55$), but is significantly correlated with each separate individual/family risk factor, including race ($r = .495, p < .01$), parent education ($r = .327, p < .01$), teen mom status ($r = .567, p < .01$), family income ($r = .624, p < .01$), family size ($r = .361, p < .01$), single parent status ($r = .617, p < .01$), and parental incarceration ($r = .568, p < .01$) (see Table 3).

Table 3

Correlations Between Individual/Family Level Risk Variables

	Risk Variables	1	2	3	4	5	6	7	8
1	Race	-	-	-	-	-	-	-	-
2	Parent Education	-.052	-	-	-	-	-	-	-
3	Teen Mom	.070	.090	-	-	-	-	-	-
4	Family Income	.169*	.108	.233**	-	-	-	-	-
5	Family Size	.111	.162*	.203*	.002	-	-	-	-
6	Single Parent Status	.143*	-.062	.232**	.358**	-.064	-	-	-
7	Parental Incarceration	-.022	.097	.070	.196*	-.096	.223*	-	-
8	Risk Composite	.495**	.327**	.567**	.624**	.361**	.617**	.568**	-

* $p < .05$. ** $p < .01$.

Gender differences

Analyses were conducted in order to determine if there were any significant differences between boys and girls in our sample. T-tests were used to examine gender

differences for each variable of interest, including neighborhood risk variables, individual/family risk variables, parent socialization strategies, and ER strategies.

Gender and Neighborhood Risk

There were no significant gender differences for any of the separate neighborhood risk variables or for the neighborhood risk composite (see Table 4). This indicates that both boys and girls in the current sample experience a similar level of risk at the neighborhood level.

Table 4

Neighborhood Risk Variables by Gender

Variable	Male (n=74) Mean (SD)	Female (n=109) Mean (SD)	t	d
Proportion Black	.78 (.24)	.72 (.29)	1.27	.19
Proportion Less than HS Education	.35 (.11)	.33 (.12)	1.33	.20
Proportion Unemployed	.07 (.05)	.07 (.05)	.49	.07
Proportion Below the Poverty Line	.36 (.26)	.34 (.23)	.57	.09
Neighborhood Risk Composite	1.56 (.59)	1.46 (.64)	1.10	.16

Gender and Individual/Family Risk

As with neighborhood risk, there were no significant gender differences for any of the individual/family risk variables or the composite, indicating that boys and girls in the sample experience a similar level of risk at the individual/family level (see Table 5).

Table 5

Individual/Family Risk Variables by Gender

Variable	Male Mean (SD)	Female Mean (SD)	*t*	*d*
Race	.82 (.39)	.78 (.43)	.924	.14
Parent Education	.08 (.27)	.14 (.35)	-1.20	-.18
Teen Mom	.31 (.47)	.32 (.47)	-.04	-.01
Family Income	.62 (.49)	.59 (.50)	.32	.05
Family Size	.19 (.40)	.21 (.41)	-.32	-.05
Single Parent Status	.51 (.50)	.41 (.49)	1.39	.20
Parental Incarceration	.37 (.49)	.31 (.47)	.79	.12
Individual/Family Composite	2.97 (1.67)	2.76 (1.54)	.77	.13

Gender and Parent Socialization Strategies

Parent's emotion socialization strategies did not differ significantly based on child's gender (see Table 6). There was a slight, but not significant, trend for the Neglect strategy when responding to children's Anger. In this sample, parents reported using Neglect for Anger emotions more for boys ($M = 2.46$, $SD = 1.24$) than for girls ($M = 2.21$, $SD = 0.71$), $t(174) = 1.69$, *ns* (see Table 6). There were no other findings, suggesting that male and female children in the current sample do not receive significantly different types of socialization strategies from their parents.

Table 6

Parent Emotion Socialization Strategies by Gender

Variable	Male Mean (SD)	Female Mean (SD)	*t*	*d*
Reward				
Anger	13.52 (2.22)	13.00 (2.58)	1.38	0.22
Worry	13.55 (2.38)	13.37 (2.50)	0.48	0.07
Sad	13.61 (2.21)	13.60 (2.30)	0.02	0.00
Punish				
Anger	2.84 (1.37)	2.62 (1.08)	1.21	0.18
Worry	2.15 (0.53)	2.07 (0.45)	0.99	0.16
Sad	2.20 (0.65)	2.14 (0.47)	0.78	0.11
Neglect				
Anger	2.46 (1.24)	2.21 (0.71)	1.69	0.25
Worry	2.19 (0.73)	2.10 (0.49)	1.01	0.14
Sad	2.29 (1.01)	2.16 (0.52)	1.12	0.16
Override				
Anger	4.56 (1.70)	4.52 (1.82)	0.13	0.02
Worry	4.09 (1.72)	4.30 (1.82)	-0.77	-0.12
Sad	4.46 (1.81)	4.48 (1.77)	-0.04	-0.01

Gender and ER

Significant gender differences were found for the ER strategies of Anger Inhibition and Worry Dysregulation (see Table 7). Girls (n = 112; M = 8.38, SD = 2.00) reported significantly more Anger Inhibition than boys (n = 75; M = 7.71, SD = 2.06), $t(185) = -2.22$, $p < .05$. Girls also reported significantly more Worry Dysregulation (M = 5.54, SD = 1.76) than boys (M = 4.77, SD = 1.38) $t(185) = -3.19$, $p < .01$. These findings suggest that the girls in the current sample are more likely than boys to suppress or over-control their Anger and deal with their Worry in exaggerated or inappropriate ways. No other significant differences were found.

Table 7

Emotion Regulation by Gender

Variable	Male Mean (SD)	Female Mean (SD)	*t*	*d*
Anger				
Inhibition	7.71 (2.06)	8.38 (2.00)	-2.22*	-0.33
Dysregulation	4.68 (1.59)	4.66 (1.71)	0.08	0.01
Coping	8.61 (2.00)	8.59 (2.00)	0.08	0.01
Worry				
Inhibition	8.45 (1.91)	8.14 (1.73)	1.18	0.17
Dysregulation	4.77 (1.38)	5.54 (1.76)	-3.19**	-0.49
Coping	6.47 (1.47)	6.68 (1.32)	-1.03	-0.15
Sad				
Inhibition	8.03 (2.01)	8.09 (2.05)	-0.21	-0.03
Dysregulation	5.26 (1.67)	5.52 (1.49)	-1.13	-0.16
Coping	8.59 (1.74)	8.63 (1.79)	-0.12	-0.02

*$p < .05$. **$p < .01$.

Age differences

Age differences were also examined. Children's ages ranged from 78.4 months (6 years, 5 months) to 141.6 months (11 years, 8 months). Correlations were used to explore any significant relations between age and neighborhood risk variables, individual/family risk variables, parent socialization strategies, and ER strategies.

Age and Neighborhood Risk.

Age was significantly correlated with two neighborhood level risk factors: proportion unemployed and proportion below the poverty line (see Table 8). Both of these correlations were less than -.20, suggesting a weak association between the variables. A negative correlation was found between age and the proportion of unemployed individuals in a neighborhood ($r = -.149, p < .05$). Age was also negatively correlated with the proportion of households living below the poverty line ($r = -.175, p <$

.05). This suggests that older children in the sample were less likely to live in neighborhoods with more unemployment and more poverty.

Table 8

Correlations Between Neighborhood Risk Variables and Age

Neighborhood Risk Variables	Age
Proportion Black	-.029
Proportion Less than HS Education	-.108
Proportion Unemployed	-.149*
Proportion Below the Poverty Line	-.175*
Neighborhood Composite	-.115

* $p < .05$.

Age and Individual/Family Risk.

At the individual/family risk level, age was significantly but weakly correlated with single parent status ($r = .154, p < .05$) (see Table 9). This indicates that older children in the sample were more likely to live in single parent households. There were no other significant correlations for individual/family risk variables and age, indicating that there were similar levels of most individual and family risk factors across all ages in the sample.

Table 9

Correlations Between Individual/Family Level Risk Variables and Age

Individual/Family Risk Variables	Age
Race	.023
Parent Education	.007
Teen Mom	.118
Family Income	.060
Family Size	-.028
Single Parent Status	.154*
Parental Incarceration	.084
Individual/Family Composite	.105

* $p < .05$.

Age and Parent Socialization Strategies

No significant correlations were found between age and parent socialization strategies, suggesting that parent emotion socialization strategies did not differ significantly depending on the age of the child (See Table 10).

Table 10

Correlations Between Parent Emotion Socialization Strategies and Age

Emotion Socialization Variables	Age
Reward	
Anger	-.047
Worry	-.057
Sad	-.073
Punish	
Anger	.031
Worry	-.004
Sad	-.071
Neglect	
Anger	.053
Worry	-.020
Sad	-.011

Table 10 (Continued)

Emotion Socialization Variables	Age
Override	
Anger	.042
Worry	-.039
Sad	.007

Age and ER

Significant but weak correlations were found between age and ER strategies (see Table 11). Age was negatively correlated with Anger Dysregulation (r = -.201, p < .01), Worry Dysregulation (r = -.231, p < .01), and Sad Inhibition (r = -.149, p < .05). This suggests that older children in the current sample were less likely to use these ER strategies. No other significant correlations were found.

Based on significant age differences found for some of the variables, age was entered as a control variable in subsequent analyses.

Table 11

Correlations Between Emotion Regulation and Age

Emotion Regulation Variables	Age
Anger	
Inhibition	-.074
Dysregulation	-.201**
Coping	.045
Worry	
Inhibition	.053
Dysregulation	-.231**
Coping	.084

Table 11 (Continued)

Emotion Regulation Variables	Age
Sad	
Inhibition	-.149*
Dysregulation	-.142
Coping	-.002

*$p < .05$. **$p < .01$.

School differences

Analyses were conducted to explore any systematic differences between the two schools from which data were collected. Both schools were located within the same city. School A had a sample size of 118 respondents while school B had a sample size of 65 respondents (see Table 12). T-tests were used to examine differences between the schools on the main variables of interest.

Table 12

Number of Students per School by Gender

School	Males	Females	Total
School A	41 (35%)	77 (65%)	118
School B	30 (46%)	35 (54%)	65

School and Neighborhood Risk

Significant differences were found on all variables of neighborhood risk, with children attending school A having significantly higher levels of risk factors within their neighborhoods than children attending school B (see Table 13). The neighborhood proportion of black residents was higher for children in school A ($M = .86$, $SD = .23$)

than for those in school B (M = .54, SD = .23), $t(181) = 9.00$, $p < .01$, the proportion of residents with less than a high school education was higher for children in school A (M = .38, SD = .11) than for children in school B (M = .26, SD = .09), $t(181) = 7.71$, $p < .01$, the proportion of unemployed individuals was higher in the neighborhoods of children from school A (M = .09, SD = .05) than in the neighborhoods of children from school B (M = .03, SD = .03), $t(181) = 7.29$, $p < .01$, and the proportion of families living below the poverty line was higher in neighborhoods of children in school A (M = .44, SD = .24) than children in school B (M = .18, SD = .11), $t(181) = 8.35$, $p < .01$. Finally, the overall level of neighborhood risk was higher for children attending school A (M = 1.77, SD = .55) than for children attending school B (M = 1.01, SD = .38), $t(181) = 9.84$, $p < .01$. These findings indicate that children attending school A came from neighborhoods with more associated risks than children attending school B.

Table 13

Neighborhood Risk Variables by School

Variable	School A (n = 118) Mean (SD)	School B (n = 65) Mean (SD)	t	d
Proportion Black	.86 (.23)	.54 (.23)	9.00**	1.39
Proportion Less than HS Education	.38 (.11)	.26 (.09)	7.71**	1.19
Proportion Unemployed	.09 (.05)	.03 (.03)	7.29**	1.45
Proportion Below the Poverty Line	.44 (.24)	.18 (.11)	8.35**	1.39
Neighborhood Composite	1.77 (.55)	1.00 (.38)	9.84**	1.62

**$p < .01$.

School and Individual/Family Risk

Children attending school A were also found to have significantly higher levels of individual/family level risk factors than children attending school B (see Table 14). Children from school A were more likely to be of ethnic minority status ($M = .89$, $SD = .31$) than children from school B ($M = .58$, $SD = .50$), $t(186) = 5.38$, $p < .01$. Children from school A also came from families with less income ($M = .70$, $SD = .46$) than children from school B ($M = .43$, $SD = .50$), $t(174) = 3.67$, $p < .01$), and were more likely to come from single parent homes ($M = .53$, $SD = .50$) than were children from school B ($M = .30$, $SD = .46$), $t(186) = 3.08$, $p < .01$. Children from school A also were more likely to have teen mothers ($M = .39$, $SD = .49$) than were children from school B ($M = .18$, $SD = .39$), $t(154) = 2.67$, $p < .01$) and were more likely to have had an incarcerated parent ($M = .48$, $SD = .50$) than were children from school B ($M = .08$, $SD = .27$), $t(186) = 6.03$, $p < .01$. Composite risk levels for children from school A ($M = 3.43$, $SD = 1.46$) were subsequently significantly greater than risk levels for children from school B ($M = 1.81$, $SD = 1.27$), $t(181) = 9.84$, $p < .01$.

Table 14

Individual/Family Risk Variables by School

Variable	School A ($n = 122$) Mean (SD)	School B ($n = 66$) Mean (SD)	t	d
Race	.89 (.30)	.57 (.50)	5.38**	.78
Parent Education	.12 (.32)	.11 (.31)	.30	.03
Teen Mom	.39 (.49)	.18 (.39)	2.67**	.47
Family Income	.70 (.46)	.43 (.50)	3.67**	.56

Table 14 (Continued)

Variable	School A (n = 122) Mean (SD)	School B (n = 66) Mean (SD)	t	d
Family Size	.22 (.42)	.17 (.38)	.86	.12
Single Parent Status	.53 (.50)	.30 (.46)	3.08**	.48
Parental Incarceration	.48 (.50)	.08 (.27)	6.03**	1.00
Individual/Family Composite	3.43 (1.46)	1.81 (1.27)	6.76**	1.18

* $p < .05$. ** $p < .01$.

School and Parent Socialization Strategies

Significant schools differences were also found for parent's use of Override as a socialization strategy for all three emotions (see Table 15). Parents with children attending school A (M = 4.77, SD = 1.75) reported using more Override strategies for Sadness than parents with children attending school B (M = 3.93, SD = 1.72), $t(170)$ = 3.00, $p < .01$. Parents with children in school A (M = 4.73, SD = 1.72) also reported using more Override strategies for Anger than parents of children in school B (M = 4.18, SD = 1.83), $t(173) = 2.00$, $p < .05$. The same pattern was found for Override of Worry, with parents of children from school A reporting more use of this strategy (M = 4.43, SD = 1.72) than parents of children from school B (M = 3.84, SD = 1.84), $t(170) = 2.12$, $p <$ .05. No significant differences were found for any of the other socialization strategies.

Table 15

Parent Emotion Socialization Strategies by School

Variable	School A (n = 110) Mean (SD)	School B (n = 61) Mean (SD)	t	d
Reward				
Anger	13.15 (2.48)	13.31 (2.42)	-0.41	-0.06
Worry	13.42 (2.56)	13.47 (2.24)	-0.11	-0.02
Sad	13.57 (2.41)	13.67 (1.96)	-0.28	-0.05
Punish				
Anger	2.76 (1.27)	2.60 (1.06)	0.88	0.14
Worry	2.12 (0.54)	2.07 (0.36)	0.76	0.11
Sad	2.21 (0.65)	2.08 (0.28)	1.44	0.26
Neglect				
Anger	2.39 (1.09)	2.16 (0.63)	1.55	0.26
Worry	2.18 (0.69)	2.06 (0.36)	1.20	0.22
Sad	2.25 (0.89)	2.15 (0.44)	0.81	0.14
Override				
Anger	4.73 (1.72)	4.18 (1.83)	2.00*	0.31
Worry	4.43 (1.72)	3.84 (1.84)	2.12*	0.33
Sad	4.77 (1.75)	3.93 (1.72)	3.00**	0.48

*$p < .05$. **$p < .01$.

School and ER

Significant school differences were found for children's Anger Coping strategies (see Table 16). Children attending school A (M = 8.38, SD = 1.89) reported using more Anger Coping than children attending school B (M = 9.02, SD = 2.13), $t(185) = -2.11$, $p <$ .05. No significant differences were found for any other socialization strategies.

Based on significant school differences found for multiple variables, school was entered as a control variable in subsequent analyses.

Table 16

Emotion Regulation by School

Variable	School A (n = 122) Mean (SD)	School B (n = 65) Mean (SD)	t	d
Anger				
Inhibition	8.07 (2.01)	8.18 (2.12)	-0.38	-0.05
Dysregulation	4.66 (1.61)	4.69 (1.75)	-0.14	-0.02
Coping	8.38 (1.89)	9.02 (2.13)	-2.11*	-0.30
Worry				
Inhibition	8.34 (1.74)	8.12 (1.92)	0.76	0.12
Dysregulation	5.33 (1.68)	5.06 (1.61)	1.05	0.16
Coping	6.46 (1.24)	6.85 (1.60)	-1.83	-0.27
Sad				
Inhibition	8.07 (1.87)	8.06 (2.31)	0.01	0.00
Dysregulation	5.36 (1.58)	5.52 (1.56)	-0.63	-0.10
Coping	8.48 (1.66)	8.88 (1.93)	-1.50	-0.22

*$p < .05$

Global versus discrete approach for emotions

Correlations were used to examine whether parents and children used socialization and ER strategies similarly across each of the three emotions – Anger, Sadness, and Worry. These analyses were conducted to determine whether a global or discrete approach for examining emotions should be used for the main analyses.

Parent Socialization Strategies

The socialization strategy of Reward was found to be significantly correlated for all three emotions (see Table 17). Reward of Sadness was significantly correlated with Reward of Anger (r = .818, $p < .01$) and Reward of Worry (r = .775, $p < .01$). Reward of Anger was also significantly correlated with Reward of Worry (r = .760, $p < .01$). These findings indicate that parents in this sample used Reward strategies similarly for Sadness, Anger, and Worry.

Table 17

Correlations Between Parent Socialization Strategies: Reward

Variable	Reward Anger	Reward Worry	Reward Sad
Reward Anger	-		
Reward Worry	.760**	-	
Reward Sad	.818**	.775**	-

** $p < .01$.

The socialization strategy of Override was also significantly correlated for all three emotions (see Table 18). Override of Sadness was significantly correlated with Override of Anger ($r = .699, p < .01$) and Override of Worry ($r = .796, p < .01$). Override of Anger was also significantly correlated with Override of Worry ($r = .732, p < .01$). These findings indicate that parents in this sample use Override strategies similarly for Sadness, Anger, and Worry.

Table 18

Correlations Between Parent Socialization Strategies: Override

Variable	Override Anger	Override Worry	Override Sad
Override Anger	-		
Override Worry	.732**	-	
Override Sad	.699**	.796**	-

** $p < .01$.

The remaining socialization strategies of Punish and Neglect were only weakly correlated for the 3 emotions, suggesting that unlike Reward and Override, these strategies appear to be used differently depending on the emotions (see Table 19, 20). These data suggest using a discrete strategy when examining emotions in order to maintain consistency across analyses. Each of the four emotion socialization strategies were therefore examined separately for each of the three emotions, creating a total of 12 emotion socialization variables. Reward and Override strategies were also examined as global strategies for some analyses, based on findings that they were significantly correlated across all three emotions.

Table 19

Correlations Between Parent Socialization Strategies: Punish

Variable	Punish Anger	Punish Worry	Punish Sad
Punish Anger	-		
Punish Worry	.273**	-	
Punish Sad	.306**	.485**	-

**$p < .01$.

Table 20

Correlations Between Parent Socialization Strategies Neglect

Variable	Neglect Anger	Neglect Worry	Neglect Sad
Neglect Anger	-		
Neglect Worry	.324**	-	
Neglect Sad	.535**	.365**	-

**$p < .01$.

ER Strategies

There were weak but significant correlations for each of the ER strategies across each of the three emotions. Inhibition of Anger was correlated with Inhibition of Worry ($r = .266, p < .01$) and Inhibition of Sadness ($r = .538, p < .01$). Inhibition of Worry and Sadness were also correlated ($r = .323, p < .01$) (see Table 21). Similar weak correlations were found for Dysregulation of Anger and Worry ($r = .318, p < .01$), Anger and Sadness ($r = .285, p < .01$), and Worry and Sadness ($r = .405, p < .01$) (see Table 22). Finally, Anger Coping was significantly correlated with Worry Coping ($r = .264, p < .01$) and Sadness Coping ($r = .343, p < .01$), and Worry Coping was significantly related to Sadness Coping ($r = .327, p < .01$) (see Table 23). These weak correlations also confirmed the appropriateness of examining each discrete emotion when looking at ER strategies, creating a total of nine ER variables.

Table 21

Correlations Between ER strategies: Inhibition

Variable	Anger INH	Worry INH	Sad INH
Anger INH	-		
Worry INH	.266**	-	
Sad INH	.538**	.323**	-

**$p < .01$.

Table 22

Correlations Between ER strategies: Dysregulation

Variable	Anger DYS	Worry DYS	Sad DYS
Anger DYS	-		
Worry DYS	.318**	-	
Sad DYS	.285**	.405**	-

** $p < .01$.

Table 23

Correlations Between ER strategies: Coping

Variable	Anger COP	Worry COP	Sad COP
Anger COP	-		
Worry COP	.264**	-	
Sad COP	.343**	.327**	-

** $p < .01$.

Main Analyses

Main analyses were conducted to examine each of the four proposed hypotheses. Based on preliminary analyses, each emotion was examined separately for parent socialization strategies and children's ER strategies. Age and school were entered as control variables. Analyses were conducted for the overall sample and were also conducted separately by gender. Results for each of the four hypotheses are discussed below.

Hypothesis 1

The first hypothesis stated that risk was expected to be directly related to children's ER skills, with a larger accumulation of risk factors associated with more maladaptive (e.g., Dysregulation, Inhibition) and less adaptive (e.g., Coping) emotion

regulation skills. Correlations and ANOVAs were used to examine the relations between risk factors and ER strategies. Analyses were conducted both with and without age and school as control variables. If significant relations between these variables existed, the first hypothesis further stated that neighborhood risk factors were expected to explain a significant amount of variance above and beyond what was explained by family and individual level risk factors.

Neighborhood Risk and ER

In the full sample of boys and girls combined, results from correlations show that the neighborhood risk composite was significantly related to Anger Coping (r = -.184, p < .05), indicating that more neighborhood risk was associated with less Anger Coping. Correlations for each separate neighborhood risk variable reveal that Anger Coping was significantly related to the proportion of the neighborhood population with less than a high school education (r = -.155, p < .05), the proportion unemployed (r = -.186, p < .05), and the proportion living below the poverty line (r = -.152, p < .01) (see Table 24). This suggests that individuals living in neighborhoods with these specific risk factors exhibited less Anger Coping. No other significant relations were found. When age and school were entered as control variables, all significant findings disappeared.

Table 24

Correlations Between Neighborhood Risk and ER

Variable	Proportion Black	Proportion Less than HS Education	Proportion Unemployed	Proportion Below the Poverty Line	Neighborhood Composite
Anger					
INH	.018	-.037	-.048	-.055	-.025
DYS	-.084	.013	.110	.118	.021
COP	-.138	-.155*	-.186*	-.197**	-.184*
Worry					
INH	.005	.037	.056	.040	.030
DYS	.080	-.001	.042	.038	.054
COP	-.022	-.030	-.019	-.014	-.023
Sad					
INH	.004	.062	.046	.020	.026
DYS	-.030	.054	-.028	.045	.013
COP	-.103	-.075	-.072	-.068	-.093

*$p < .05$. **$p < .01$.

Gender differences

Separate analyses by gender were conducted. Like with the overall sample, the neighborhood risk composite was significantly related to Anger Coping, but only for girls ($r = -.216, p < .05$), indicating that girls in neighborhoods with more associated risk used less Anger Coping than girls in neighborhoods with less risk. No other relations were found between neighborhood risk and ER skills. There were no significant relations when age and school were entered as control variables.

Individual/Family Risk and ER

At the individual/family risk level, results from ANOVAs indicate that ER strategies did not differ significantly based on different levels of individual and family risk. This was true in the overall sample and when conducting separate analyses for gender. Regression analyses were not conducted to explore whether neighborhood risk

accounted for more variance than individual and family risk due to the lack of relations found between these variables.

Hypothesis 2

The second hypothesis stated that risk would be related to parent's emotion socialization strategies such that greater risk would be related to less positive socialization strategies (e.g., Reward) and more negative socialization strategies (e.g., Punish, Neglect, Override). Analyses were conducted both with and without age and school as control variables.

Neighborhood Level Risk and Parent Socialization

In examining the relations between neighborhood risk and parent socialization of emotion, no significant correlations were found between the neighborhood risk composite and parents' socialization strategies (see Table 25). This indicates that greater neighborhood risk was not associated with less positive or more negative parent socialization strategies, as hypothesized. Looking at each neighborhood risk factor separately, however, some significant relations were found. Parents' Reward of Sadness was found to be significantly correlated with a neighborhood's proportion of individuals with less than a high school education ($r = -.170, p < .05$) and the proportion unemployed ($r = -.152, p < .05$). Both correlations were negative, indicating that lower education levels and higher unemployment rates were associated with less Reward of Sadness. No other significant correlations were found. When age and school were entered as control variables, no significant relations were found.

Table 25

Correlations Between Neighborhood Risk and Parent Socialization Strategies

Variable	Proportion Black	Proportion Less than HS Education	Proportion Unemployed	Proportion Below the Poverty Line	Neighborhood Composite
Reward					
Anger	.084	-.064	-.018	.000	.023
Worry	.073	-.136	-.025	-.038	-.012
Sad	-.022	-.170*	-.152*	-.130	-.107
Punish					
Anger	-.012	-.043	.000	-.028	-.025
Worry	.125	.059	.091	.104	.115
Sad	.132	.098	.098	.105	.127
Neglect					
Anger	-.015	-.078	-.014	-.056	-.045
Worry	-.001	.055	.103	.051	.039
Sad	.034	.050	.003	.034	.039
Override					
Anger	.035	-.020	.110	.071	.049
Worry	.074	.008	.063	.069	.067
Sad	.116	.047	.097	.092	.105

* $p < .05$.

Gender Differences

The relationship between neighborhood risk and parent socialization of emotion was also examined separately by gender. Unlike with the full sample, there were significant correlations between the neighborhood risk composite and parents' socialization strategies for boys (see Table 26). Neighborhood risk was significantly correlated with Reward of Sadness ($r = -.280, p < .05$) and Override of Sadness ($r = .244, p < .05$). This indicates that in neighborhoods with higher levels of risk, parents reported using less Reward of Sadness and more Override of Sadness for boys. Significant relations were also found for separate neighborhood risk variables. The proportion of individuals with less than a high school education was significantly

correlated with Reward of Sadness (r = -.374, p < .01), Punishment of Sadness (r = .254, p < .05), Reward of Anger (r = -.303, p < .05), and Reward of Worry (r = -.269, p < .05). These relations indicate that in neighborhoods with lower education levels, there was less Reward of Sadness, Anger, and Worry and more Punishment of Sadness for boys. The proportion of unemployed individuals in a neighborhood was also significantly correlated with Reward of Sadness (r = -.264, p < .05), Override of Sadness (r = .279, p < .05), and Punishment of Worry (r = .309, p < .05) for boys. This indicates that higher levels of unemployment rates were associated with less Reward of Sadness, more Override of Sadness, and more Punishment of Worry for boys. The proportion of individuals living below the poverty line in a neighborhood was also significantly correlated with Reward of Sadness (r = -.266, p < .05), indicating less Reward of Sadness for boys living in neighborhoods with higher poverty rates. As with other analyses, all significant findings disappeared when age and school were entered as control variables.

Table 26

Correlations Between Neighborhood Risk and Parent Socialization Strategies for Boys

Variable	Proportion Black	Proportion Less than HS Education	Proportion Unemployed	Proportion Below the Poverty Line	Neighborhood Composite
Reward					
Anger	-.159	-.303*	-.177	-.143	-.202
Worry	.030	-.269*	-.059	-.042	-.063
Sad	-.162	-.374**	-.264*	-.266*	-.280*
Punish					
Anger	.000	-.044	.057	.010	.001
Worry	.185	.188	.309*	.207	.230
Sad	.209	.254*	.180	.162	.222
Neglect					
Anger	.159	.069	.042	.031	.097

Table 26 (Continued)

Variable	Proportion Black	Proportion Less than HS Education	Proportion Unemployed	Proportion Below the Poverty Line	Neighborhood Composite
Neglect					
Worry	-.009	.086	.116	.079	.058
Sad	.154	.201	.072	.106	.155
Override					
Anger	.156	.144	.235	.219	.209
Worry	.125	.119	.159	.180	.167
Sad	.217	.197	.279*	.209	.244*

* $p < .05$. ** $p < .01$.

For girls, overall neighborhood risk was significantly correlated with Neglect of Anger ($r = -.222, p < .05$), indicating that higher levels of neighborhood risk were associated with less Neglect of Anger for girls (see Table 27). Examining neighborhood risk variables separately, the proportion of black individuals in a neighborhood was significantly correlated with Neglect of Anger for girls ($r = -.213, p < .05$). The proportion of individuals with less than a high school education was also significantly correlated with Neglect of Anger for girls ($r = -.271, p < .01$), indicating that there was less Neglect of Anger for girls in neighborhoods with higher proportions of black individuals and in neighborhoods with lower education levels. There were no significant findings when age and school were entered as control variables.

Table 27

Correlations Between Neighborhood Risk and Parent Socialization Strategies for Girls

Variable	Proportion Black	Proportion Less than HS Education	Proportion Unemployed	Proportion Below the Poverty Line	Neighborhood Composite
Reward					
Anger	.185	.045	.070	.081	.129
Worry	.092	-.065	-.005	-.038	.014
Sad	.053	-.053	-.083	-.042	-.009
Punish					
Anger	-.034	-.057	-.051	-.069	-.057
Worry	.082	-.039	-.076	.016	.029
Sad	.071	-.044	.019	.045	.042
Neglect					
Anger	-.213*	-.271**	-.084	-.176	-.222*
Worry	-.006	.018	.092	.017	.015
Sad	-.111	-.147	-.102	-.075	-.115
Override					
Anger	-.027	-.112	.032	-.028	-.042
Worry	.059	-.045	.006	.001	.019
Sad	.058	-.050	-.033	.004	.015

*$p < .05$. **$p < .01$.

Individual/Family Level Risk and Parent Socialization

For individual and family level risk, no significant correlations were found between the individual/family risk composite and parents' emotion socialization strategies. Examining each risk factor separately, some significant correlations were found (see Table 28). Teen mom status was significantly correlated with Reward of Sadness ($r = -.188, p < .05$), indicating that being a teen mom was associated with less Reward of Sadness. Parental incarceration was significantly correlated with a large number of negative parent socialization strategies, including Punishment of Sadness ($r = .246, p < .01$), Neglect of Sadness ($r = .216, p < .01$), Override of Sadness ($r = .255, p < .01$), Override of Anger ($r = .302, p < .01$), Punishment of Worry ($r = .168, p < .05$), and

Override of Worry ($r = .259, p < .01$). All of these correlations were in the positive direction, indicating that higher rates of parental incarceration were associated with more negative types of parent socialization strategies. No significant relations were found when age and school were entered as control variables.

Table 28

Correlations Between Individual/Family Risk and Parent Socialization Strategies

Variable	Race	Parent Ed.	Teen Mom	Family Income	Family Size	Single Parent	Parental Incarc.	Composite
Reward								
Anger	.084	.070	-.122	-.005	.024	.066	-.018	.011
Worry	-.013	.022	-.050	-.008	.035	.035	-.029	-.023
Sad	-.064	.056	-.188*	-.026	.029	.033	-.087	-.076
Punish								
Anger	-.029	-.145	-.027	-.120	-.034	.031	.075	-.031
Worry	.114	-.080	-.008	-.044	.045	.111	.168*	.089
Sad	.107	-.112	.003	-.007	-.097	.042	.246**	.062
Neglect								
Anger	-.017	-.048	.127	-.106	-.060	-.070	.070	-.023
Worry	.077	-.088	.018	.025	-.114	.018	.113	.072
Sad	.093	-.011	.038	.013	-.105	.064	.216**	.118
Override								
Anger	.050	.008	.011	-.079	-.021	.087	.302**	.078
Worry	.098	.056	.070	-.003	-.039	.069	.259**	.119
Sad	.117	.071	.043	-.062	-.008	.104	.255**	.128

Note: Parent Ed. = Parent Education; Parental Incarc. = Parental Incarceration
*$p < .05$. **$p < .01$.

Gender Differences

For boys, no significant correlations were found between the individual/family risk composite and parents' emotion socialization strategies. Examining separate risk variables, parental incarceration was found to be significantly correlated with Punishment of Sadness ($r = .287, p < .05$), Override of Anger ($r = .247, p < .05$), and Override of

Worry ($r = .331, p < .01$) (see Table 29). These findings indicate that parental incarceration was associated with more Punishment of Sadness and Override of Anger and Worry in boys in the current sample. No other significant correlations were found. There were no significant findings when age and school were entered as control variables.

Table 29

Correlations Between Individual/Family Risk and Parent Socialization Strategies for Boys

Variable	Race	Parent Ed.	Teen Mom	Family Income	Family Size	Single Parent	Parental Incarc.	Composite
Reward								
Anger	.097	.137	-.062	.034	-.070	.108	-.075	.015
Worry	-.039	.126	-.014	.036	.060	.128	-.025	.063
Sad	-.018	.180	-.075	.019	.105	.076	-.174	.023
Punish								
Anger	-.002	-.191	.039	-.110	.078	-.027	.119	.035
Worry	.133	-.089	.126	.055	.236	.093	.172	.204
Sad	.150	-.096	.095	.063	-.096	-.014	.287*	.124
Neglect								
Anger	.014	.009	.137	-.019	-.034	-.145	.036	-.012
Worry	.129	-.086	.093	.095	-.131	.089	.114	.095
Sad	.138	.115	.034	.079	-.104	-.013	.201	.119
Override								
Anger	.138	.020	-.048	.027	-.010	.050	.247*	.092
Worry	.070	.045	.028	.192	-.086	.049	.331**	.131
Sad	.042	.121	.012	.142	-.098	.005	.230	.134

Note: Parent Ed. = Parent Education; Parental Incarc. = Parental Incarceration
*$p < .05$. **$p < .01$.

For girls, there were no significant correlations between the individual/family risk composite and parent socialization strategies. A number of significant correlations were found for separate risk variables (see Table 30). Family income was significantly

correlated with Override of Sadness (r = -.207, p < .05) and Neglect of Anger (r = -.219, p < .05). This indicates that families having incomes less than $30,000 were associated with less use of Override of Sadness and Neglect of Anger socialization strategies for girls. Teen mom status was significantly correlated with Reward of Sadness (r = -.268, p < .05), indicating that for girls, having a teen mom was associated with less Reward of Sadness. As with boys, parental incarceration was significantly correlated with a number of negative parent socialization strategies, including Punishment of Sadness (r = .203, p < .05), Neglect of Sadness (r = .243, p < .05), Override of Sadness (r = .275, p < .01), Override of Anger (r = .337, p < .01), and Override of Worry (r = .226, p < .05). This indicates that parental incarceration was associated with more Punishment of Sadness, Neglect of Sadness, and Override of Sadness, Anger, and Worry. No other significant correlations were found. As with all other analyses, all significant differences disappeared when age and school were entered as control variables.

Table 30

Correlations Between Individual/Family Risk and Parent Socialization Strategies for Girls

Variable	Race	Parent Ed.	Teen Mom	Family Income	Family Size	Single Parent	Parental Incarc.	Composite
Reward								
Anger	.067	.054	-.153	-.030	.081	.029	.000	-.004
Worry	-.004	-.025	-.073	-.039	.022	-.027	-.037	-.095
Sad	-.090	.000	-.268*	-.059	-.015	.006	-.032	-.170
Punish								
Anger	-.060	-.109	-.077	-.133	-.114	.064	.026	-.097
Worry	.095	-.068	-.110	-.121	-.087	.112	.155	-.021
Sad	.068	-.122	-.087	-.074	-.099	.086	.203*	-.019
Neglect								
Anger	-.066	-.085	.135	-.219*	-.091	-.024	.097	-.058

Table 30 (Continued)

Variable	Race	Parent Ed.	Teen Mom	Family Income	Family Size	Single Parent	Parental Incarc.	Composite
Neglect								
Worry	.030	-.085	-.062	-.072	-.109	-.063	.102	-.012
Sad	.040	-.127	.060	-.074	-.116	.156	.243*	.121
Override								
Anger	.002	.003	.049	-.145	-.027	.109	.337**	.065
Worry	.121	.055	.095	-.122	-.015	.095	.226*	.111
Sad	.166	.044	.066	-.207*	.052	.173	.275**	.123

Note: Parent Ed. = Parent Education; Parental Incarc. = Parental Incarceration
*$p < .05$. **$p < .01$.

Hypothesis 3

The third hypothesis stated that parent's emotion socialization strategies were expected to be related to their children's ER skills. In particular, positive strategies (e.g., Reward) would be associated with more adaptive regulation skills (e.g., Coping) whereas negative strategies (e.g., Punish, Neglect, Override) would be associated with more maladaptive skills (e.g., Dysregulation, Inhibition). Analyses were conducted both with and without age and school as control variables.

Parent Socialization Strategies and ER

The relationship between parents' socialization strategies and children's ER was examined using correlations. Reward and Override strategies were found to be significantly related to a number of ER strategies (see Table 31). Reward of Anger, Sadness, and Worry were all significantly correlated with Anger Inhibition ($r = .159, p < .05$; $r = .181, p < .05$; $r = .174, p < .05$). The overall Reward strategy collapsed across emotions was also examined and was significantly correlated with Anger Inhibition ($r = .188, p < .05$). This indicates that more use of the positive Reward strategy by parents was associated with more Anger Inhibition in children. This does not support the

hypothesis, which assumed that positive socialization strategies be associated with positive ER strategies.

The Override strategy was also significantly related to children's ER. Override of Anger, Sadness and Worry were all significantly related to Anger Dysregulation (r = .177, $p < .05$; r = .182, $p < .05$; r = .165, $p < .05$). The overall strategy of Override was also significantly related to Anger Dysregulation (r = .198, $p < .01$), indicating that the more use of Override strategies by parents was associated with more Anger Dysregulation in children. Override of Worry was also significantly correlated to Anger Inhibition (r = .157, $p < .05$) and Override of Sadness was significantly correlated to Worry Dysregulation (r = .154, $p < .05$). These findings are consistent with the hypothesis and demonstrate that the negative socialization strategy of Override by parents was associated with more maladaptive ER strategies in children (e.g., Inhibition and Dysregulation). When age and school were entered as control variables, no significant relations were found.

Table 31

Correlations Between Parent Socialization Strategies and ER

	Anger			Worry			Sad		
	INH	DYS	COP	INH	DYS	COP	INH	DYS	COP
Reward									
Anger	.159*	.040	-.118	.014	.036	.131	.050	.017	.011
Worry	.174*	-.082	-.021	.032	.022	.101	.071	-.091	-.004
Sad	.181*	-.002	-.079	-.045	.089	.150	.005	.021	.001
Punish									
Anger	.043	-.108	.003	-.013	-.026	.014	-.037	-.008	.099
Worry	.102	-.070	.072	.022	-.039	-.118	.070	-.035	.047
Sad	-.054	.022	.025	-.002	.008	-.104	.058	-.079	.056
Neglect									
Anger	-.144	-.061	.007	-.053	-.036	-.086	-.153*	-.020	-.091

Table 31 (Continued)

	Anger			Worry			Sad		
	INH	DYS	COP	INH	DYS	COP	INH	DYS	COP
Neglect									
Worry	-.125	-.002	-.106	-.043	.063	-.099	-.029	.055	-.080
Sad	-.013	-.113	-.025	-.059	-.051	-.055	-.039	-.005	.024
Override									
Anger	.036	.177*	-.140	-.041	.060	-.060	.026	.051	-.053
Worry	.157*	.165*	-.047	.012	.102	-.046	.080	.035	-.051
Sad	.133	.182*	-.092	-.137	.154*	-.002	.080	.035	-.096

*$p < .05$.

Gender Differences

Relations between parent socialization strategies and ER strategies in children were examined separately by gender. No significant correlations were found for boys. For girls, Reward of Anger, Sadness, and Worry were all significantly correlated with Anger Inhibition ($r = .250, p < .01$; $r = .255, p < .01$; $r = .245, p < .05$) (see Table 32). The overall Reward strategy collapsed across emotions was significantly correlated with Anger Inhibition ($r = .284, p < .01$), indicating that the general use of the Reward strategy was associated with more Anger Inhibition in girls. Like with the overall sample, this relationship was the opposite of what would be expected based on the hypothesis. Conversely, Reward of Anger was significantly correlated with Worry Coping ($r = .190$, $p < .05$). This indicates that the positive strategy of Reward for Anger was associated with adaptive Coping with Worry for girls in the current sample.

Override strategies were also significantly related with ER for girls. Override of Sadness was significantly correlated with Anger Inhibition ($r = .199, p < .01$) and Anger Dysregulation ($r = .202, p < .05$). The overall strategy of Override was also significantly correlated with Anger Dysregulation ($r = .206, p < .05$). Consistent with the hypothesis,

these findings indicate that for girls, Override strategies were associated with more negative ER strategies. Punishment of Worry was also significantly negatively correlated with Worry Coping for girls (r = -.194, p < .05), indicating that more Punishment of Worry was associated with less Worry Coping. This is also consistent with the hypothesis. As with the overall sample, no significant relations were found when age and school were entered as control variables.

Table 32

Correlations Between Parent Socialization Strategies and ER for Girls

	Anger			Worry			Sad		
	INH	DYS	COP	INH	DYS	COP	INH	DYS	COP
Reward									
Anger	.250**	.059	-.173	-.002	.052	.190*	.058	.018	.070
Worry	.245*	-.084	-.085	-.023	.051	.135	.099	-.114	.057
Sad	.255**	.020	-.134	-.100	.100	.182	.041	.017	.074
Punish									
Anger	.108	-.124	-.012	-.060	.071	-.113	.014	-.068	.061
Worry	.036	-.064	-.029	-.110	.025	-.194*	.089	-.019	.047
Sad	-.094	.042	-.125	-.117	.063	-.154	.006	.073	.058
Neglect									
Anger	-.122	-.008	.134	.045	.078	-.170	-.047	-.010	-.081
Worry	-.092	.042	-.004	.114	.116	-.034	-.040	.111	-.167
Sad	-.041	-.078	-.046	-.052	-.041	-.246*	-.097	-.022	-.057
Override									
Anger	.123	.169	-.124	.044	.057	-.128	.046	-.004	-.059
Worry	.190	.156	-.072	.059	.059	-.128	.094	.029	-.034
Sad	.199*	.202*	-.143	-.094	.152	-.077	.148	.074	-.118

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

Hypothesis 4

The final hypothesis proposed a mediational model by which parent socialization strategies were expected to mediate the relationship between risk and ER. This

hypothesis was based on previous hypotheses and the assumption that there would be significant relations between risk, emotion socialization, and ER variables. Support for testing this model was not provided based on limited findings for the previous hypotheses. Exploratory analyses were instead conducted to explore other relations between variables and to examine whether the relations between emotion socialization strategies and ER skills varied based on different levels of risk. First, regression analyses were used to explore whether parent socialization and risk variables combined could predict children's ER skills. Next, regression analyses including interaction terms were used to explore whether the relations between parents' socialization strategies and children's ER strategies differed in the context of risk.

Predicting ER from Risk and Parent Socialization

Regression analyses were conducted to examine whether parent socialization strategies, the individual and family risk composite, and neighborhood risk composite could predict children's ER skills. Age and school were used as control variables and analyses were conducted with the overall sample and separately by gender.

In the full sample, a model including parent socialization strategies for Worry and both the individual/family and neighborhood risk composites explained a significant proportion of the variance in Worry Dysregulation, $R^2 = .16$, $F(9, 120) = 2.58$, $p < .01$ (see Table 33). Despite the collective significance of the model, none of the individual predictors were significant. Override of Anger was also found to significantly predict Anger Dysregulation, $b = .17$, $t(122) = 2.13$, $p < .05$.

Table 33

Regression Model Predicting Worry Dysregulation from Parent Socialization Strategies and Risk

	Model 1	Model 2	Model 3	Model 4
Predictor	*B*	*B*	*B*	*B*
(Constant)	8.42**	8.23**	8.07**	7.87**
Age	-.04**	-.04**	-.04**	-.03**
Gender	.85**	.84**	.86**	.87**
School	-.31	-.27	-.21	-.18
Reward Worry		-.00	-.00	-.00
Punish Worry		-.17	-.17	-.18
Neglect Worry		.04	.04	.05
Override Worry		.08	.08	.08
Individual/Family Risk			.04	.03
Neighborhood Risk				.06
R^2	.15	.16	.16	.16
ΔR^2	.15	.01	.00	.00
Model *F*	7.56**	3.34**	2.92**	2.58**

**$p < .01$.

Gender differences

For boys, a model including parent socialization strategies for Anger and both the individual/family and neighborhood risk composites explained a significant proportion of the variance in Anger Dysregulation scores, $R^2 = .29$, $F(8, 44) = 2.34$, $p < .05$ (see Table 34). Within this model, Override of Anger significantly predicted Anger Dysregulation, $b = .28$, $t(44) = 2.19$, $p < .05$. Punishment of Sadness significantly predicted Sadness Dysregulation in boys, $b = -1.00$, $t(44) = -2.77$, $p < .01$. No other significant relations were found.

Table 34

Regression Model Predicting Anger Dysregulation from Parent Socialization Strategies and Risk for Boys

	Model 1	Model 2	Model 3	Model 4
Predictor	*B*	*B*	*B*	*B*
(Constant)	9.66**	9.47**	8.52**	8.30*
Age	-.05**	-.05*	-.05*	-.05*
School	.58	.65	1.00	1.03
Reward Anger		-.04	-.05	-.04
Punish Anger		-.28	-.29	-.28
Neglect Anger		-.19	-.15	-.15
Override Anger		.28*	.28*	.28*
Individual/Family Risk			.15	.14
Neighborhood Risk				.07
R^2	.17	.28	.30	.30
ΔR^2	.17	.11	.02	.00
Model *F*	5.17**	3.01*	2.73*	2.34*

* $p < .05$. ** $p < .01$.

For girls, a model including parent socialization strategies for Anger and both the individual/family and neighborhood risk composites explained a significant proportion of the variance in girl's Anger Inhibition, $R^2 = .21$, $F(8, 68) = 2.30$, $p < .05$ (see Table 35). Within this model, Reward of Anger and Punishment of Anger were significant predictors of Anger Inhibition, $b = .23$, $t(68) = 2.41$, $p < .05$; $b = .56$, $t(68) = 2.73$, $p < .01$. No other significant relations were found.

Table 35

Regression Model Predicting Anger Inhibition from Parent Socialization Strategies and Risk for Girls

	Model 1	Model 2	Model 3	Model 4
Predictor	*B*	*B*	*B*	*B*
(Constant)	11.54**	6.19*	5.74	4.10
Age	-.02	-.02	-.02	-.01
School	-.34	-.15	-.03	.29
Reward Anger		.25*	.25*	.23*
Punish Anger		.53*	.55**	.56**
Neglect Anger		.05	-.22	-.13
Override Anger			.04	.05
Individual/Family Risk			.09	.06
Neighborhood Risk				.51
R^2	.03	.19	.20	.21
ΔR^2	.03	.16	.00	.02
Model *F*	1.05	2.76*	2.39*	2.30*

* $p < .05$. ** $p < .01$.

Parent Socialization and ER in the Context of Risk

Regression analyses including interaction terms were conducted to explore whether the relations between parents' socialization strategies and children's ER strategies differed in the context of risk. Interaction terms were created using standardized variables to represent low and high levels of parent socialization strategies and low and high levels of risk at both the individual and family levels and the neighborhood level.

Main effects

There was a significant main effect of Reward of Anger on Anger Coping. Parents' use of the Reward of Anger strategy significantly predicted Anger Coping in

children, b = -.38, $t(131)$ = -2.15, p <.05, with more Reward of Anger leading to less Anger Coping. No other main effects were found.

Individual/Family Risk by Parent Socialization Interactions

Three significant interactions and two trends were found at the individual/family risk level. All three significant interactions involved ER strategies of Coping. The two trends were for ER strategies of Inhibition. There were no significant findings for ER strategies of Dysregulation. Findings are described below.

Override of Sadness and Sadness Coping.

At the individual and family risk level, there was a significant interaction between risk and Override of Sadness for Sad Coping, b = -.33, $t(126)$ = -2.10, p <.05 (see Figure 3). Children with parents who used less Override of Sadness exhibited significantly more Sadness Coping if in low risk families than if in high risk families. Children whose parents used more Override of Sadness, however, exhibited slightly more Sadness Coping in high risk situations than in low risk situations. The difference between these groups was larger in high risk than in low risk families.

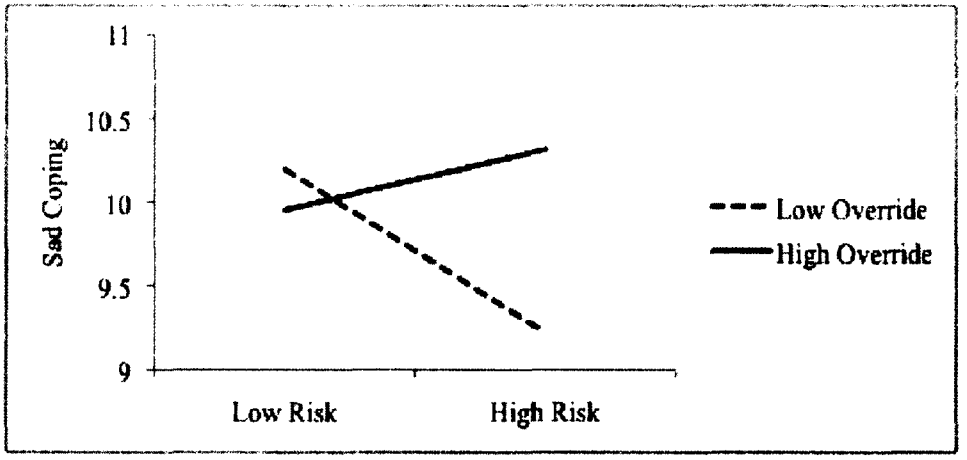

Figure 3. Graph of significant interaction between individual/family risk and Override of Sadness for Sad coping.

Punishment of Anger and Anger Coping

A significant interaction was also found between risk and Punishment of Anger for Anger Coping, $b = .37$, $t(130) = 2.01$, $p < .05$ (see Figure 4). Children whose parents used more Punishment of Anger exhibited more Anger Coping in low risk families than in high risk families. Children whose parents used less Punishment of Anger used slightly more Anger Coping in high risk than in low risk families.

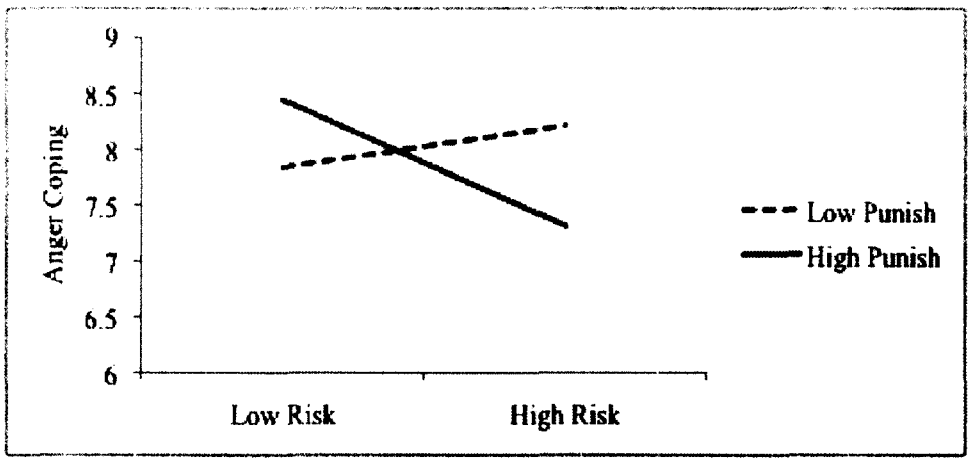

Figure 4. Graph of significant interaction between individual/family risk and Punishment of Anger for Anger coping.

Reward of Worry and Worry Coping

Finally, a significant interaction was found between risk and Reward of Worry for Worry Coping, $b = -.38$, $t\,(129) = -2.50$, $p < .05$ (see Figure 5). Children whose parents used less Reward for Worry exhibited significantly more Worry Coping in low risk than in high risk families. Children whose parents used more Reward of Worry, however, exhibited more Worry Coping in high risk than in low risk families. The differences between these groups were more significant in low risk families.

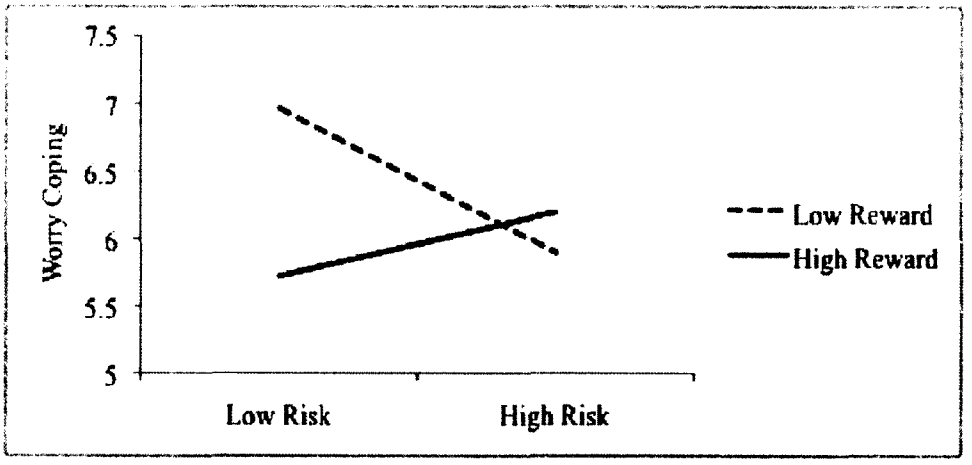

Figure 5. Graph of significant interaction between individual/family risk and Reward of Worry for Worry coping.

Override of Sadness and Sadness Inhibition

In addition to the significant interactions, two trends were found. There was a trend found between risk and Override of Sadness for Sadness Inhibition, $b = -.31$, $t(126) = -1.69$, $p = .09$ (see Figure 6). Children whose parents used less Override for Sadness exhibited significantly more Sadness Inhibition in low risk than in high risk families. Children whose parents used more Override of Sadness, however, exhibited more Sadness Inhibition in high risk than in low risk families. The differences between these groups were more significant in low risk families.

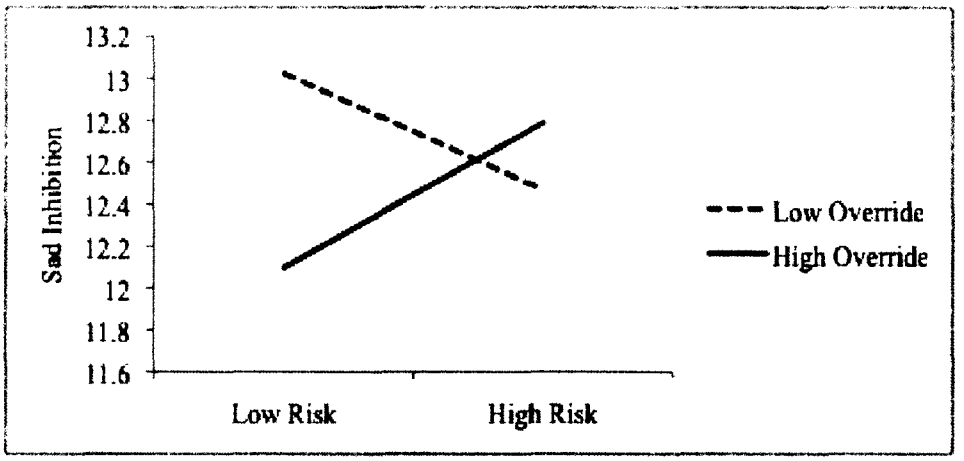

Figure 6. Graph of interaction trend between individual/family risk and Override of Sadness for Sad Inhibition.

Punish of Worry and Worry Inhibition

The second trend was found between risk and Punish of Worry for Worry Inhibition, $b = .27$, $t\,(129) = 1.91$, $p = .06$ (see Figure 7). Children whose parents used less Punishment for Worry exhibited significantly less Worry Inhibition in low risk than in high risk families. Children whose parents used more Punishment of Worry, however, exhibited less Worry Inhibition in high risk than in low risk families. The differences between these groups were more significant in low risk families.

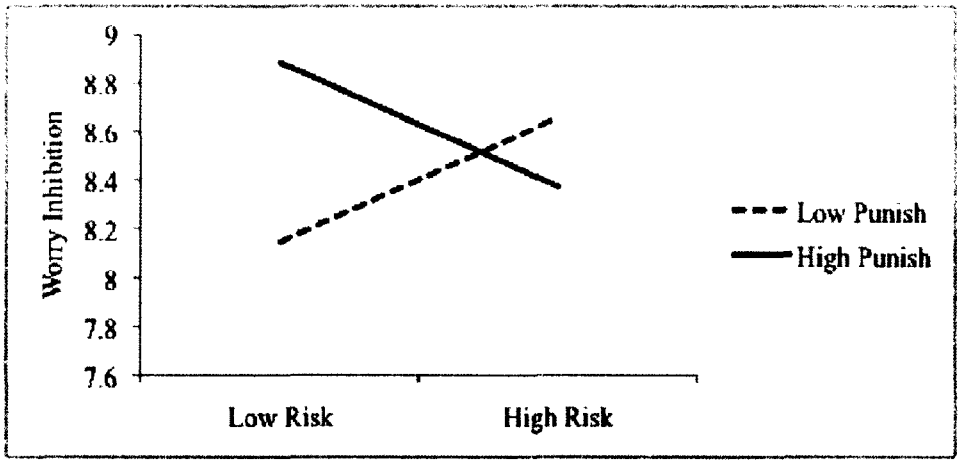

Figure 7. Graph of interaction trend between individual/family risk and Punishment of Worry for Worry Inhibition.

Neighborhood Risk by Parent Socialization Interactions

Three significant interactions were found at the neighborhood risk level. All three interactions were related to the emotion of Worry. More specifically, one of these interactions was related to Worry Inhibition and the other two were related to Worry Coping. Findings are described below.

Punishment of Worry and Worry Inhibition

There was a significant interaction between neighborhood risk and Punishment of Worry for Worry Inhibition, $b = .46$, $t(158) = 2.34$, $p < .05$ (see Figure 8). Children whose parents used less Punishment of Worry exhibited more Worry Inhibition in neighborhoods with low risk levels than in neighborhoods with high risk levels. Children whose parents used more Punishment of Worry exhibited less Worry Inhibition in low risk than in high risk neighborhoods. There was a larger difference in Worry Coping in the low risk condition.

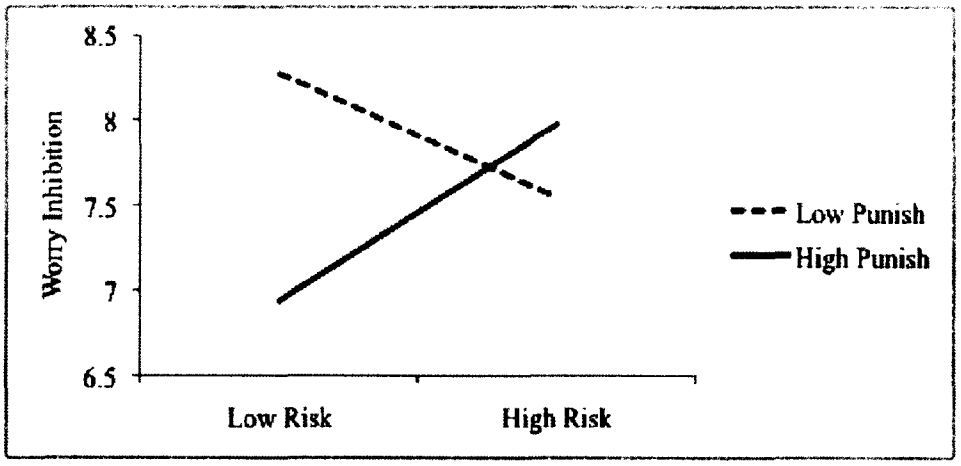

Figure 8. Graph of significant interaction between neighborhood risk and Punishment of Worry for Worry Inhibition.

Reward of Worry and Worry Coping

There was a significant interaction between neighborhood risk and Reward of Worry for Worry Coping, $b = -.29$, $t(158) = -2.60$, $p < .05$ (see Figure 9). Children whose parents used less Reward of Worry exhibited less Worry Coping in neighborhoods with low risk levels than in neighborhoods with high risk levels. Children whose parents used more Reward of Worry exhibited more Worry Coping in low risk than in high risk neighborhoods. There was a larger difference in Worry Coping in the low risk condition.

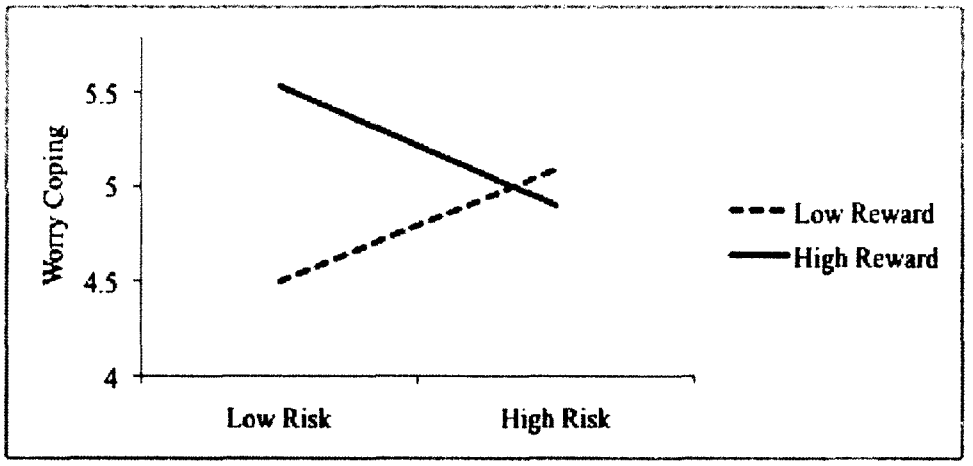

Figure 9. Graph of significant interaction between neighborhood risk and Reward of Worry for Worry coping.

Neglect of Worry and Worry Coping

There was a significant interaction between neighborhood risk and Neglect of Worry for Worry Coping, $b = .21$, $t\,(158) = 2.07$, $p < .05$ (see Figure 10). Children whose parents used less Neglect of Worry exhibited more Worry Coping in neighborhoods with low risk levels than in neighborhoods with high risk levels. Children whose parents used more Neglect of Worry exhibited less Worry Coping in low risk than in high risk neighborhoods. There was a larger difference in Worry Coping in the low risk condition, but the two groups exhibited very similar levels of Worry Coping in the high risk condition.

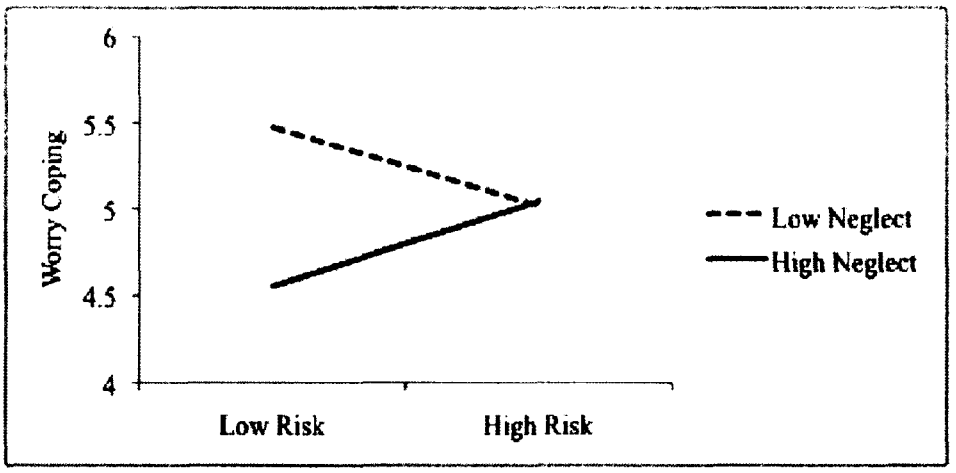

Figure 10. Graph of significant interaction between neighborhood risk and Neglect of Worry for Worry coping.

Summary of Results

Preliminary findings revealed that boys and girls experienced similar levels of risk at both the neighborhood and individual/family level. With regard to ER strategies, girls reported more Anger Inhibition and Worry Dysregulation than boys. Significant age differences were found for neighborhood risk factors, individual/family risk factors, and ER strategies. Older children in the sample were less likely to live in neighborhoods with more unemployment and more poverty, were less likely to live in single parent homes, and were more likely to use these ER strategies of Anger Dysregulation, Worry Dysregulation, and Sadness Inhibition. School differences were found for all variables.

Overall, results provided only limited support for study hypotheses. In examining relations between risk and ER outcomes, more neighborhood risk was found to be associated with less Anger Coping, but this was found to be true only for girls. At the individual/family level, ER strategies did not differ significantly based on different levels of risk for boys or girls. Some relations were found between risk factors and parent

socialization strategies. Higher levels of overall neighborhood risk were associated with less Reward and more Override of Sadness for boys and less Neglect of Anger for girls. Parental incarceration was associated with a number of negative socialization strategies for boys and girls, including more Punishment of Sadness and Override of Anger and Worry. In general, parent socialization strategies of Reward were related to more Anger Inhibition and Override strategies were related to more Anger Dysregulation. Interaction analyses indicated that risk moderated the relations between parent socialization strategies and ER. Relations differed in low and high risk contexts, with the impact of parent socialization strategies diminishing at higher levels of risk.

CHAPTER V

DISCUSSION

Though not to the degree that was expected, results indicate that contextual risk relates to both parent socialization strategies and children's ER skills. In general, higher levels of overall neighborhood risk were associated with less of what are generally conceived of as positive parent emotion socialization strategies and more of what are generally conceived of as negative parent emotion socialization strategies. Cumulative risk at the individual/family level was not associated with more negative socialization or ER strategies, but specific types of family level risks, including parental incarceration and teen mom status, were associated with a number of negative parent socialization strategies. These findings suggest that community and family level risk factors have the capacity to effect parents' socialization of emotion in their children.

Findings for ER revealed that children's ability to use typically adaptive regulation skills was related to risk and to parent socialization strategies. More neighborhood risk was associated with less use of adaptive ER skills for girls, who used less Anger Coping in these higher risk contexts. Whereas prior research has suggested that expression rules for anger make it less acceptable for girls to directly express their anger (see Zeman et al., 2006, for a review), this may differ in high risk environments. It is possible that the dysregulated expression of anger might be considered more acceptable or even adaptive in these different contexts. Further highlighting this idea, Thompson and Calkins (1996) discuss the "double-edged sword" of ER. They suggest that certain ER strategies might enhance resiliency in conditions of risk, but may also enhance vulnerability and create challenges for "normal" social and emotional development in

other circumstances. In the current study, girls' expression anger may have enhanced resiliency in their high risk neighborhoods, but may have created vulnerabilities for successful social and emotional development. Research has linked neighborhood risk variables to the development of aggression in children (Vanfossen et al., 2010), and it is possible that ER may serve as an intervening mechanism in the development of aggression and other maladaptive outcomes. These ideas point to the particular importance of considering how ER functions in high risk environments.

With regard to socialization strategies and ER, strategies of Reward were generally related to more Anger Inhibition, and Override strategies were related to more Anger Dysregulation. These findings provided mixed support for hypotheses stating that positive strategies were expected to be related to more adaptive ER skills and that negative strategies were expected to be related to maladaptive skills. Based on these mixed findings, it is possible that expected relations between socialization strategies and ER change or do not hold true in high risk contexts. This idea is supported by findings from interaction analyses, which showed that relations between parent socialization strategies and ER differed in low and high risk contexts. At higher levels of risk, the impact of parent socialization strategies on children's ER skills seemed to diminish. These findings suggest that while socialization processes do impact children's ER skills, there are likely additional factors and processes in high risk situations that may weaken or undermine the effects of positive socialization. Findings from this study support these ideas and point to the need for a better understanding of how ER is associated with contextual risk factors and processes (Morris et al., 2007).

In general, results from the present study support the research literature suggesting that risk has an impact on factors and processes that affect child development. Studies have shown that greater exposure to risk factors, such as low SES, minority status, large family size, single-parent households, low parental education, and parental unemployment, is associated with negative child outcomes (Burchinal et al., 2008, Leventhal & Brooks-Gunn, 2000, Schoon et al., 2003). Consistent with prior studies, low neighborhood education and unemployment rates were factors in the current study that were significantly related to other variables of interest. Contrary to findings from other studies, minority status did not significantly relate to other factors, but this is likely due to the fact that the majority of the sample consisted of racial ethnic minorities (Leventhal & Brooks-Gunn, 2000). At the individual/family level, parental incarceration stood out as a factor that was significantly related to less use of positive socialization strategies and more use of negative strategies. Based on documented links between parental incarceration and child maladjustment (e.g. Aaron & Dallaire, 2007), it is important for future studies to consider such risk factors when creating risk composites.

Findings regarding parent socialization and ER also provide some support for the research literature. Emotions were addressed separately based on findings that socialization strategies were not consistently related across emotions and that only weak correlations existed between ER strategies across emotions. This is consistent with prior studies, which have found more support for emotion-specific models (O'Neal & Magai, 2005) and have highlighted the importance of investigating regulation of specific emotions rather than general reactions (Morris et al., 2007). With most of the current study findings, gender differences were found for ER and parent socialization strategies.

This is consistent with findings from a number of research studies regarding differences in children's ER skills (e.g. Davis, 1995, Murphy & Eisenberg, 2002, Schultz et al., 2000,) and in the ways parents socialize male and female children differently (e.g. Cassano et al., 2007, Klimes-Dougan et al., 2007). These findings point to the importance of exploring how risk factors interact with gender in terms of outcomes as well as mediating processes, such as socialization. Although not investigated in the current study, research on protective factors for child development should similarly pay close attention to how variables affect boys and girls differently. These findings would have significant implications for prevention and intervention programs aimed at promoting healthy development and preventing maladaptive outcomes.

Although many of the abovementioned findings provided support for study hypotheses and for the research literature, many of the results lacked clear patterns or were inconsistent with study hypotheses. Nevertheless, the lack of significant and consistent findings between many of the study variables is noteworthy. The following discussion of unsupported hypotheses and unexpected findings can provide valuable insight into future theoretical and experimental models as well as provide implications for clinical and community interventions.

Risk and ER

Little support was provided for the hypothesis that a greater accumulation of risk factors would be related to less adaptive ER skills. In general, there was a lack of strong findings between risk and children's ER as an outcome. A number of possible explanations are offered. First, although ER is often examined as a mediating factor impacting a range of child outcomes, it is not often examined as an outcome itself.

Children's ER has often been viewed as a link and mediating factor between contextual conditions, such as the family, and children's outcomes and adjustment, including behavior problems and social competence (e.g., Eisenberg et al., 2001, Walton & Flouri, 2009). Based on the important ways ER has been theorized and observed to affect child outcomes, the importance of examining what types of factors impact ER has been highlighted (Morris et al., 2007). The lack of findings from the current study point to the possibility that risk may not have a strong direct impact on children's ER. Other intervening factors, such as socializing processes, might have stronger and more direct influences on ER. In support of this idea, one study found that low-income status of families had less of an impact on children's social and emotional development than did emotion regulation in the home environment (Garner, Jones, & Miner, 1994).

Another possible explanation for the lack of findings is that the measures of risk and ER in the current study did not sufficiently capture these constructs. Researchers have indicated that more consensus is needed on how to measure and operationalize ER (Morris et al., 2007) and that a multimethod approach is necessary in order to determine the complex mechanisms involved in ER (Adrian, Zeman, & Veits, 2011). The current study used a validated measure of ER, but additional measurement tools may have provided a more complete assessment of this important construct.

Risk and Parent Emotion Socialization Strategies

Mixed support was provided for the second hypothesis, which stated that greater levels of risk would be related to less positive and more negative emotion socialization strategies. This was found to be true only for the neighborhood risk composite and when examining individual/family risk factors separately. Furthermore, different patterns were

found for boys and girls in the sample. The findings for boys were consistent with the hypothesis, as more risk was associated with less use of Reward, a positive strategy, and more use of Override, a negative strategy, for sadness. For girls, however, the finding for neighborhood level risk was in the opposite direction of what would be expected, with more risk associated with less Neglect of Anger. One possible explanation for these inconsistent findings is that there may be differences in gender socialization practices and children's ER based on what might be perceived as adaptive for boys and girls in certain contexts. In the context of neighborhood risk, parents may socialize their male children to inhibit their feelings of sadness by not rewarding it and instead overriding it. Sadness might be perceived as a weakness, especially in high risk situations. This idea is consistent with research suggesting that the expression of sadness is considered less acceptable in boys (Brody & Hall, 1992). Similarly, anger might be perceived as adaptive for girls in high risk situations, which might explain less use of Neglect for Anger in girls in the current sample. The gender differences found in the current sample point to the importance of exploring how risk factors impact male and female children differently both in terms of outcomes as well as mediating processes, such as socialization.

The lack of relations between risk composites and socialization strategies might be due to a number of factors. First, it is possible that the risk composites used in the current study did not adequately represent the types of risk that would impact socialization strategies. Previous studies have found that parenting practices are influenced by risk factors such as race, neighborhood characteristics, family context (Pinderhughes et al., 2001), but limited research exists regarding how risk impacts the specific process of parent emotion socialization. Despite good internal reliability for the

neighborhood risk composite (α = .81), few studies have examined whether these types of factors actually play a role in influencing parent socialization strategies. The lack of relations found with the individual/family risk composite may also be explained by this reason or by the relatively low internal reliability of the composite (α = .55). Relations between specific risk factors at both the neighborhood and individual/family levels did exist, however, suggesting that the consideration of relations between risk and parent socialization is important. Better representations of composite risk would need to be explored further to get a more comprehensive picture of these important relations.

Parent Emotion Socialization Strategies and ER

There was mixed support for the third hypothesis, which stated that parents' use of positive socialization strategies would be associated with more adaptive ER skills and use of negative strategies would be associated with more maladaptive ER skills. In support of the hypothesis, Reward of Anger was associated with more Worry Coping and Override strategies were related to more Inhibition and Dysregulation. Analyses by gender indicated that these relations were only significant for girls. Contrary to the hypotheses, general Reward strategies were associated with more Anger Inhibition for girls. Potential explanations for this finding are difficult to discern, but may be related to the at-risk sample. It is possible, for example, that Reward strategies are used and perceived differently by parents and children in high risk situations and may therefore lead to different ER outcomes. Further investigation of how socialization and ER differ in the context of risk is critical to help further understand these relations.

Predicting ER outcomes

Exploratory analyses using regressions indicated that models including risk composites and social process factors can be effective in predicting child ER outcomes. Models including parent socialization strategies, the individual/family risk composite, and the neighborhood risk composite were able to explain significant proportions of variance for Worry Dysregulation in the full sample, Anger Dysregulation for boys, and Anger Inhibition for girls. The idea of testing models with multiple variables to assess ER is consistent with findings from prior research, which have indicated that separate risk indices for different levels of risk, including community level, family level, and individual level, can each independently contribute to variance in child outcomes (Deater-Deckard, Dodge, Bates, & Pettit, 1998). The risk composites and parent socialization variables in the current study were not strong predictors alone, but models including these variables together showed promise in explaining changes in ER. This provides further support for the idea that different levels of variables should be included in both theoretical and experimental models of child development.

Emotion Socialization Strategies and ER in the Context of Risk

The mediational model proposed as part of the final hypothesis was not supported based on the lack of robust relations between risk, parent socialization strategies, and ER. Prior research supports the inclusion of social processes, such as parenting and peer influences, as intervening factors and potential mediators when studying neighborhood effects on child outcomes (Winslow & Shaw, 2007). Direct effects have been shown to exist between neighborhood and contextual risk on child outcomes, including cognitive and behavioral outcomes (Vaden-Kiernan et al., 2010; Winslow & Shaw, 2007). The

current study, however, showed no direct relations between risk and ER outcomes. The investigation of the potential mediating role of parent socialization was therefore not warranted.

Although moderation effects were not hypothesized, exploratory analyses included the examination of risk as a potential moderator of the relationship between parent socialization strategies and ER. Prior research has similarly examined contextual risk factors as moderators. For example, research has found that neighborhood context moderated the effect of family risk on behavior problems in children such that more family risk was associated with a greater increase in problems for children living in high risk versus low risk neighborhoods (Lima, Caughy, Nettles, & O'Campo, 2010). Results from the present study revealed a number of significant interactions and trends in which risk acted as a moderator, though the patterns of these results were not clear or consistent. At the individual/family risk level, there were three significant interactions that all related to children's ER Coping. At the neighborhood level, there were three significant interactions that all related to the emotion of Worry. For most of these interactions, the impact of parent socialization strategies seemed to be greatest in low risk neighborhoods and seemed to lessen in high risk neighborhoods. These findings suggest that parent socialization processes may function differently in low and high risk contexts. This points to the importance of continuing to investigate the moderation effects of risk and the ways in which socialization and other process factors may function differently in the context of risk.

Strengths and Limitations

This study expands on prior research by investigating the complex relations between contextual risk, parent socialization and ER in an at-risk sample. There continues to be a need for more research that investigates the complex relations between individuals and their environmental contexts as well as the potential mediators and moderators of adaptive outcomes for children living in such high-risk settings. One strength of this study is the use of census data as a way of exploring the ways in which neighborhood effects operate on child outcomes (Leventhal & Brooks-Gunn, 2000). Another strength is the examination of ER in a high risk, minority sample. Although there are some studies that examine ER for minority samples (e.g., Cunningham et al., 2009; Kliewer et al., 2009), the majority of ER research has been conducted with White, middle class populations. Examining the relations between socialization strategies and ER in an at-risk sample is an important step in further understanding how these processes affect child development in ethnic minority populations.

This study had several limitations that should be kept in mind when interpreting results. First, although the sample contained a larger proportion of racial minorities than what is typical of many studies examining parent socialization and ER, it did not represent a full range of minorities that might be present in urban or at-risk communities. The sample consisted primarily of African-American children and their families and did not include other minorities, such as Hispanics. Findings therefore are not generalizable to more diverse urban settings or to suburban settings that might consist of less minority groups. Despite this limitation, it is important to continue exploring important socialization and ER variables in populations that are considered at-risk.

The lack of a school risk variable is another important limitation of this study. School differences on variables of interest were examined, but a school risk variable was not created based on missing data and limited information regarding specific school risks. Based on findings that using school as a control variable in correlation analyses led to the disappearance of some significant findings, it is clear that school context is important to consider in future studies. In addition, this highlights the need for more sophisticated data analytic tools, such as Hierarchical Linear Modeling (HLM; Bryk & Raudenbush, 1992), that can be used to examine nested data. These analyses could not be used with the current study due missing data that restricted the number of neighborhoods in the data set.

Another limitation of this study is that the risk variables used may not have been up to date and may not have represented the most relevant risk factors. At the time of data collection, only data from the 2000 U.S. Census was available in enough detail to determine neighborhood risk variables for the sample. More recent data from the 2010 census is now available and might represent more appropriate measures of risk experienced by the families included in the study. In addition, family risk variables may not have represented the most relevant types of risk that would affect parent socialization processes and ER outcomes.

Study data might also be limited by the fact that information was primarily obtained from self-report and parent-report. For example, it is possible that children did not fully comprehend the questions from the ER measures or provided socially desirable responses when being interviewed. Socialization strategies were based solely on parent-report and may also have been affected by comprehension and social desirability factors.

Using Microsoft Word, readability statistics for the child and parent questionnaires could have been obtained prior to administration to ensure that the reading levels were appropriate for questionnaire items. Another factor to consider is that the majority of participating parents for the current study were mothers (86%, $n = 156$), which may have affected the data. Researchers have indicated that reports of socialization and ER are often dependent on both the gender of the parent and the child (Klimes-Dougan et al., 2007). Future research would therefore benefit from gathering data from both parents, whenever possible, to examine how parent gender might affect socialization practices as well as perceptions about children's ER strategies.

A final limitation of this study is that single measures were used to define the constructs of emotion socialization and ER. Research has pointed to the difficulty in operationalizing these constructs and the need for further consensus on how they should be defined (e.g., Morris et al., 2007). A recent review of assessment methods for ER suggests that multimethod approaches for studying ER are necessary in order to fully understand the complex mechanisms involved (Adrian et al., 2011). Although the Children's Emotion Management Scales have been well validated and widely used, few studies were found that utilized the Emotions as a Child Inventory. The use of additional measures of emotion socialization may have been beneficial to include in the current study. In addition, getting measures of parent's perceptions and beliefs about different emotions and ER strategies would have been interesting to consider and might have provided a better understanding of how socialization might function differently in the context of risk.

Future Directions

Despite often inconsistent patterns of findings in the current study, results point to the importance of continuing to consider the impact of contextual risk on children and their families. Future research should continue to consider contextual factors at multiple levels when studying the relations between predictors and child outcomes. School should be included as a contextual level of risk based on suggestions from prior research (e.g., Lochman, 2004) as well as findings from the current study highlighting school differences on a number of factors. Communities and neighborhoods should also be included in ecological frameworks. This is especially true for neighborhoods that are considered high risk. There are still a limited number of studies examining neighborhood factors as part of cumulative risk models (Lima et al., 2010), indicating the need for more research in this area. Using census data is recommended as a way of gathering important and useful information about neighborhood risk (Leventhal & Brooks-Gunn, 2000). Future research should examine not just risk, but also protective factors and mechanisms that contribute to the prevention of maladaptive outcomes and the promotion of healthy development (Appleyard et al., 2005).

The continued examination of risk factors that affect the family context as well as the broad development of emotion are also important areas for future research (Morris et al., 2007). The ways in which cultural factors influence children and families' perception of risk, emotions, and ER should be considered. Obtaining family ratings and views of perceived risk and adaptive strategies would be interesting additions to future studies. Differences based on developmental level and gender should also continue to be examined based on findings from past research that highlight the ways socialization

processes and ER skills might vary across development (e.g. Klimes-Dougan & Zeman, 2007; Murphy & Eisenberg, 2002).

Finally, examining the complex relations between emotion socialization and ER becomes increasingly complex when considering how these strategies function in contexts of risk. Findings from the current study support the idea that the uses and effectiveness of strategies are likely to differ in conditions of risk due to changes in functional goals and situational demands (Thompson & Calkins, 1996). Strategies of emotion socialization and of ER may be applied to different circumstances to accomplish various goals, such as maintaining positive perceptions, building and enhancing self-esteem, promoting self-defense, or acquiring support. This complicates the often felt need for defining and operationalizing emotion socialization and ER strategies as positive, negative, adaptive, or maladaptive. As highlighted by this study, these definitions may vary based on the goals of children and families and the need to function in different contexts. It is critical for future research to consider the function and goals of emotion socialization and ER when studying these concepts in order to correctly identify what is adaptive and effective in certain contexts.

Clinical Implications

Findings from the current study have important implications for intervention and policy. Given the finding that different levels of contextual risk can have effects on processes important to healthy child development, comprehensive interventions should be developed that target different contextual levels of influence. Programs should target not just children and their families, but also the schools and neighborhoods within which they reside. Prevention and intervention for children and families might include a focus on

providing social and emotional education and coping skills training, improving the parent-child relationship, and providing support and education for parents to help reduce economic and other stressors. In the current study, parental incarceration and being a teen mom were risk factors that were more closely related to socialization variables, suggesting that programs providing additional support for these types of families would be beneficial. In addition, prevention and intervention programs should direct attention not only to the reduction of risk factors, but also to the promotion of resiliency and protective factors that would reduce the likelihood of maladaptive outcomes (Luthar & Cicchetti, 2000). At the school and neighborhood levels, policy efforts should promote safety, education, job growth, and economic security as a way of reducing the impact of these contextual risk factors on children and families.

Findings regarding socialization strategies and ER can help inform the development of programs that promote healthy and adaptive social and emotional development of children. Social and emotional learning (SEL) is becoming an area of greater focus based on implications for social, psychological, and academic success (Denham & Brown, 2010). This highlights the need for research to help better understand the factors that influence healthy development. Research on ER in particular can provide important contributions to the development of such programs. Based on findings from the current study, it would be important to consider socialization and ER differences based on gender and contextual risk in order to develop appropriate and targeted interventions.

Though notable advancements have been made in the dissemination of evidence-based treatments and interventions, a gap continues to exist between research and clinical practice. This gap continues to attract a significant deal of attention in the field

(Teachman et al., 2012). Although the current study did not expose consistently clear findings or implications, similar research studies examining risk, socialization processes, and ER have the potential to make valuable contributions to the fields of school, clinical, and community psychology. These types of studies can inform the development of programs that promote healthy social and emotional development of children.

Conclusions

Exposure to risk in childhood can disrupt social and emotional processes (Leventhal & Brooks-Gunn, 2000) and lead to the development of physical and mental health issues across the lifespan (Flouri, 2008). Based on limited knowledge of how socialization processes affect ER in communities that are considered high-risk (Morris et al., 2007), this study sought to better understand the associations between contextual risk, parent socialization of emotion, and children's emotion regulation skills using an ecological perspective. Results showed that in a high-risk sample, relations exist between contextual risk, parent socialization of emotion, and children's ER skills. These relations were not as robust and did not always function as expected based on prior research. Findings do, however, point to the importance of considering the functions and goals of emotion socialization and ER when defining what is adaptive and effective in different contexts. In addition, the use of an ecological perspective is informative when studying these relations. Contextual models help acknowledge and incorporate the multiple levels of influence and the complex relations between them that affect child development. Finally, prevention and intervention efforts should address each of these contextual levels. Research can inform practice by guiding the development of programs to support

and enhance children's ER skills, parent-child relationships, family stressors, and school and community variables.

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APPENDIX A

ADDITIONAL TABLES

A.1. Correlations Between All Study Variables

Table A.1.

Correlations Between All Study Variables

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Proportion Black	1	-	-	-	-	-	-	-	-	-	-	-	-
2	Proportion Less than HS Education	.69**	1	-	-	-	-	-	-	-	-	-	-	-
3	Proportion Unemployed	.61**	.70**	1	-	-	-	-	-	-	-	-	-	-
4	Proportion Below Poverty Level	.68**	.82**	.84**	1	-	-	-	-	-	-	-	-	-
5	Neighborhood Risk Composite	.90**	.88**	.82**	.92**	1	-	-	-	-	-	-	-	-
6	Race	.32**	.21**	.28**	.29**	.32**	1	-	-	-	-	-	-	-
7	Parent Education	-.01	.10	.16*	.15*	.09	-.05	1	-	-	-	-	-	-
8	Teen Mom	.14	.18*	.17*	.23*	.20*	.07	.09	1	-	-	-	-	-
9	Family Income	.32**	.41**	.36**	.42*	.42**	.17*	.11	.23**	1	-	-	-	-
10	Family Size	.11	.01	.16*	.12	.11	.11	.16*	.20*	.00	1	-	-	-
11	Single Parent Status	.20**	.11	.18*	.20**	.20**	.14*	-.06	.23**	.36**	-.06	1	-	-
12	Parental Incarceration	.25**	.19**	.27*	.26**	.28**	.13	.10	.16	.25**	-.05	.33**	1	-
13	Risk Composite	.40**	.34**	.46**	.49**	.47**	.50*	.33**	.57**	.62**	.36**	.62**	.57**	1
14	Reward Anger	.08	-.06	-.02	.00	.02	.08	.07	-.12	-.01	.02	.07	-.02	.01
15	Reward Worry	.07	-.14	-.03	-.04	-.01	-.01	.02	-.05	-.01	.04	.04	-.03	-.02
16	Reward Sad	-.02	-.17*	-.15*	-.13	-.11	-.06	.06	-.19	-.03	.03	.03	-.09	-.08
17	Punish Anger	-.01	-.04	.00	-.03	-.03	-.03	-.15	-.03	-.12	-.03	.03	.08	-.03
18	Punish Worry	.13	.06	.09	.10	.12	.11	-.08	-.01	-.04	.05	.11	.17*	.09
19	Punish Sad	.13	.10	.10	.11	.13	.11	-.11	.00	-.01	-.10	.04	.25**	.06
20	Neglect Anger	-.02	-.08	-.01	-.06	-.05	-.02	-.05	.12	-.11	-.06	-.07	.07	-.02
21	Neglect Worry	-.00	.06	.10	.05	.04	.08	-.09	.02	.03	-.11	.02	.11	.07
22	Neglect Sad	.03	.05	.00	.03	.04	.09	-.01	.04	.01	-.11	.06	.22**	.12
23	Override Anger	.04	-.02	.11	.07	.05	.05	.01	.01	-.08	-.02	.09	.30**	.08

Table A.1. (Continued)

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
24	Override Worry	.07	.01	.06	.07	.07	.10	.06	.07	-.00	-.04	.07	.26**	.12
25	Override Sad	.12	.05	.10	.09	.11	.12	.07	.04	-.06	-.01	.10	.26**	.13
26	Anger INH	.02	-.04	-.05	-.06	-.03	-.08	-.04	-.06	.09	-.08	.07	.07	.01
27	Anger DYS	-.08	.01	.11	.12	.02	.06	.04	-.04	.14	.09	-.05	.03	.07
28	Anger COP	-.14	-.16*	-.19*	-.20**	-.18*	-.16*	-.11	.08	-.09	-.11	-.01	-.12	-.11
29	Worry INH	.01	.04	.06	.04	.03	.04	-.12	-.04	.03	-.17*	.03	.05	-.00
30	Worry DYS	.08	-.00	.04	.04	.05	-.02	.03	.09	.01	.13	-.02	.00	.07
31	Worry COP	-.02	-.03	-.02	-.01	-.02	-.14	-.05	.01	-.00	-.15*	.07	-.05	-.13
32	Sad INH	.00	.06	.05	.02	.03	.01	.04	-.02	.06	-.06	.01	.11	.06
33	Sad DYS	-.03	.05	-.03	.05	.01	.06	.08	-.05	.07	.03	-.10	-.06	-.02

Note: 1 = Proportion Black; 2 = Proportion Less than High School Education; 3 = Proportion Unemployed; 4 = Proportion Below Poverty Level; 5 = Neighborhood Risk Composite; 6 = Race; 7 = Parent Education; 8 = Teen Mom; 9 = Family Income; 10 = Family Size; 11 = Single Parent Status; 12 = Parental Incarceration; 13 = Risk Composite.
*$p < .05$. **$p < .01$.

Table A.1. (Continued)

	Variable	14	15	16	17	18	19	20	21	22	23	24	25	26
14	Reward Anger	1	-	-	-	-	-	-	-	-	-	-	-	-
15	Reward Worry	.76**	1	-	-	-	-	-	-	-	-	-	-	-
16	Reward Sad	.82**	.78**	1	-	-	-	-	-	-	-	-	-	-
17	Punish Anger	-.33**	-.19*	-.23**	1	-	-	-	-	-	-	-	-	-
18	Punish Worry	-.14	-.12	-.14	.27**	1	-	-	-	-	-	-	-	-
19	Punish Sad	-.26**	-.28**	-.31**	.31**	.49**	1	-	-	-	-	-	-	-
20	Neglect Anger	-.34**	-.31**	-.31**	.33**	.10	.28**	1	-	-	-	-	-	-
21	Neglect Worry	-.14	-.24**	-.27**	.15	.09	.24**	.32**	1	-	-	-	-	-
22	Neglect Sad	-.33**	-.41**	-.35**	.33**	.25**	.44**	.54**	.37**	1	-	-	-	-
23	Override Anger	.06	.06	.01	.27**	.15*	.17*	.18*	.08	.07	1	-	-	-
24	Override Worry	.18*	.14	.14	-.05	.19*	.12	.06	.01	.03	.73**	1	-	-
25	Override Sad	.08	.03	.09	.10	.19*	.12	.12	.05	.12	.70**	.80**	1	-
26	Anger INH	.16*	.17*	.18**	.04	.10	-.05	-.14	-.13	-.01	.04	.16*	.13	1
27	Anger DYS	.04	-.08	-.00	-.11	-.07	.02	-.06	-.00	-.11	.18*	.17*	.18*	-.08
28	Anger COP	-.12	-.02	-.08	.00	.07	.03	.01	-.11	-.03	-.14	-.05	-.09	.20**
29	Worry INH	.01	.03	-.05	-.01	.02	-.00	-.05	-.04	-.06	-.04	.01	-.14	.27**
30	Worry DYS	.04	.02	.09	-.03	-.04	.01	-.04	.06	-.05	.06	.10	.15*	.19*
31	Worry COP	.13	.10	.15	.01	-.12	-.01	-.09	-.10	-.06	-.06	-.05	-.00	.24**
32	Sad INH	.05	.07	.01	-.04	.07	.06	-.15*	-.03	-.04	.03	.08	.08	.54**
33	Sad DYS	.02	-.09	.02	-.01	-.04	-.08	-.02	.06	-.01	.05	.04	.04	.06
34	Sad COP	.01	-.00	.00	.10	.05	.06	-.09	-.08	.02	-.05	-.05	-.10	.29**

*$p < .05$. **$p < .01$.

Table A.1. (Continued)

	Variable	27	28	29	30	31	32	33	34
27	Anger DYS	1	-	-	-	-	-	-	-
28	Anger COP	.25**	1	-	-	-	-	-	-
29	Worry INH	-.09	.15*	1	-	-	-	-	-
30	Worry DYS	.32**	-.07	-.11	1	-	-	-	-
31	Worry COP	.04	.26**	.11	.13	1	-	-	-
32	Sad INH	.14	.16*	.32**	.26**	.16*	1	-	-
33	Sad DYS	.29**	-.18*	-.02	.41**	-.03	.09	1	-
34	Sad COP	-.10	.34**	.12	-.03	.33**	.22**	-.12	1

*$p < .05$. **$p < .01$.

APPENDIX B

PARENT QUESTIONNAIRES

B.1. Family Background Questionnaire
B.2. Emotions as a Child Scales

General Information

Today's date: _____ _____ _____
mo day yr

Child Information

Child's name: _____ Child's Gender: boy girl
(first name) (last name)

Name of Child's School: _____ Child's Grade Level: _____

Race/ethnicity: Check all that apply

_____ Black or African-American
_____ Hispanic or Mexican-American
_____ American Indian or Native-American
_____ White or Caucasian (not Hispanic)
_____ Asian or Asian-American
_____ Other: _____

Child's birth date: _____ _____ _____ How old is your child? _____
month day yr

Your information

Your name: _____

What is your relation to this child? _____

What is the highest grade or level of education you have completed?

_____ 8th Grade or lower
_____ Some high school
_____ Completed high school
_____ Some education after high school
_____ Received Bachelor's degree
_____ Some education after Bachelor's degree
_____ Received Master's degree
_____ Some education after Master's degree

Are you currently married? Yes No
Have you ever been divorced? Yes No If you have been divorced, how long ago? _____

Family Information

How old is the child's father? _____ How old is the child's mother? _____

How many children currently live at the home? _____

How old is the oldest child living at home? _____ How old is the youngest child living at home? _____

Besides children, who else lives with the child most of the time? Include yourself if you live with the child. The child's…

_____ Mother _____ Stepmother _____ Grandmother _____ Aunt
_____ Father _____ Stepfather _____ Grandfather _____ Other adults: _____

Thinking about all sources of income in your family, about how much was your family's income over the past year?

_____ Less than $10,000
_____ $10,000 - $20,000
_____ $20,000 - $30,000
_____ $30,000 - $40,000
_____ $40,000 - $50,000
_____ $50,000 - $60,000
_____ $60,000 - $70,000
_____ $70,000 - $80,000
_____ $80,000 - $90,000
_____ $90,000 - $100,000
_____ $100,000 - $120,000
_____ Over $120,000

Responses to Children's Emotions

A. For each of the following questions, please circle the number that best describes your child's emotions over the past YEAR.

	Not at all like my child	A little like my child	Somewhat like my child	Like my child	A lot like my child
1. Your child feels sad or down.	1	2	3	4	5
2. Your child feels angry or frustrated.	1	2	3	4	5
3. Your child feels worried.	1	2	3	4	5

B. Over the past MONTH, when your child has been **SAD** or feeling **DOWN**, what did you do?

	Not at all like me	A little like me	Somewhat like me	Like me	A lot like me
1. When my child has been **sad**, I was too busy to get involved with him/her.	1	2	3	4	5
2. When my child has been **sad**, I told him/her to grow up.	1	2	3	4	5
3. When my child has been **sad**, I found out what made him/her sad.	1	2	3	4	5
4. When my child has been **sad**, I gave him/her a disapproving look.	1	2	3	4	5
5. When my child has been **sad**, I ignored him/her.	1	2	3	4	5
6. When my child has been **sad**, I helped my child deal with the issue that made him/her sad.	1	2	3	4	5
7. When my child has been **sad**, I showed my child I did NOT like him/her being sad.	1	2	3	4	5
8. When my child has been **sad**, I comforted her/him.	1	2	3	4	5
9. When my child has been **sad**, I punished him/her.	1	2	3	4	5

C. Over the past MONTH, when your child has been **ANGRY** or feeling **FRUSTRATED**, what did you do?

	Not at all like me	A little like me	Somewhat like me	Like me	A lot like me
1. When my child has been **angry**, I was too busy to get involved with him/her.	1	2	3	4	5
2. When my child has been **angry**, I told him/her to grow up.	1	2	3	4	5
3. When my child has been **angry**, I found out what made him/her angry.	1	2	3	4	5
4. When my child has been **angry**, I gave him/her a disapproving look.	1	2	3	4	5
5. When my child has been **angry**, I ignored him/her.	1	2	3	4	5
6. When my child has been **angry**, I helped my child deal with the issue that made him/her angry.	1	2	3	4	5
7. When my child has been **angry**, I showed my child I did NOT like him/her being angry.	1	2	3	4	5
8. When my child has been **angry**, I comforted her/him.	1	2	3	4	5
9. When my child has been **angry**, I punished him/her.	1	2	3	4	5

D. Over the past MONTH, when your child has been feeling **WORRIED**, what did you do?

	Not at all like me	A little like me	Somewhat like me	Like me	A lot like me
1. When my child has been **worried**, I was too busy to get involved with him/her.	1	2	3	4	5
2. When my child has been **worried**, I told him/her to grow up.	1	2	3	4	5
3. When my child has been **worried**, I found out what made him/her worried.	1	2	3	4	5
4. When my child has been **worried**, I gave him/her a disapproving look.	1	2	3	4	5
5. When my child has been **worried**, I ignored him/her.	1	2	3	4	5
6. When my child has been **worried**, I helped my child deal with the issue that made him/her worried.	1	2	3	4	5
7. When my child has been **worried**, I showed my child I did NOT like him/her being worried.	1	2	3	4	5
8. When my child has been **worried**, I comforted her/hir.	1	2	3	4	5
9. When my child has been **worried**, I punished him/her.	1	2	3	4	5

APPENDIX C

CHILD QUESTIONNAIRES

C.1. Children's Emotion Management Scale: Sadness
C.2. Children's Emotion Management Scale: Anger
C.3. Children's Emotion Management Scale: Worry

Children's Emotion Management Scales: **Sadness**

Instructions: Please circle the response that best describes your behavior when you are feeling **sad.**

		Hardly - Ever	Sometimes	Often
1.	When I'm feeling sad, I can control my crying and carrying on.	1	2	3
2.	I hold my sad feelings in.	1	2	3
3.	I stay calm and don't let sad things get to me.	1	2	3
4.	I whine/fuss about what's making me sad.	1	2	3
5.	I hide my sadness.	1	2	3
6.	When I'm sad, I do something totally different until I calm down.	1	2	3
7.	I get sad inside but don't show it.	1	2	3
8.	I can stop myself from losing control of my sad feelings.	1	2	3
9.	I cry and carry on when I'm sad.	1	2	3
10.	I try to calmly deal with what is making me sad.	1	2	3
11.	I do things like mope around when I'm sad.	1	2	3
12.	I'm afraid to show my sadness.	1	2	3

Children's Emotion Management Scales: **Anger**

Instructions: Please circle the response that best describes your behavior when you are feeling **mad.**

		Hardly – Ever	Sometimes	Often
1.	When I'm feeling mad, I can control my temper.	1	2	3
2.	I hold my anger in.	1	2	3
3.	I stay calm and keep my cool when I am feeling mad.	1	2	3
4.	I do things like slam doors when I am mad.	1	2	3
5.	I hide my anger.	1	2	3
6.	I attack whatever it is that makes me mad.	1	2	3
7.	I get mad inside but I don't show it.	1	2	3
8.	I can stop myself from losing my temper.	1	2	3
9.	I say mean things to others when I am mad.	1	2	3
10.	I try to calmly deal with what is making me feel mad.	1	2	3
11.	I'm afraid to show my anger.	1	2	3

Children's Emotion Management Scales: **Worry**

Instructions: Please circle the response that best describes your behavior when you are feeling **worried.**

		Hardly -- Ever	Sometimes	Often
1.	I keep myself from losing control of my worried feelings.	1	2	3
2.	I show my worried feelings.	1	2	3
3.	I hold my worried feelings in.	1	2	3
4.	I talk to someone until I feel better when I'm worried.	1	2	3
5.	I do things like cry and carry on when I'm worried.	1	2	3
6.	I hide my worried feelings.	1	2	3
7.	I keep whining about how worried I am.	1	2	3
8.	I get worried inside but I don't show it.	1	2	3
9.	I can't stop myself from acting really worried.	1	2	3
10.	I try to calmly settle the problem when I feel worried.	1	2	3

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EDUCATION

2008 – present	Virginia Consortium Program in Clinical Psychology Psy.D., August 2012 University-based, APA accredited program, jointly sponsored by: The College of William & Mary, Eastern Virginia Medical School, Norfolk State University, and Old Dominion University
2008 – 2010	Norfolk State University M.A., Community and Clinical Psychology
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CLINICAL EXPERIENCE

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