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Maternal Emotion Regulation And Expressivity As Predictors Of Positive Parenting In Low-Income Families

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MATERNAL EMOTION REGULATION AND EXPRESSIVITY AS PREDICTORS OF POSITIVE PARENTING IN LOW-INCOME FAMILIES

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CHAPTER 1: INTRODUCTION

Positive Parenting

Displays of warmth, sensitivity, and support of child's autonomy have been identified as key features of healthy parent-child relationships (Bornstein, Hendricks, Haynes, & Painter, 2007; MacDonald, 1992). These characteristics comprise the construct known as positive parenting. Positive parenting has been examined in a variety of contexts as a set of strategies that foster adaptive outcomes. Positive parenting involves interacting with children in such a way as to strengthen attachment, promote self-efficacy and self-esteem, and, ultimately, encourage healthy cognitive, social, and emotional development (Fuligni & Brooks-Gunn, 2013; Hubbs-Tait, Culp, Culp, & Miller, 2002, Roggman, Cook, Innocenti, Jump, & Christiansen, 2013).

Given that positive parenting promotes healthy development throughout childhood, providing benefits that persist into adulthood (Roggman et al., 2013), it is important to identify factors that predict positive parenting. As patterns of parenting are established in early childhood, parent, child, and environmental characteristics during that developmental period would be most salient in predicting parenting behaviors. Belsky's (1984) influential model of predictors of parenting identified three domains of parenting determinants: 1) personal psychological resources of the parent, 2) child characteristics, such as temperament, and 3) contextual environmental factors, such as socioeconomic status and familial support. Though all three factors contribute to parenting practices, the personal psychological resources of the parent provide the primary determinant according to the model. Child characteristics and the environment contribute to parenting on their own, as well as through influencing the stress and support experienced by parents. The varying levels of stress and support perceived by parents require them to draw on their resources. Psychological resources include internal factors that can enhance or undermine

parenting abilities. For example, resources contribute to how parents experience, express, and manage emotions. Parenting is an emotional endeavor; therefore, a parent's skill in navigating emotional "ups" and "downs" should have significant implications for their parenting practices (Dix, 1991). To predict parents' utilization of positive parenting practices, it is necessary to understand the specific parent and child characteristics that contribute to the relationship within the particular family environment. The present study examined whether low-income mothers' emotion expressivity and regulation influenced their use of positive parenting strategies while interacting with their toddlers. The study also accounted for the child's temperament and contextual sources of stress and support that can strengthen or strain parental emotional resources.

Emotion and Parenting

Subsequent theory and research has elaborated on Belsky's (1984) model, indicating that child characteristics and family context contribute to parenting behaviors in the sense that they impact the psychological well-being of the parent. For example, Dix (1991) developed a model of parenting that emphasizes the interrelatedness of parent, child, and environmental contributions. His component model of parenting frames the parent-child relationship within the context of emotion processes. It includes: 1) child, parent, and contextual factors that activate parental emotion, 2) effects of this emotion arousal on parenting, and 3) the processes parents use to control emotions. In parent-child interactions, parental emotions are activated when parents are invested in a particular outcome. For example, when children meet the expectations set by their parents, parents experience positive emotion. However, when the wants or needs of children conflict with the parents' intended goal, the interaction may create negative emotion and conflict. Interactions that activate positive emotions are more likely to ensue if parents are empathic and work

cooperatively with children to obtain outcomes children desire. This requires the parent to be sensitive to children's needs, and to respond in an empathic way (Bugental & Grusec, 2006).

The activation of negative emotion does not necessarily mean that the parent will respond insensitively. Research on emotional processes highlight the distinction between emotional response tendencies (proneness to feel either positive or negative emotions) and emotional expressivity, or the behavioral manifestations of those tendencies (Gross & John, 1997). The activation of emotions aids us in responding adaptively to situations (Frijda, 1989). Response tendencies do not always manifest behaviorally. A person is emotionally expressive to the extent that they display emotional response tendencies. In other words, there are differences between individuals in how often or how much they show sadness, anger, happiness, etc. Parenting is often accompanied by the activation of negative emotion, because parental goals may not be compatible with those of the child (Dix, 1991). When faced with parenting challenges, parents often draw on psychological resources to cope with negative feelings and limit their expression of negative emotional response tendencies, thereby promoting healthy relations with their child (Belsky, Crnic, & Woodworth, 1995; Bornstein et al., 2007). This requires parents to regulate their own negative emotion while simultaneously expressing positive, empathic emotion that promotes the well-being of their child (Gross & John, 1997). Parents who are skilled in managing negative emotions will be less likely to express these emotions inappropriately towards (or around) their children than parents who are more emotionally dysregulated. Furthermore, a parent with adaptive regulation skills also can display emotions appropriately, such as expressing happiness and enjoyment when interacting with the child. Positive emotional expressivity contributes to warmth, or the extent to which parents display positive regard of their child, which is an important dimension of positive parenting (Roggman et al., 2013).

One of the ways parents can inhibit the inappropriate expression of negative emotion and display positive expressivity is through a strategy known as reappraisal. Reappraisal refers to the act of interpreting emotion-related stimuli in unemotional ways (Gross, 1998). During incompatible parent-child interactions, parents can reframe the event so as to view it as promoting concerns that are important to them, instead of feeling their concerns are being blocked by the child (Dix, 1991). Negative emotions are more likely to occur and to be stronger if parents believe their goals are being blocked for reasons that are stable, general, and not under parental control. Positive emotions are stronger and more likely to be activated if parents believe their goals are being promoted for reasons that are stable, general, and under their control (Weiner, 1979). These emotional processes are particularly influential on the parent-child relationship during the early childhood developmental period. Parental warmth toward young children consistently predicts favorable childhood outcomes, while hostility consistently predicts unfavorable outcomes (Roggman et al., 2013). Research indicates that even transient expression of negative emotions in adults can manifest as distress and aggression in infants and young children, due to their heightened emotional sensitivity during this particular time in development (Cummings, Iannotti, & Zahn-Waxler, 1985).

Though emotional activation does not always lead to expression, parents may have certain proclivities towards experiencing either positive or negative emotions; this can create individual differences in the resources required to manage emotions. For example, parents prone towards positive emotionality would be more likely to express and exhibit warmth and enjoyment while interacting with their children (Prinzie, Stams, Dekovic, Reijntjes, & Belsky, 2009). On the other hand, research examining the role of emotion processes in parenting supports the notion that parental proneness to negative emotionality and dysregulated emotional expression lead to less

warmth, increased harshness, and less sensitivity in parenting (Dix, Gershoff, Meunier, & Miller, 2004).

It is not only parents' emotion processes that influence parenting; children's emotionality also plays an important role. The child characteristic most studied for its influence on parenting is temperament, or the child's emotional reactivity and self-regulation abilities (Kochanska, Freisenborg, Lange, & Martel, 2004; Rothbart, 2007). Qualities comprising a difficult temperament, including a propensity to negative emotionality and limited effortful control, negatively influence the quality of parent-child interactions. Research using various methodologies suggests that irritability in children is associated with less maternal involvement (van den Boom, 1994). Parenting and child temperament are mutually related. As the child continues to be irritable, parents who initially responded to the child's distress then see that it does not mitigate the child's emotionality, and therefore pull away. The child escalates their crying or fussing, becoming even more aversive to the parent (Kochanska et al., 2004). Bornstein and colleagues (2007) examined the predictive factors of responsiveness and found that mothers' sense of efficacy in their parenting contributed to their sensitivity. Parents with difficult children may be more likely to feel they are incompetent and have a negative view regarding the quality of their relationship with their child. This negative outlook contributes to increased harshness and decreased sensitivity and warmth in their parenting practices.

Research emphasizes the examination of child temperament in the context of parent characteristics (Bornstein et al., 2007). In a study examining the influence of mothers' personality and their children's temperament on positive parenting, Koenig and colleagues (2010) found that mothers who are more "neurotic" (i.e. prone to negative affect) exhibit less positive parenting practices. A child with a difficult temperament may exacerbate the experience of heightened

anxiety by parents who are prone to negative emotionality or have difficulties with self-regulation. The combination may lead to harsher parenting practices than either would alone (Kochanska et al., 2004). Alternatively, a parent with dysregulated emotion may have an easygoing child, therefore experiencing parenting demands that fit with their limited psychological resources (Bornstein et al., 2007).

Contextual Sources of Stress and Support

Parents and children mutually influence their respective characteristics, but the relationship is also affected by the particular environmental context (Belsky, 1984). Sources of stress and support influence the quality of parenting because they influence the emotions parents experience with children. Families from high risk environments tend to face more stress and adversity, thereby requiring more effort to find the time, energy, and resources to parent effectively (Bornstein et al., 2007). A high prevalence of risk factors, such as low socioeconomic status (SES), single parenthood, young maternal age, and limited education contribute to the family's level of experienced distress (Bornstein, Putnick, & Suwalsky, 2006; Conger et al, 2002).

Research indicates that low SES is associated with harsher parenting and less sensitivity (Fuligni & Brooks-Gunn, 2012). The level of attentiveness and ability required to be a responsive parent may be difficult to gather under circumstances of economic adversity. In their Family Stress Model, Conger and colleagues (2002) outlined how economic hardship influences the psychological well-being of caregivers, and therefore their parenting practices. Economic hardship creates negative emotion through the frustrating experiences, such as being unable to purchase necessities or pay monthly bills due to limited resources. These frustrating experiences can arouse negative emotions in the parent, contributing to an increased level of harsh parenting and a decrease in warm and supportive parenting (Berkowitz, 1989; Dix, 1991).

Studies on stress and support also incorporate a variety of social relationships, including those of relatives and friends, though the level of emotional and temporal investment in marriage makes it an especially significant influence on psychological well-being (Belsky, 1984). It can be extrapolated that single motherhood represents a risk factor, in the sense that unmarried mothers have less sources of support than married mothers. However, relatives or friends may provide important sources of support for single mothers. Therefore, the levels of experienced relational stress depend on the individual needs for fulfillment, and whether or not the individual feels those needs are met.

Evidence also suggests that relationship stressors are experienced differently in families of ethnic minorities (Conger et al., 2002). For example, in African American families, there is often an increased importance on the influence of extended family on family functioning and psychological well-being (Bluestone & Tamis-Lamonda, 1999). It is not uncommon for African American single mothers to receive assistance from extended family, such as the child's grandmother. The role of the grandmother in child-rearing can provide a source of stress and/or support in low-income African American families. Research indicates that negative relations between caregivers contribute to an increase in hostility and a decrease in supportive parenting (Conger et al., 2002). It may be that some of these secondary caregivers experience negative emotion due to their unanticipated caretaker role. A study examining the perspectives of grandmothers in the child-rearing role in African American families indicated that the grandmothers felt imposed upon, due to having goals other than raising children at this point in their lives (Burton & Bengston, 1985). Having a family member who is a reluctant caregiver creates stress and negative emotion for the parent as well; this is compounded by the stress

stemming from the financial hardship that made it necessary to seek assistance in the first place (Conger et al., 2002).

Cultural norms also contribute to the varied utilization of parenting strategies. Research comparing mothers from different cultural backgrounds indicate that there are higher levels of authoritarian parenting practices and lower levels of sensitivity among African American mothers compared to European American mothers (Fuligni & Brooks-Gunn, 2012). In particular, African American mothers tend to be more directive, which has been considered the opposite of supportiveness. However, results from research on parenting with African American samples are often confounded by SES (Tamis-Lamonda, Briggs, McClowry, and Snow, 2008). It may be that firm, directive parenting is a potentially positive factor for families living in high-risk communities to protect children from neighborhood dangerousness, among other risk factors faced by lower-income populations. (Conger, et al., 2002). These findings highlight the importance of not overlooking the heterogeneity within any particular ethnic minority group, and examining contextual factors holistically.

Measuring Positive Parenting Behaviors

Past research typically drew conclusions about parenting behaviors using self-report measures (Roggman et al., 2013). This practice tended to examine parenting through either parenting characteristics or child outcomes, often ignoring the parent-child interaction. Positive parenting stems from how parent and child factors each interact and contribute to the relationship, and, therefore, it is the parent-child relationship that is most salient to child outcomes. Observational tools, such as the Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO; Roggman et al., 2013), allow researchers to examine the utilization of positive parenting practices during the context of parent-child interactions. It was

developed as a tool to be used with families to inform interventions, highlighting parenting strengths in interactions with children. It was created from a developmental parenting perspective, meaning that fostering positive parent-child interactions was seen as having greater positive implications for children's future development than treating either the parent or child alone (Wheeler et al., 2013). The tool has a particular focus on the early childhood period, as early parenting has been consistently linked to adaptive outcomes pertaining to school readiness and achievement. The PICCOLO's focus on positive parenting during early childhood was informed by many early intervention programs that work directly with parents to support children's development by addressing parenting behaviors (Knoche et al., 2012).

The PICCOLO is a measure of positive parenting behaviors consisting of items that comprise four domains: Affection, Responsiveness, Encouragement, and Teaching. The measure can be used to observe a variety of activities in different settings. The PICCOLO's practicality and its inclusion of behaviors that are empirically linked to developmental outcomes add to its utility in research settings (Roggman et al., 2013).

Roggman and colleagues (2013) observed parenting in low-income European American, African American, and Latino American families with the PICCOLO. The PICCOLO demonstrated strong reliability and validity across the sample. Non-expert observers were able to show high levels of inter-rater agreement among the domain items. Furthermore, all four domains were judged as important elements of parenting, related to established measures of parenting behaviors, and predictive of child outcomes. For the African-American subsample, the PICCOLO domains were moderately to strongly associated with various validation measures, on par in robustness to the other demographic groups. Furthermore, there were moderate associations with later developmental outcomes for all three groups. Overall, there was strong validity and reliability

within the African-American subsample, supporting the notion that the items in the PICCOLO reflect behaviors utilized by diverse racial/ethnic groups.

Domains of Positive Parenting Measured with the PICCOLO

Affection. Affection, often referred to as "warmth" or "positive regard" encompasses behavioral manifestations of love, approval, and enjoyment of interactions with the child (Fuligni & Brooks-Gunn, 2012; Roggman et al., 2013). Affectionate interactions are characterized by the use of a warm emotional tone and behaviors that convey this warmth, such as smiling or laughing with the child, providing positive physical contact, and comforting the child when the child is exhibiting signs of distress (Fuligni & Brooks-Gunn, 2012). By cultivating the sense that children are loved and respected, affectionate parenting enhances a child's motivation to comply with their parents, thereby fostering future positive, cooperative parent-child interactions (Prinzie et al., 2009).

Responsiveness. Responsiveness (also referred to as "sensitivity") refers to being in-tune with, and supportive of, the child's needs. Responsive parent-child interactions are "in-sync", meaning that the parent is responsive to the child's cues regarding emotions and preferences, thereby creating a smooth, back-and-forth exchange. A parent exhibits responsiveness by acknowledging the child's speech, guiding play, and monitoring the child's interest in the activity (Fuligni & Brooks-Gunn, 2012). Sensitive parenting promotes self-efficacy and trust in the child, and has implications for the development of emotion regulation and future interpersonal relationships (Bugental & Grusec, 2006). This approach differs from affection, in that a parent can be sensitive to the child's cues without showing overt signs of warmth, highlighting the importance of *how* parents respond, not just the content of their response (MacDonald, 1992).

Encouragement. Encouragement, also known as "support", includes behaviors that respect the child's autonomy and foster exploration, creativity, and initiative (Roggman et al., 2013). Encouraging parents promote decision-making, provide assistance when children struggle with tasks, and tend to intrude less during play than unsupportive parents. Similar to responsiveness, encouragement involves responding to the child's cues (Prinzie et al., 2009). However, supportive parenting can be distinguished from sensitive parenting; in sensitive parenting, a parent can be attuned to the needs of their child without actively encouraging independence.

Teaching. Teaching involves parental stimulation of the child's cognitive development through explanations, conversations, and joint play (Roggman et al., 2013). Teaching behaviors are more didactic and less connected with the emotionally warm, sensitive tone that is characteristic of parent-child interactions. Commonly exhibited teaching behaviors include asking the child questions, using new vocabulary, and labeling actions or objects during play (Fuligni & Brooks-Gunn, 2012). However, elements of the other parenting domains are important in teaching. Parents must be engaged with the child's activity, understand the child's level of comprehension of the requirements of the task, and expand upon the child's existing base of knowledge. Therefore, some degree of sensitivity and support are incorporated into teaching behaviors.

Study Aims

The purpose of this study was to investigate the parent, child, and contextual factors that contribute to positive parenting, framed within emotional processes. Specifically, this study had three main aims:

1) The reliability and the associations between the domains of the PICCOLO were examined in the context of a high-risk, primarily African-American sample of mothers and toddlers.

a) It was hypothesized that the PICCOLO would provide a reliable measure of positive parenting behaviors in this sample.

b) It was expected that the PICCOLO domains of Affection, Responsiveness, Encouragement, and Teaching would be related, but distinct.

2) The present study examined how mothers' emotion processes were related to their positive parenting practices, as measured by the total score on the PICCOLO.

a) It was expected that parents' abilities in the regulation and expression of emotion would be correlated with their utilization of positive parenting strategies as measured by the PICCOLO.

b) It was expected that parents reporting higher levels of skill in managing and expressing emotions would demonstrate more positive parenting strategies as measured by the PICCOLO, while controlling for child temperament characteristics and sources of family support and stress (maternal cognitive ability, maternal perception of support, and single parenting).

3) The present study explored the possibility that predictors of parenting may exhibit different strengths of association with each domain of the PICCOLO, while taking child temperament and sources of family support and stress into account. Parenting predictors were examined in connection with each PICCOLO domain separately. Parent emotion processes also were examined as moderators of the relation between child temperament and PICCOLO domains.

a) It was expected that parenting emotional resources would predict more consistently to Affection and Responsiveness than to Encouragement and Teaching, while controlling for child temperament characteristics and sources of stress and support. This exploratory hypothesis was formulated because the Affection and Responsiveness domains contain

more item content that is directly related to emotion processes. However, emotion processes are also relevant to the Encouragement and Teaching domains.

b) It was expected that parenting emotional resources would moderate the relation between child temperament and each PICCOLO domain. For example, child temperament characteristics may be more robustly associated with PICCOLO domain scores when parents report lower levels of skill in expressing and managing emotions (e.g., less reappraisal).

CHAPTER 2: METHOD

Participants

Participants were 104 adolescent and young adult mother-toddler dyads. The young mothers were recruited in Detroit, Michigan, from Women, Infants, and Children (WIC) sites. WIC was used for recruitment because it provides health and nutritional support for low-income pregnant women, postpartum women, infants, and children who are at nutritional risk. To meet the study's longitudinal requirements, mothers had to have been 21 years or younger when they gave birth to the child participating in the study (*M* age at the initial study visit = 20.4 years, *SD* = 1.62). Nearly all mothers in the sample (98%) self-identified as Black/African American or bi-racial/multi-racial and all were of low socioeconomic status given that they qualified for WIC services. Participants lived in Detroit and the surrounding metropolitan area. The longitudinal study assessed the toddlers (males = 55, females = 49) at approximately 18 months (*M* age = 1.51 years, *SD* = 0.09), 24 months (*M* = 1.99 years, *SD* = 0.05), and 36 months (*M* age = 3.01 years, *SD* = 0.03).

Procedure

Families were either visited in their homes by trained research assistants, or they came to the lab for interviews, observations, and assessments when participating children were 18 months, 24 months, and 36 months, making three time points. Each visit was comprised of videotaped tasks that children either completed independently or with their mothers' involvement. At 18 months, the mothers and their children were assessed in the Family Emotion Lab at Wayne State University in Detroit, Michigan. During their visit, mothers completed demographic information, surveys, and computer tasks; as mothers completed these materials, trained research assistants supervised their children. Afterwards, mothers and their children were videotaped during a five-minute

cleanup task. This visit took approximately two hours to complete. Participants were compensated $100.

The visit at 24 months is the primary focus of this study. At 24 months, two trained research assistants visited the homes of the mothers and their children. Due to attrition, four mother-toddler dyads were not included at the second time point. Two visits were conducted in the Family Emotion Lab because it was not possible to visit the participants' homes. The second visit was also approximately two hours long and participants were compensated $100. During this second visit, mothers completed demographic information and numerous surveys. In addition, mothers and their children were videotaped engaging in multiple tasks. The first task was a free play task where the children played with toys provided by the researchers while their mothers worked on the demographic survey with a research assistant. Next, mothers were instructed to have their children cleanup the toys. After, the mothers and children were videotaped while the children had no toys to play with and mothers worked on surveys. Then, the mothers and children participated in an interactive book reading task, followed by a task where mother and child played with three different toys presented separately in three bags (Three Bags Task). After the tasks were completed, children were allowed to play with toys while mothers finished their questionnaires. The present study examined parent-child interactions during the Three Bags Task during this home visit.

Three Bags Task**.** The Three Bags Task is a 10-minute play session designed to provide a semi-structured environment for the mother to guide the child in each task, allowing some flexibility for the mother's style of parenting. Each mother-child dyad was given three cloth bags. The first bag contained a peg board with shapes for the child to stack or arrange. The second bag included a puzzle with pictures of farm animals. The third bag contained a shape sorter cube.

Mothers were instructed to open the bags in sequence and were told by the administrators to transition after about three minutes for each bag. The mother had the freedom to determine the extent to which she guided the play activity versus letting the child direct the play [See Appendix C].

Coding Procedure**.** Coders used the PICCOLO (Roggman et al., 2013) to examine parenting styles exhibited during the Three Bags Task. Three research assistants were trained by watching 5-minute training videos, and then compared their scores to the established codes for the videos. Coders started with 2-4 items (half a domain), then 7-8 items (full domain), then 14-15 items (2 domains), then finally practiced with all 29 items (4 domains). Coders then practiced what they learned in training with 1-2 videos of the Three Bags Task per week, and routinely met to discuss discrepancies between individual items, domains, and items across videos. After reliability was established, the three coders watched and scored 4-5 videos per week, establishing 6-8 double-coded videos each week over a four-month period. Coders continued to meet weekly to discuss coding questions and reliability. Each coder was assigned 66 videos, creating 100 videos that were double coded. Two coders coded each video, and interrater reliability was calculated on all 100 videos.

Measures

Positive Parenting Behaviors. The PICCOLO (Roggman et al., 2013) consists of 29 items grouped in four domains of positive parenting strategies [see Appendix D]. Observers rated the frequency and intensity parents exhibited those strategies, using a scale of 0 (*not at all there*), 1 (*barely there*), and 2 (*mostly there*). Affection consists of seven items that measure the presence and degree of warmth the in the parent-child interaction. Examples of items include “Speaks in a warm tone of voice,” and “Praises child.” Responsiveness consists of seven items that indicate

how sensitive the mother is to the child's cues. Examples include "Responds to child's emotions," and "Replies to child's words or sounds." Encouragement consists of seven items that refer to the level of autonomy support given to the child by the mother. Examples include "Supports child in doing things on his or her own," and "Verbally encourages child's efforts." Teaching consists of eight items that measure when the mother provides cognitive stimulation to her child. Examples include "Labels objects or actions for child," and "Asks child for information." Each domain total was also combined to obtain the total positive parenting score.

Mother Emotion Regulation and Expressivity**.** The Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) and the Berkeley Expressivity Questionnaire (BEQ; Gross & John, 1995) were given to the mothers to assess their experiences of emotions and their ability to manage them [see Appendix E]. The ERQ is comprised of 10 items that assess an individual's tendency to utilize two types of emotion regulation strategies: cognitive reappraisal and expressive suppression. Example items include: "I control emotions by changing the way I think about the situation I'm in," and "I keep my emotions to myself." The ERQ has also been validated using an African-American sample (Melka, Lancaster, Bryant, and Rodriguez, 2001). For the present study, the ERQ had an overall internal consistency of $\alpha = .70$. The internal consistencies for the subscales were, Reappraisal (6 items), $\alpha = .71$, and Suppression (4 items), $\alpha = .64$.

The BEQ is a 16-item measure of individual differences in emotion expressivity. The BEQ has three subscales: Negative Expressivity, Positive Expressivity, and Impulse Strength. Example items include: "I laugh out loud when someone tells me a joke that I think is funny," "I've learned it's better to suppress my anger than to show it," and "I have strong emotions." For the present study, the BEQ had an overall internal consistency of $\alpha = .75$. The internal consistencies for the subscales were, Negative Expressivity (6 items), $\alpha = .43$, Positive Expressivity (4 items), $\alpha = .51$,

and Impulse Strength (6 items), $\alpha = .73$. For both scales, participants respond on a Likert scale of 1 (*strongly disagree*) to 7 (*strongly agree*).

Child Temperament**.** A short form of the Early Childhood Behavior Questionnaire (ECBQ; Putnam, Gartstein, & Rothbart, 2006) was administered to assess temperament at 18 months. The ECBQ is a parent report measure that measures 18 dimensions of temperament characteristics in children ages 18 to 36 months. The 18 scales include Activity Level, Attention Focusing, Fear, Frustration, High- and Low-intensity Pleasure, Perceptual Sensitivity, Positive Anticipation, Sadness, Soothability, Affiliation/Cuddliness, Discomfort, Impulsivity, Inhibitory Control, Shyness, Attention Shifting, Motor Activation, and Sociability. These 18 scales comprise three factors: Surgency/Extraversion, Negative Affectivity, and Effortful Control. Each of the three factors was examined in the present study. The short form (ECBQ-S) condensed the original measure from 201 items to 107 items, while maintaining all the original temperament scales. Example items include: "When s/he couldn't find something to play with, how often did your child become angry?" and "When s/he was upset, how often did your child stay upset for 10 minutes or longer?" Caregivers rate statements of child behaviors on a Likert scale of 1 (*never*) to 7 (*always*), or respond with NA (*does not apply*). The internal consistencies for the subscales were, Surgency/Extraversion, $\alpha = .69$, Negative Affectivity, $\alpha = .78$, and Effortful Control, $\alpha = 61$.

Maternal Cognitive Ability. The Peabody Picture Vocabulary Test (PPVT-4; Dunn & Dunn, 2007) was used to measure the receptive verbal language abilities of the mothers. For each item, the examiner asks the mother to point to the picture that best illustrates the word that is being tested. Four images are presented for every item administered. The items sample words that represent twenty content areas, such as vegetables and tools, and parts of speech, such as nouns and verbs. The test is individually administered and it takes between 10-15 minutes. Standard

scores are obtained with a mean of 100 and a standard deviation of 15. The prior version of the PPVT has been found to correlate with intelligence quotient (IQ) ranging from .70 to .90 and correlates with verbal ability from .81 to .91 (Dunn & Dunn, 1997).

Social Support. Social support was measured with the Inventory of Parent's Experiences (IPE; Crnic, Greenberg, & Slough, 1986). Eight items were used to assess how satisfied the mothers felt about situations related to their community. For example, the mothers rated how satisfied they were their neighborhood involvement, they rated their satisfaction with how much they talk on the phone with friends or family, and they rated their satisfaction with how many times they have visited with friends. The eight items were rated on a scale from 1 (*Very dissatisfied; I wish things were very different*) to 4 (*Very satisfied; I'm really pleased*). The IPE has been used in research conducted with African-American mothers and their young children (Trentacosta & Beeghly, 2014). For the current study, the satisfaction with social support scale had an internal consistency of $\alpha = .79$.

Single Parenting. During the demographic interview, the mothers reported on who lived in the home, including all adults and children present. Single parenting was a dichotomous variable, which was defined as whether the mother was the only adult in the home or whether there were other adults present.

CHAPTER 3: RESULTS

Preliminary Results

Means and standard deviations for the predictors, criterions, and covariates can be found in Table 1. The distributions for the Affection, and Encouragement domains were somewhat negatively skewed. The mean for Affection (M = 10.96, SD = 1.90) and for Encouragement (M = 11.77, SD = 1.83) were close to the maximum possible score for those scales (maximum = 12). The distribution for the Teaching subscale was slightly positively skewed. The mean for Teaching (M = 5.80, SD = 2.35) was close to the midpoint of the total possible scale value (midpoint = 7). Overall, the skew for each domain was not substantial and the distributions were not transformed for analysis. Furthermore, the total and domain scores in the validation study, conducted by Roggman and colleagues (2013), also generally had a negative skew. The distributions for the Responsiveness domain and the total PICCOLO score were normal in the present study. The mean for the Responsiveness domain (M = 9.48, SD = 1.85) was close to the midpoint of the measure. The same was true of the total PICCOLO score (M = 38.00, SD = 6.35).

Aim #1

To address the first aim, the scale reliability of the PICCOLO was examined using Cronbach's α. Cronbach's α for the total PICCOLO scale was .85. Subscale analysis resulted in a Cronbach's α = .63 for Affection, α = .55 for Responsiveness, α = .68 for Encouragement and α = .68 for Teaching. The reliability coefficients for the scales were lower than those reported by Roggman et al. (2013), suggesting that there were some differences in internal consistency between the present sample and the sample used for establishing scale reliability and validity. In terms of coding in our sample, there was a high degree of inter-rater reliability between the coders, with an average measure ICC of .94 for the total PICCOLO scale. For the domains, the average

measure ICCs were as follows: Affection = .90, Responsiveness = .86, Encouragement = .86, and Teaching = .90.

Correlations between the domains were also examined (see Table 2). The domains were all significantly correlated, ranging from $r = .41$ (between Affection and Teaching) to $r = .70$ (between Affection and Encouragement). Though the domains were modestly to strongly associated with each other, they still seemed to represent distinct aspects of the broader positive parenting construct.

Aim #2

For the second aim, bivariate correlations between variables were examined. First, correlations between the PICCOLO and the covariates were examined. The total PICCOLO score was significantly related to the mother's PPVT-4 score, indicating that mothers' positive parenting behaviors were positively associated with their cognitive ability. Mother's total PICCOLO score was not significantly associated with any of the other covariates, namely, child temperament, single parenting, and perceived support (see Table 3).

Then, the correlations between the emotion variables from the ERQ and BEQ were examined (see Table 4). The relations between the variables were consistent with their measured constructs. For instance, Emotion Suppression was significantly negatively correlated with Positive Expressivity. Impulse Strength was significantly associated with Negative Expressivity and Positive Expressivity.

Next, correlations between the total PICCOLO score and mother's ERQ and BEQ scores were examined (see Table 5). The total PICCOLO score was not significantly associated with mothers' reported emotion regulation and expressivity.

Multiple regression analyses were conducted to assess the relation between maternal emotion regulation and expressivity and the total PICCOLO score, while controlling for covariates (see Table 6). Results indicated that the Impulse Strength subscale on the BEQ significantly predicted lower total PICCOLO scores, while controlling for the ECBQ subscales and demographic variables. As shown in Table 6, emotion reappraisal, emotion suppression, and positive and negative expressivity did not significantly predict mothers' overall use of positive parenting strategies.

Aim #3

To address the third aim, bivariate correlations between the PICCOLO domains, maternal emotion variables, and covariates were examined. Both the Affection and Encouragement domain scores were significantly positively associated with the ECBQ subscale of Surgency/Extraversion. The Responsiveness domain score was significantly negatively associated with the Impulse Strength subscale on the BEQ. The Teaching domain score was significantly positively associated with mothers' verbal ability, as indexed by the PPVT-4, and with the Effortful Control subscale of the ECBQ.

Multiple regression analyses were conducted to assess the relation between maternal emotion regulation and expressivity on each domain of the PICCOLO (see Table 7). Greater impulse Strength significantly predicted lower scores on the Responsiveness and Encouragement domains. There were no other significant associations between the mothers' emotion variables and any of the PICCOLO domain scores.

Next, hierarchical regression analyses were conducted in order to test the hypothesis that the maternal emotion variables would moderate the relation between child temperament and positive parenting behaviors, while controlling for the other covariates (mothers' verbal ability,

single parenting, and mothers' perception of social support). The ECBQ subscale scores and the ERQ/BEQ subscale scores were centered prior to creating interaction terms for the analysis. For each PICCOLO domain, the covariates were entered in the first step. Next, the child temperament and the maternal emotion variables were entered as predictors of positive parenting behaviors. The interaction between child temperament and maternal emotion variables were entered into the final step of the regression.

The interactions between child temperament and the maternal emotion variables were not significant predictors of the total PICCOLO score, the Responsiveness domain, or the Teaching domain. There was only one significant interaction involving the Affection domain. Impulse Strength moderated the relation between Surgency/Extraversion and Affection, $\beta = 0.20$, $t(99) = -2.01$, $p < .05$. The simple slope for 1 SD above the mean of Impulse Strength was 0.03, $p > .05$. The simple slope for 1 SD below the mean was 0.43, $p < .05$. For mothers with low Impulse Strength, child Surgency/Extraversion was positively associated with mothers' Affection behaviors.

There were several significant interactions between child temperament and maternal emotion variables when predicting the Encouragement domain. For example, Positive Expressivity moderated the relation between Surgency/Extraversion and Encouragement, as the interaction term was significant, $\beta = -0.24$, $t(99) = -2.31$, $p < .05$. Figure 1 depicts the simple slopes for this analysis. The simple slope for 1 SD above the mean of Positive Expressivity was -0.09, $p > .05$. The simple slope for 1 SD below the mean was 0.33, $p < .05$. For mothers with low levels of Positive Expressivity, child Surgency/Extraversion was positively associated with mothers' Encouragement behaviors.

Positive Expressivity also moderated the relation between Effortful Control and Encouragement, with a significant interaction term, $\beta = -0.26$, $t(99) = -2.72$, $p < .05$. The pattern was nearly identical to the slopes depicted in Figure 1. The simple slope for 1 SD above the mean of Positive Expressivity was -0.12, $p > .05$. The simple slope for 1 SD below the mean was 0.37, $p < .05$. For mothers with low levels of Positive Expressivity, child Effortful Control was positively associated with mothers' Encouragement behaviors.

Emotion Reappraisal moderated the relation between Negative Affectivity and Encouragement, $\beta = -0.23$, $t(99) = -2.15$, $p < .05$. The simple slopes for below and above the mean of Emotion Reappraisal were in the opposite direction, but neither slope was significant.

Emotion Suppression moderated the relation between Effortful Control and Encouragement, $\beta = 0.25$, $t(99) = 2.48$, $p < .05$. Figure 2 depicts the simple slopes for this analysis. The simple slope for 1 SD above the mean of Emotion Suppression was 0.32, $p < .05$. The simple slope for 1 SD below the mean was 0.16, $p > .07$. For mothers with high levels of Emotion Suppression, child Effortful Control was positively associated with mothers' Encouragement behaviors.

CHAPTER 4: DISCUSSION

This study investigated the maternal, child, and contextual contributions to the utilization of positive parenting behaviors in low-income families, within the framework of emotion processes. The first aim addressed the reliability of the PICCOLO scale when used with a high-risk, African-American sample. The first hypothesis within this aim was supported, in that the total PICCOLO scale demonstrated strong internal consistency and inter-rater reliability. When examined within each of the four domains, the internal consistency reliability was less strong. As previously mentioned, the internal consistency for the PICCOLO domains in this sample were lower than the validation sample (Roggman et al., 2013). The present study, like that of Roggman and colleagues, included a low-income, African-American sample. One possible explanation for the differences in internal consistencies is the structure of the play task. This study used a Three Bags Task that incorporated a different set of toys than previous research. For example, in the first phase of the task, the mothers were instructed to encourage their children to build a tower using the pegs and the peg board. However, tasks in the validation study included toys for pretend play and a book. The tasks in this study may be more goal-oriented than the those previously used with the PICCOLO, therefore providing less opportunities for mothers to display certain behaviors (i.e. "pretend play" or "labels objects or actions") than they might in a free play situation.

The second hypothesis of the first aim was also supported. The four domain scores (Affection, Responsiveness, Encouragement, and Teaching) were related, but represented distinct groups of behaviors exhibited by the mothers in the sample. However, as noted previously, the internal consistencies of each domain were not especially strong in the present study. Roggman and colleagues (2013) advised that it may be more helpful to use the total PICCOLO score, rather than the individual domain scores, in clinical use. The present findings suggest that a similar

recommendation may be warranted for research use of the PICCOLO, at least when conducting research with populations that are similar to the present sample.

The second aim was to examine how mothers' emotion processes, specifically their expressivity and regulation, were related to their positive parenting practices. It was expected that those reporting higher levels of skill in managing and expressing emotions would be more likely to demonstrate positive parenting skills, while controlling for child temperament and family sources of stress and support (maternal cognitive ability, maternal perceived support, and single parenting). These hypotheses were generally not supported. The maternal emotion variables were not associated with the positive parenting behaviors. The only maternal emotion variable that predicted positive parenting was Impulse Strength, which significantly predicted the total PICCOLO score. More specifically, mothers who reported that they typically expressed their emotions with high levels of intensity were less likely to display positive parenting behaviors. The experience of strong emotions (both positive and negative) may interfere with engaging in positive parenting as parents devote more resources to their own emotion experiences.

It may be the case that the emotion measures did not align with how the mothers in the present study conceptualize or perceive their emotional experiences. The ERQ and BEQ were validated using samples of undergraduate students or upper-middle class individuals. Even the validation study by Melka and colleagues (2001), which included an African-American subsample, only used undergraduate students. More research on maternal expressivity and emotion regulation is needed with participants sampled from primarily low-income backgrounds.

Though the emotion variables were generally not associated with the PICCOLO, one interesting finding emerged from the correlations between the PICCOLO and the covariates. Maternal verbal ability was strongly associated with positive parenting. Mothers with stronger

receptive vocabularies displayed more Teaching behaviors, and more positive parenting behaviors in general. Many of the PICCOLO items involve verbalizations as part of their criteria, whether they are asking questions ("Which is your favorite animal?"), discussing characteristics of objects ("Stack the pink star on the blue circle"), or providing verbal encouragement to their toddlers ("Turn the square around. You almost got it!"). It may be that higher maternal education or verbal ability mitigates some of the stress experienced by at-risk families, and it is apparent in their parenting behaviors.

The third aim was exploratory in nature. It was first hypothesized that the predictors would exhibit different strengths of association with each domain of the PICCOLO, while accounting for child temperament. It was expected that the maternal emotion variables would be more strongly associated with Affection and Responsiveness than with Encouragement and Teaching. However, this hypothesis was not supported. The emotion variables did not predict more consistently to one domain relative to the others. In other words, maternal emotion regulation and expressivity did not predict to specific positive parenting behaviors over others.

It was also expected that the maternal emotion variables would moderate the relation between the child's temperament characteristics and positive parenting. In other words, it was expected that the interaction between mother and child characteristics would predict maternal positive parenting. This hypothesis was generally supported when predicting Encouragement. For mothers with low levels of positive expressivity, low levels of impulse strength, and high levels of suppression, having children with reportedly less "difficult" temperaments (i.e. high Surgency/Extraversion and Effortful Control) increased the likelihood of using Encouragement. These moderation findings indicate that mothers with limited psychological resources are less likely to encourage children who typically display negative affect than children who are prone to

positive emotionality. On the other hand, high levels of maternal positive expressivity, high impulse-strength, and low emotion suppression, in interaction with the child temperament traits, did not predict Encouragement. If mothers typically express positive emotions, their child's temperament did not seem to impact their use of Encouragement.

These moderation results were consistent with the literature concerning the interaction between parent characteristics and child temperament (Kochanska et al. 2004). Parenting behaviors are not determined by the mothers' personality alone, but are also affected by the child's traits. Mothers with limited emotional skills may have the capacity to utilize positive parenting with children who display positive emotions and demonstrate strong regulatory capacities (Bornstein, et al., 2007). On the other hand, children who possess "difficult" temperament traits may exceed their capacities, and therefore mothers may display fewer signs of warmth or sensitivity. These findings highlight the importance of examining parenting behaviors within the context of the parent-child relationship, rather than focusing on the characteristics of the individuals.

Though this study highlighted some important factors in predicting positive parenting, the findings should be interpreted within the context of its limitations. First, the PICCOLO scale construction was not as strong as the validation sample (Roggman et al., 2013). Having domains that were lower in reliability perhaps weakened their apparent associations with the predictors and the covariates. Second, the internal consistencies for the ERQ and BEQ subscales were low, perhaps not tapping into the most relevant emotion expressivity or regulation constructs for this particular population. Third, though the observational task occurred in the families' homes, it is likely that the mothers may not have behaved in the same way towards their children as they would if the observers were not present. Fourth, some of the toys may have been unfamiliar with the

mother and child (such as the shape sorter), and may not have captured how they typically play together. Fifth, the observational coding only focused on behaviors of the mother. Findings from the present study indicate that child temperament traits interact with maternal traits to elicit parenting behaviors. Therefore, it may be important to examine child behaviors, as well as parent behaviors, when assessing positive parenting.

Despite the limitations, and the lack of support for some hypotheses, this study demonstrated certain strengths. Namely, the participants were sampled from a low-income, African-American, at-risk population, often understudied in the parenting literature. Research has increasingly focused on this population, trying to identify ways to mitigate the relation between risk factors and negative child and family outcomes (Tamis-Lamonda, et al., 2008). Another strength of the present study was the use of a multi-method approach to capture the interplay between mother and child factors during parenting.

One group of findings, though yielded from the exploratory analysis, have some important implications when researching positive parenting. Mothers' emotion expression and regulation could be significant contributors to their positive parenting, but perhaps only in the context of their child's temperament. Future research should continue to parse apart the contributions of mother and child, perhaps using different settings or play situations. Furthermore, fathers and alternate caregivers should also be observed interacting with their children, to see if their emotion expression and regulation also interact with the child temperament to influence parenting behaviors. Future research should also incorporate parent histories as a contextual factor contributing to parenting. Belsky (1984) included within the parent psychological resources factor of his model the fact that parents bring their own experiences of having been parented into their parenting practices. An intergenerational study could identify how parenting practices and emotion

resources are passed down through families. It is especially important to understand the mechanisms behind positive parenting, as it can provide a buffer between the risk-factors associated with low-income families and their effect on childhood outcomes.

APPENDIX A

Table 1

Descriptive Statistics of Measures

Measure	*n*	*M*	*SD*
Total PICCOLO (Positive Parenting)	100	38.00	6.35
Affection	100	10.96	1.90
Responsiveness	100	9.47	1.85
Encouragement	100	11.77	1.83
Teaching	100	5.80	2.35
ECBQ (Child Temperament)			
Effortful Control	100	4.73	0.59
Surgency/Extraversion	100	5.15	0.73
Negative Affectivity	100	3.78	0.77
ERQ/BEQ (Mother's Emotion Regulation)			
Emotion Reappraisal	100	5.27	1.11
Emotion Supression	100	3.91	1.33
Positive Expressivity	100	5.69	0.96
Negative Expressivity	100	3.47	1.00
Impulse Strength	100	4.67	1.26
PPVT (Mother's verbal ability)	95	80.39	12.52
IPE (Mother's perceived support)	100	26.53	4.26

Table 2

Correlations between PICCOLO Domains

Variables	1.	2.	3.	4.
1. PICCOLO Total	-			
2. Affection	.802**	-		
3. Responsiveness	.791**	.514**	-	
4. Encouragement	.837**	.704**	.546**	-
5. Teaching	.780**	.407**	.508**	.485**

*p < .05 **p < .01

Table 3

Correlations between PICCOLO Domains and Covariates

Variables	Total	Affection	Responsiveness	Encouragement	Teaching
Maternal Verbal Ability	.274**	.122	.163	.196	.366**
Social Support	-.008	.057	.029	-.016	-.078
Single Parenting	.094	.037	.173	-.019	.104
Effortful Control	.138	.037	-.013	.148	.237*
Surgency/ Extraversion	.171	.227*	.025	.201*	.102
Negative Affectivity	-.062	.068	-.071	.025	-.185

*p < .05 **p < .01

Table 4

Correlations between Maternal Emotion Variables

Variables	1.	2.	3.	4.
1. Emotion Reappraisal	-			
2. Emotion Suppression	.251*	-		
3. Negative Expressivity	-.092	-.174	-	
4. Positive Expressivity	.302**	-.259**	.154	-
5. Impulse Strength	.282**	-.058	.271**	.479**

*p < .05 **p < .01

Table 5

Correlations between PICCOLO Domains and Predictors

Variables	Total	Affection	Responsiveness	Encouragement	Teaching
Emotion Reappraisal	.022	.003	-.012	.000	.067
Emotion Suppression	-.096	-.060	-.029	-.123	-.093
Negative Expressivity	.058	.080	-.028	.15	.031
Positive Expressivity	.121	.146	.016	.121	.102
Impulse Strength	-.175	-.063	-.244*	-.160	-.104

*p < .05 **p < .01

Table 6

Maternal Emotion Regulation and Expressivity Predicting Overall Positive Parenting (PICCOLO)

Variables	B	SEB	β
Covariates			
Mothers' Verbal Ability	0.13	0.06	0.25*
Mothers' Perception of Social Support	0.07	0.15	0.05
Single Parenting	1.26	1.50	0.08
Child Effortful Control	1.32	1.14	0.12
Child Surgency/Extraversion	0.91	0.97	0.11
Child Negative Affectivity	-0.06	0.90	-0.01
Predictors			
Emotion Reappraisal	-0.46	0.69	-0.08
Emotion Suppression	0.13	0.55	0.03
Negative Expressivity	0.96	0.69	0.16
Positive Expressivity	1.02	0.87	0.15
Impulse Strength	-1.64	0.62	-0.32*

*$p < .05$

Note: Predictors were measured using the Emotion Regulation Questionnaire and the Berkeley Expressivity Questionnaire; Covariate values were obtained from the following: Peabody Picture Vocabulary Test, Inventory of Parents' Experience, and the Early Childhood Behavior Questionnaire.

Table 7

Maternal Emotion Regulation and Expressivity Predicting Positive Parenting (PICCOLO subscales)

Variables	Affection	Responsiveness	Encouragement	Teaching
Covariates				
Mothers' Verbal Ability	0.03	0.19	0.12	0.42**
Mothers' Social support	0.09	0.07	0.04	-0.03
Single Parenting	0.04	0.15	-0.03	0.10
Child Effortful Control	0.004	-0.02	0.12	0.26*
Child Surgency/Extraversion	0.22	-0.01	0.16	-0.01
Child Negative Affectivity	0.06	-0.003	0.08	-0.13
Predictors				
Emotion Reappraisal	-0.08	-0.04	-0.04	-0.10
Emotion Suppression	0.03	0.03	-0.03	0.05
Negative Expressivity	0.17	0.07	0.21	0.06
Positive Expressivity	0.17	0.13	0.15	0.06
Impulse Strength	-0.23	-0.34**	-0.34**	-0.15

Note: *p < .05 **p < .01 The values above are the standardized beta coefficients

APPENDIX B

Figure 1

Positive Expressivity moderating the relation between Surgency/Extraversion and Encouragement.

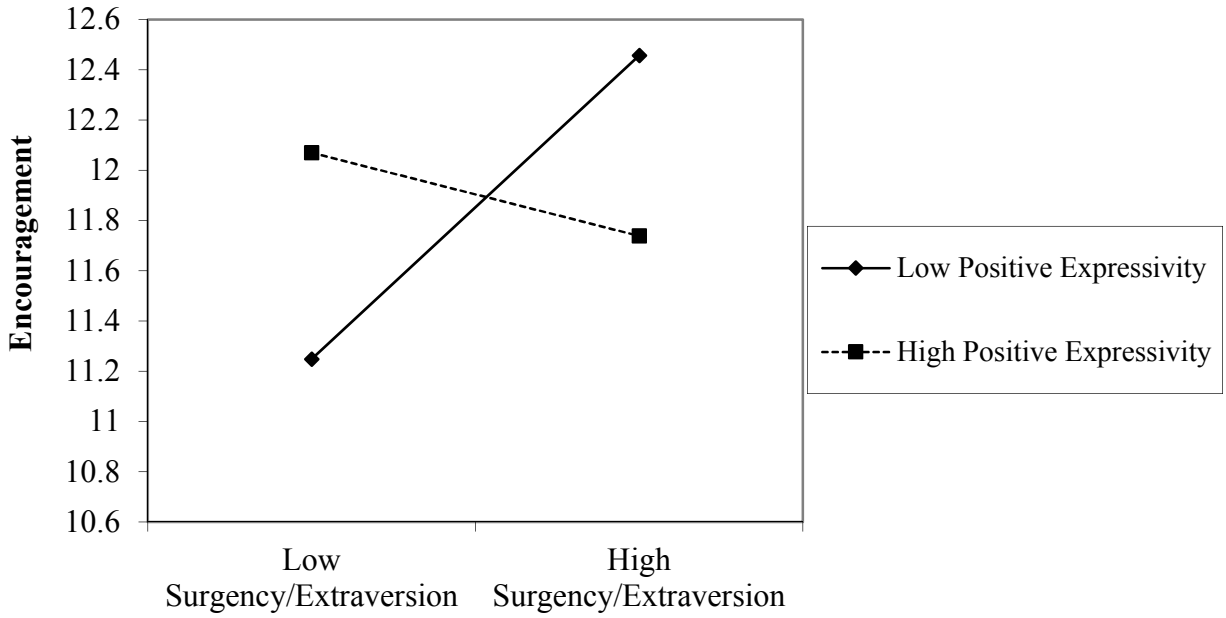
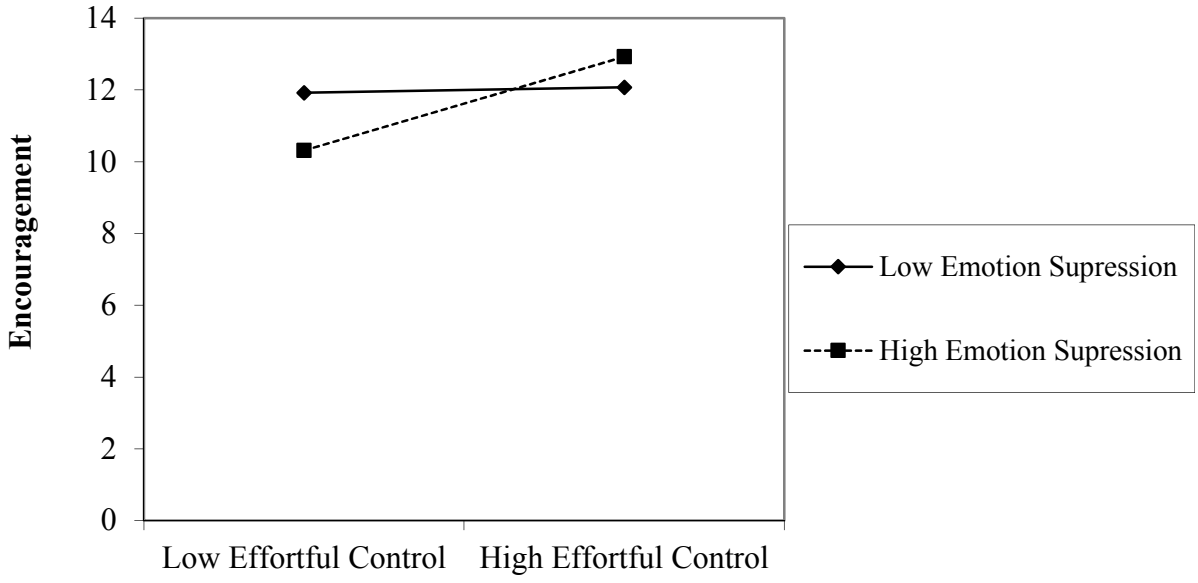


Figure 2

Emotion Suppression moderating the relation between Effortful Control and Encouragement.



APPENDIX C

Three Bags Task Script

The following script is the instructions given to the mothers preceding the Three Bags Task at 24 months:

[Note: "C" refers to the target child's name.]

To parent: "Now we'd like to watch C while you're working with her/him on 3 different activities. In this box there are 3 toys we'd like C to play with. We'd like you to go in the order in which I talk about them and we would like you to spend 3 minutes on each activity. **The one rule is: Help C as much as you think s/he needs help. Otherwise try and get her/him to do it on her/his own."**

<As each task is explained, show the parent the toy and briefly explain or demonstrate how to use them.>

"In the first one, see if C can work with the stacking board we brought. See if you can get C to make towers out of the blocks <*show the picture as an example*>. For the second task, we'd like you to work on a puzzle together. For the third task, we'd like you to work on a shape sorter together."

"We'll let you know when to move on to the next toy. Don't worry about putting the toys back in their boxes, as we are going to have C play with them when all three activities are done. In fact, when we signal you that the last activity is over, let C know s/he can play with any of the toys while you return to work on questionnaires. Then after a few minutes, we will clean up the toys."

<Review the order for the parent and ask her/him if s/he has any questions. All of the cooperative activities should be kept in opaque bags so the child cannot see the next toy. Hold them on your lap until you have finished the directions so the child or parent cannot start before you finish the directions.>

<Move out of the room, if possible, for the duration of the cooperative activities.>

<Time 3 minutes for each cooperative activity. The time begins when the parent touches the next toy unless they begin working on the appropriate toy and the child goes off task to another toy. Then timing continues with that interval until the 3 minutes are completed and then they should proceed to the next designated task (even if it is one the child is already off task and playing with). Reset the timer when the tasks are over. Then begin timing 4 minutes to allow the child to play with the toys.>

APPENDIX D

Parenting Interactions with Children: Checklist of Observations Leading to Outcomes

The following are the items of the PICCOLO (Roggman, Cook, Innocenti, Jump, & Christiansen, 2013) observed and coded during the Three Bags Task at 24 months.

Affection
1. speaks in a warm tone of voice
2. smiles at child
3. praises child
4. is physically close to child
5. uses positive expressive with child
6. is engaged in interacting
7. shows emotional warmth

Responsiveness
1. pays attention to what child is doing
2. changes pace or activity to meet child's interests or needs
3. is flexible about child's change of activities or interests
4. follows what child is trying to do
5. responds to child's emotions
6. looks at child when child talks or makes sounds
7. replies to child's words or sounds

Encouragement
1. waits for child's response after making a suggestion
2. encourages child to handle toys
3. supports child in making choices
4. supports child in doing things on his/her own
5. verbally encourages child's efforts
6. offers suggestions to help child
7. shows enthusiasm about what child is doing

Teaching
1. explains reasons for something to child
2. suggests activities to extend what child is doing
3. repeats or expands child's words or sounds
4. labels objects or actions for child
5. engages in pretend play with child
6. does activities in a sequence of steps
7. talks to child about characteristics of objects
8. asks child for information

APPENDIX E

Emotion Regulation Questionnaire & Berkeley Expressivity Questionnaire

INSTRUCTIONS:
For each item, please circle one number that best describes how much you agree or disagree with each statement.

Strongly Disagree **Neutral** **Strongly Agree**
1----------2----------3----------4----------5----------6----------7

1. When I want to feel more *positive* emotion (such as joy or amusement), I *change what I'm thinking about.*
1 2 3 4 5 6 7

2. I keep my emotions to myself.
1 2 3 4 5 6 7

3. When I want to feel less *negative* emotion (such as sadness or anger), I *change what I'm thinking about*.
1 2 3 4 5 6 7

4. When I am feeling *positive* emotions, I am careful not to express them.
1 2 3 4 5 6 7

5. When I'm faced with a stressful situation, I make myself *think about it* in a way that helps me stay calm.
1 2 3 4 5 6 7

6. I control my emotions by *not expressing them*.
1 2 3 4 5 6 7

7. When I want to feel more *positive* emotions, I *change the way I'm thinking* about the situation.
1 2 3 4 5 6 7

8. I control my emotions by *changing the way I think* about the situation I'm in.
1 2 3 4 5 6 7

9. When I am feeling *negative* emotions, I make sure not to express them.
1 2 3 4 5 6 7

10. When I want to feel less *negative* emotion, I *change the way I'm thinking* about the situation.
1 2 3 4 5 6 7

11. Whenever I feel positive emotions, people can easily see exactly what I am feeling.
1 2 3 4 5 6 7

12. I sometimes cry during sad movies.
1 2 3 4 5 6 7

13. People often do not know what I am feeling.
1 2 3 4 5 6 7

14. I laugh out loud when someone tells me a joke that I think is funny.
1 2 3 4 5 6 7

15. It is difficult for me to hide my fear.
1 2 3 4 5 6 7

16. When I'm happy, my feelings show.
1 2 3 4 5 6 7

17. My body reacts very strongly to emotional situations.
1 2 3 4 5 6 7

18. I've learned it is better to suppress my anger than to show it.
1 2 3 4 5 6 7

19. No matter how nervous or upset I am, I tend to keep a calm exterior.
1 2 3 4 5 6 7

20. I am an emotionally expressive person.
1 2 3 4 5 6 7

21. I have strong emotions.
1 2 3 4 5 6 7

22. I am sometimes unable to hide my feelings, even though I would like to.
1 2 3 4 5 6 7

23. Whenever I feel negative emotions, people can easily see exactly what I am feeling.
1 2 3 4 5 6 7

24. There have been times when I have not been able to stop crying even though I tried to stop.
1 2 3 4 5 6 7

25. I experience my emotions very strongly.
1 2 3 4 5 6 7

26. What I'm feeling is written all over my face.
1 2 3 4 5 6 7

ERQ subscales:

Items 1, 3, 5, 7, 8, 10 make up the Cognitive Reappraisal facet.

Items 2, 4, 6, 9 make up the Expressive Suppression facet.

BEQ subscales:

Items 13, 18, and 19 are reverse scored.

Items 13, 15, 18, 19, 23, 26 make up the Negative Expressivity facet.

Items 11, 14, 16, 20 make up the Positive Expressivity facet.

Items 12, 17, 21, 22, 24, 25 make up the Impulse Strength facet.

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ABSTRACT

MATERNAL EMOTION REGULATION AND EXPRESSIVITY AS PREDICTORS OF POSITIVE PARENTING IN LOW-INCOME FAMILIES

by

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Positive parenting has been associated with various adaptive childhood outcomes involving healthy cognitive, social, and emotional development (Fuligni & Brooks-Gunn, 2013; Roggman, Cook, Innocenti, Jump, & Christiansen, 2013). There is less research, however, on which factors contribute to the parents' use of positive parenting strategies. Some evidence suggests that factors such as the parents' emotional competencies, along with the child's temperament and the family environment, influence parenting behaviors (Belsky, 1984). This study explored predictors of positive parenting, including maternal emotion expressivity and emotion regulation, child temperament traits, maternal cognitive ability, maternal perception of social support, and single parenting. Participants were 104 African-American, at-risk young mothers and their children. Positive parenting was observed during a mother-child semi-structured play task, and coded using the Parenting Interactions with Children: Checklist of Observations Leading to Outcomes (PICCOLO; Roggman et. al). It was expected that the PICCOLO would demonstrate strong scale validity and reliability for this sample. It was hypothesized that mothers' emotion expressivity and regulation would predict their use of positive parenting behaviors. An exploratory hypothesis also predicted that mothers' emotion skills would moderate the relation between child temperament

traits and the PICCOLO domains. Multiple regression and hierarchical linear regressions were used to conduct statistical analyses. Maternal emotion expressivity and regulation were not significant predictors of positive parenting, when controlling for child temperament, maternal cognitive ability, single parenting, and maternal perception of support. One exception was that the reported strength of the mothers' emotional expressions was negatively associated with the total PICCOLO score. Maternal emotion resources moderated some relationships with child temperament and the Encouragement domain of the PICCOLO. For mothers with low levels of positive expressivity, low levels of impulse strength, and high levels of suppression, having children with reportedly less "difficult" temperaments increased the likelihood of using Encouragement. These findings highlight the importance of examining parenting behaviors within the context of the parent-child relationship, rather than focusing on the characteristics of the individuals.

AUTOBIOGRAPHICAL STATEMENT

Laura Crespo was raised in Woodbridge, Virginia, and attended the College of William and Mary in Williamsburg for her undergraduate education. She graduated with a major in Psychology and a minor in German Studies. During her time at William and Mary, Laura was a research assistant for Dr. Janice Zeman in her Emotion Socialization Lab. In the lab, Laura worked on the parent socialization project, in which parents and children were video-recorded discussing past emotional events in the child's life. Through this work, she fostered an interest in researching parent-child relationships and their role in children's emotional development. This project also provided data to analyze for her honors thesis.

Since her acceptance in the Clinical Psychology Doctoral Program at Wayne State University in 2013, Laura has continued to pursue her interests in working with parents and children. She is involved in the Family Emotion Lab under the supervision of her advisor, Dr. Christopher Trentacosta. Here she was involved in coding videotaped mother-toddler interactions that were part of a longitudinal study following at-risk mothers and their young children. She also completed data collection for a pilot study examining executive function skills in preschool-aged twins. Additionally, Laura has obtained clinical experience at the Wayne State Psychology Clinic where she conducts psychological assessments with children and adults. She plans to graduate with her Master of Arts in Clinical Psychology from Wayne State University in May of 2015.