

ABSTRACT

Title of Dissertation: PREDICTORS OF POSITIVE PARENTING AND USE OF SPANKING AMONG LOW INCOME, PREDOMINANTLY SINGLE, AFRICAN AMERICAN MOTHERS OF TODDLERS

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A large body of research emphasizes the key role of maternal parenting in fostering positive outcomes for children, particularly during children's early years. Given this literature, it is important to identify factors that predict positive parenting, especially in the most vulnerable populations of families with young children. Therefore, this study used secondary data from the Fragile Families and Child Well-Being Study (FFCW) to examine predictors of positive parenting and use of spanking in a sample of 1,161 low income, predominantly single, African American mothers of toddlers (mean age of 13 months). Study mothers had limited education, with 82% having a high school degree or less. An ecological risk and resilience framework was used to investigate the potential risk and protective role of four microsystem variables, including maternal education, maternal health, parenting stress, and number of children; one child characteristic, the presence or absence of a toddler with asthma; and one mesosystem factor, paternal support, in predicting the two parenting outcomes. Findings revealed that

mothers engaged in many positive parenting practices and approximately one quarter (26.4%) had spanked their toddler within the previous month. Results of linear regression analysis indicated that better maternal health, lower parenting stress, more paternal support, and having a child with asthma were predictive of mothers' engagement in more positive parenting practices. Logistic regression analysis revealed that more parenting stress, lower paternal support, better maternal health, only one child in the home, and having a child without asthma predicted greater maternal use of spanking. Maternal education was not found to be a predictor of either parenting behavior. Results revealed that study mothers engaged in more nurturing and caregiving activities than learning activities with their toddlers. Overall, findings suggest that family practitioners and health care professionals should introduce culturally sensitive interventions to reduce parenting stress, increase paternal support, and improve maternal health among this population of low income mothers. Programs should continue to support mothers with asthmatic children, educate all mothers about alternatives to spanking, and encourage maternal engagement in activities that foster toddlers' cognitive development. Additional implications of the study for policymakers and program developers are discussed.

Keywords: positive parenting, spanking, health, parenting stress, paternal support, child asthma

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LOW INCOME, PREDOMINANTLY SINGLE, AFRICAN AMERICAN
MOTHERS OF TODDLERS

by

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DEDICATION

*This work is dedicated to three people
without whom this point in time would not have been realized.*

In loving memory and with great respect

Mildred F. Fortune
February 1917 – August 2004

Upon whose shoulders I still stand

Carol E. Fortune

*With your unending love,
Forever my rock, Forever my advocate*

Autumn Nicole Bruton

*My daughter, My lifeline
You make me soar!*

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I am forever grateful to and thankful for my family and friends for taking this extraordinary journey with me, and for helping me to face what sometimes seemed to be an insurmountable task in the face of countless personal adversities. I wish I could put into words the motivation that each of you have supplied over the years. Our children in

particular are the overwhelming reason for this journey. We are the keepers of their spirits and of their futures. Set the bar high.

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Chapter I: Introduction

There is rich literature across diverse populations showing the benefits of positive parenting (e.g., Bradley & Caldwell, 1995). Positive parenting practices have been linked to a number of desirable child outcomes, including cognitive competence, prosocial skills, and lower numbers of behavior problems (e.g., Bradley & Caldwell, 1995; Kotchick, Dorsey, & Heller, 2005; Laible, Carlo, Torquati, & Ontai, 2004; Ostberg, 1998). Three general parenting constructs are often linked to positive parenting: parental support, structure, and positive control (Maccoby & Martin, 1983; Slater & Power, 1987). Children who have more supportive interactions with their mothers, such as those involving positive displays of warmth and affection, have been found to have fewer behavior problems, more positive peer relationships, and better communication and coping skills throughout their lifetime compared to those who lack maternal support (Leiferman, Ollendick, Kunkel, & Christie, 2005; Prevatt, 2003). Maternal structure is another positive parenting practice. Mothers who create consistency in daily routines and offer enrichment activities such as reading, singing, and playing have been found to enhance children's cognitive and social emotional competence (Skinner, Johnson, & Snyder, 2005).

A third parenting construct, parental control, focuses on the amount and nature of the control a parent has over the child, and includes variables such as discipline and punishment (Slater & Power, 1987). Rigid, coercive methods of control, including spanking, have often been associated with negative child outcomes, including low self-esteem (Bradley, Corwyn, Burchinal, McAdoo, & Garcia-Coll, 2001), behavior problems (Lansford, Deater-Deckard, Dodge, Bates, & Pettit, 2004), poorer cognitive skills (Berlin

et al., 2009), and reduced academic success (Child Trends, 2002). In contrast, more flexible, inductive methods of control have been linked to greater self-reliance and other socially competent child outcomes (e.g., Baumrind, Larzelere, & Owens, 2010). However, while parenting experts may advocate for disciplinary practices other than spanking, research shows that the vast majority of mothers in the United States utilize non-abusive spanking as a form of physical punishment to discipline children 17 years of age and younger (MacKenzie, Nicklas, Brooks-Gunn, & Waldfogel, 2011). Over 90% of children between the ages of three and four are spanked at least once a year (Child Trends, 2012), and a significant percentage of infants and toddlers are spanked as well (Slade & Wissow, 2004; Vittrup, Holden, & Buck, 2006). MacKenzie et al., (2011) for example, found that 36% of African American mothers spanked their toddlers in the month prior to responding to the survey, which was twice the percentage of Hispanic and non-Hispanic White mothers that spanked. Recent studies have investigated the effects of spanking on children, but narrowly centered research questions (Benjet & Kazdin, 2003) and methodological problems (Larzelere, 2000) have made it difficult to draw conclusions about its impact.

Given the research demonstrating the influence of parenting behaviors on child outcomes, it is important to study factors that may influence mothers' use of positive parenting practices and spanking, especially in high-risk families. Positive parenting may have particular benefits for children facing difficult circumstances, such as financial hardship and being a member of a single parent family.

Additional studies are needed to examine factors that influence use of positive parenting practices and spanking in low income families, single parent households, and

ethnic minority families. Equally important, there is a formidable gap in the literature with respect to factors that predict maternal parenting of toddlers, particularly with respect to mothers' use of physical discipline. Most of the existing spanking research focuses on families in which children are of preschool age or older (MacKenzie et al., 2011).

The current study seeks to extend the existing parenting literature by examining the role of various risk and protective factors that may predict the parenting practices of low-income, single, African American mothers of toddlers. Specifically, the study examines the relationship between maternal education, maternal health, paternal support, and parenting stress, and maternal use of positive parenting and spanking behaviors. It also explores two additional factors that may influence positive parenting and spanking among poor, African American, single mothers with limited resources: the presence of an asthmatic toddler and number of children in the home. The study examines these relationships in a sample of mothers who have children who are just entering toddlerhood, with an average age of about one year.

Because single parenthood can be influenced by many individual, family, and environmental factors (Waylen & Stewart-Brown, 2010), it is particularly important to examine potential protective factors such as maternal education, maternal health, and paternal support. A mother's education level has long been identified as an important construct affecting her parenting behavior (Schaub, 2010). Single mothers have been found to practice more positive parenting behaviors when they have higher (versus lower) levels of education (National Center for Education Statistics, 2010; U.S. Department of Education [ED], 2009). Additionally, previous literature suggests that mothers who are

in better health (Waldfogel, Craigie, & Brooks-Gunn, 2010) and mothers who have more support from the fathers of their children (Mandara, Johnston, Murray, & Varner, 2008) are more likely to exhibit positive, consistent parenting practices than mothers who are in poor health and receive less support from their child's father.

It is also critical to investigate potential risk factors that may compromise a single mother's use of positive parenting practices and increase the likelihood of her reliance on spanking to discipline her toddler. One such factor is parenting stress. Strain and anxiety in the parenting role may negatively influence the way in which a mother interacts with and disciplines her child (Mackensie, et al., 2011; Magnuson & Waldfogel, 2005). A second potential risk factor is parenting a toddler with asthma. Mothering a child with asthma has been linked to a variety of extra duties and financial burdens that may influence parenting practices, including medical maintenance, taking children to doctors, and needing to supervise children closely (Dey, Schiller, & Tai, 2004). Notably, poor African American children are at disproportionately greater risk of asthma than those in the general population (Corman, Carroll, Noonan, & Reichman, 2006; Newcheck, 2000) so it is important to investigate how the presence of an asthmatic toddler may predict maternal parenting behaviors. A final potential risk factor is the presence of multiple children in the mother's home. Research suggests that caring for a number of children may reduce the amount of time and energy mothers have for individual children (Ward, Spitze, & Deane, 2009) and may thus affect maternal use of positive parenting practices and spanking.

In summary, the purpose of the current study is to examine the role of selected risk and protective factors in predicting the use of positive parenting practices and

spanking among predominantly single, low-income, African American mothers of toddlers. The study drew its sample of mothers from the Fragile Families and Child Well-being Study (FFCW), a national study that sought to learn more about the relationships and competencies of unmarried parents (Reichman, Teitler, Garfinkel & McLanahan, 2001). Specifically, the study will examine the role of maternal education, maternal health, paternal support, parenting stress, presence (or absence) of an asthmatic toddler, and presence (or absence) of multiple children in the home as predictors of a mother's use of positive parenting practices and spanking of her toddler child. This study is one of the first to examine factors associated with both positive parenting and spanking among a group of high-risk, predominantly single African American mothers with toddlers, including those who have an asthmatic child. Greater understanding of how various contextual factors predict more or less optimal parenting practices may help to design interventions that foster positive parenting, and ultimately improve outcomes for children in families with limited financial resources.

Chapter II: Literature Review

Ecological Theory

Ecological theory, which allows for the investigation of factors that promote or impede parenting behavior at various environmental levels, is an appropriate framework for examining predictors of positive parenting and spanking among this population of mothers who were single at the time their toddlers were born. The ecological theory was developed over four decades ago by Urie Bronfenbrenner (1979) to explain how individuals develop through their interaction with family, community, and larger society. According to the model, the ecological system is comprised of four subsystems: the microsystem, mesosystem, ecosystem, and macrosystem that influence human development, behavior, and interaction. A fifth system, the chronosystem, accounts for change over the life cycle. The systems are interrelated and become a fluid system where factors at one environmental level impact factors at other levels (Bronfenbrenner, 1986).

The first level, the microsystem, is the immediate environment where individuals have the most direct interaction with social agents, especially family members. The second environmental level, the mesosystem, refers to relations among two or more settings in which an individual participates, such as interactions between the family and schools or the family and health care providers. The ecosystem refers to one or more settings that do not directly involve the individual as an active participant, but in which events occur that may affect the individual. For example, when a local health care clinic closes, mothers may have to travel to a new clinic and develop relationships with new health care professionals. The fourth environmental level is the macrosystem, which consists of the cultural norms, values, and laws of greater society. For example, African

American families have traditionally placed a high value on kinship bonds, religion, and adaptable family roles. Bronfenbrenner (1986) later added a fifth system, the chronosystem to his ecological theory to account for the patterns of events and transitions over time, as well as the impact of historical events. For example, divorces are one transition that may affect children in different ways over time.

Resilience

Incorporating the concept of resilience broadens understanding and utilization of the ecological framework. Specifically, at each environmental level, the ecological theory suggests that there are factors that may place individuals and families at risk for poor individual and family functioning outcomes, as well as protective factors that may facilitate individual and family resilience, buffering the effects of risks and promoting family well-being (Murry, Bynum, Brody, Willert & Stephens, 2001).

The concept of resilience was born out of stress theory, which conceptually seeks to explain why some individuals within families adapt and thrive despite stressful events and circumstances, while others do not (Walsh, 1998). The principle idea of resilience is that over the family life cycle, some individuals and families are able to cope effectively with adverse events despite risks (stressors and disruptions) to family wellbeing.

The resilience literature emerged in the 1960s when researchers began studying connections between life stressors and illness in children, and sought to determine why some children were functioning competently despite their high risk for adversity (Garmezy & Rutter, 1983). Over the years, investigators have expanded resiliency research to include adults and families. Among the foundation studies on family resilience, McCubbin and Patterson (1982) explored the ability of military families to

cope and recover from war; this research progressed to explore factors that successfully protected different families from a variety of risks.

The normative stressors of life for single, African American mothers place them at higher risk for negative parenting behaviors, including lower levels of positive parenting and increased odds of spanking, than their married or cohabitating counterparts, or their White cohorts (Kendig, & Bianchi, 2008). Moreover, additional stress is likely to result from having a child with a chronic illness such as asthma. Being single and responsible for multiple children in the home, as compared to having responsibility for only one child, may create further stress that contributes to less optimal parenting practices among low-income, African American mothers.

Ecological/Risk and Resilience Framework

The population of mothers under consideration for this study has likely experienced a variety of macro level socioeconomic and cultural risk factors, including minority race status, discrimination, and cultural norms concerning the negative effects of spanking (Cowan, Cowan, & Schulz, 1996; Ogbu, 1981). Although these factors are important, this study focuses on microsystem, mesosystem, and an individual child characteristic that may be risk and protective factors which impact parenting practices of this population of low-income, predominantly single, African American mothers of toddlers. Figure 1 provides a diagram of the ecological framework, including variables investigated in this study.

As shown in Figure 1, the current study examines the role of four microsystem factors: maternal education, maternal health, parenting stress, and number of children (presence of one child or more than one child in the home). These factors are in the

mother's immediate environment and likely to directly influence her parenting behavior. It also explores a child characteristic within the ecological model, the presence or absence of asthma in the focal toddler. This child characteristic has the potential to elicit differential parenting behaviors among mothers. The study also examines a mesosystem variable, paternal support of the mother. In this study, the vast majority of fathers live in settings outside the home but the nature and amount of their support may have direct or indirect influences on the mother's parenting of her toddler child.

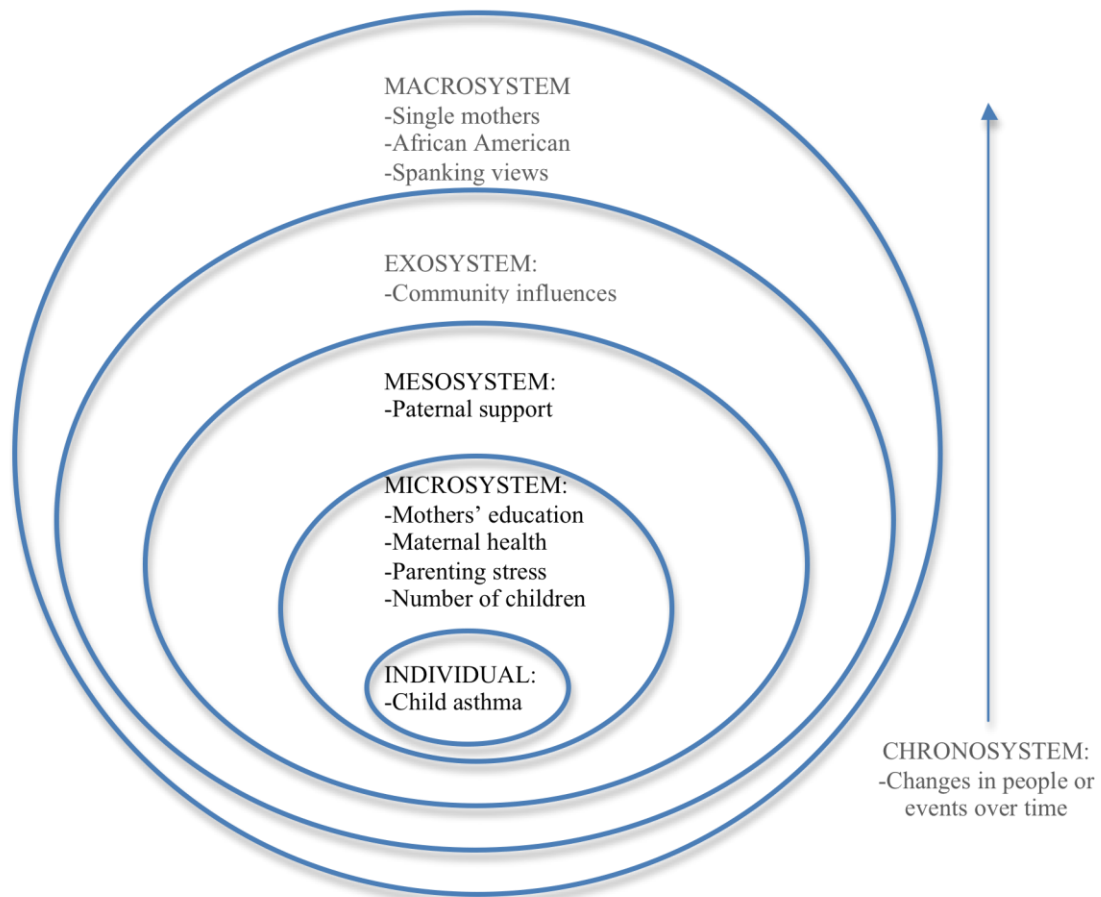


Figure 1: Ecological / Risk and Resilience Framework

Thus, the current investigation focuses on two of the four environmental levels of the ecological framework.

Within the risk and resilience framework, the study explores the role of three potential protective factors that may promote resilient parenting in the face of financial hardship, single parenthood, and other adverse experiences, specifically maternal education, maternal health, and paternal support. It further examines three potential risk factors that may compromise positive parenting and increase the use of spanking in this population, specifically parenting stress, having an asthmatic child, and having at least one other child in the home in addition to the toddler. Knowledge of how these factors predict parenting and disciplinary practices in the study's population of mothers of toddlers is an important addition to the literature on low-income, African American parenting.

Single Parenting

In 2007, there were approximately 13.7 million single parents in the United States, approximately 84% of them mothers (U.S. Census Bureau, 2009). These parents are responsible for raising 21.8 million children, or approximately 26% of children under 21 in the nation. Despite their numbers, family researchers have most often studied single mothers to learn what their families lack in comparison to two-parent married families and, more recently, in comparison to cohabitating families (Aronson & Huston, 2004). There has been far less research evaluating the diversity of resources within this population, including the role of factors that may have a positive influence on parenting (Murry et al., 2001).

Marriage is often used as the sole measure of family structure (Dupree & Primus, 2001). Family researchers have provided the medical community, policymakers, and academics with a substantial amount of literature demonstrating the relationship between marriage and family well-being. Such research on the benefits of marriage has resulted in policies promoting marriage as a positive investment for families. However, single parent families, like all families, are diverse. For example, contrary to the stereotype that suggests most single mothers are living in poverty, only 27% of custodial single mothers and their children live below the official poverty line (U.S. Census Bureau, 2009). When parents live apart, children customarily reside with their mothers (Carlson, McLanahan, & Brooks-Gunn, 2007; U.S. Census Bureau, 2009). Approximately 80% of custodial single mothers are gainfully employed (U.S. Census Bureau, 2009). However, children who live in single parent families, specifically households headed by mothers, are more likely to be poor, to be less healthy, and to have more emotional and behavioral problems than children who live in married parent families (Bramlett & Blumberg, 2007; Dupree & Primus, 2001; Golden, Winston, Acs, & Chaundry, 2007; Waldfogel et al., 2010).

Single mothers have been found to experience greater parenting stress, invest less time in their children, and spank their children more frequently than married or cohabitating mothers (Chen & Escarce, 2006; Fagan, Lee, Palkowitz, & Cavrera, 2011; Kendig, & Bianchi, 2008). The prior studies reveal that they spend less time monitoring their children, controlling them, and engaging them in positive activities than their married or cohabitating peers. A number of reasons are offered for these findings, including single mothers' lack of education, fewer economic resources, and extended work hours. On the other hand, research also finds that although single mothers may

spend less total time engaged in educational/social activities with their children (e.g., reading, playing, attending school functions), they spend an equivalent amount of time as married or cohabitating mothers engaging in primary care of children, including feeding, bathing, and putting children to bed (Hofferth & Sandberg, 2001).

Most single mothers work full or part time, do not live in poverty, and are not on public assistance. However, families headed by single mothers do experience higher rates of poverty than their married and cohabitating counterparts (U.S. Census Bureau, 2009). Further, despite increases in employment and wages for single mothers in the past two decades, 7.6 million of these families as a whole remain impoverished (DeNavas-Walt, Proctor, & Mills, 2004; Lyter, Sills, & Oh, 2002; Mandara et al., 2008). Compared to their married and cohabitating cohorts, single mothers often have lower education levels, fewer job opportunities, and less work flexibility and earning capacity (Golden et al., 2007). Many receive insufficient public benefits (Zhan, 2006) and other resources needed to make ends meet. The lack of time and resources can create environments that undermine the well-being of mothers and influence their parenting practices.

African American Mothers

Research also indicates that there are demographic and health differences between parents of different races. African American mothers are more likely to be single parents, are more likely to be poor, are more likely to be less educated, and are more likely to have children in poor health than their White counterparts (Belsky, Rovine, & Taylor, 2006). Studies further suggest that there might be differences in the manner in which African American mothers parent from the way other ethnic backgrounds parent their children.

One early study found that African American mothers displayed lower physical levels of warmth to their children as compared to mothers from other ethnic groups (Child Trends, 2002). This study of racial and ethnic differences in positive parenting behaviors found lower rates of hugging among African American mothers (75%) as compared to White non-Hispanic mothers (93%) and Hispanic mothers (81%). Furthermore, approximately 20% fewer African American mothers, compared to their White peers, reported telling their children that they were loved. However, there is little, if any, research finding a difference in the love and affection that African American mothers feel for their children. A more recent, large-scale study that examined parenting behavior in different cultural groups found that African American mothers exhibited virtually the same level of warmth as White and Hispanic mothers in the U. S. (Deater-Deckard et al., 2011).

In another study, Ispa et al. (2004) investigated the association between warmth and intrusiveness (pushy, interfering behavior) and mother-child interaction in low-income, African American, European American, and Mexican American families with toddlers at two points in time: when children were 15 months of age, and when children were 25 months of age. After controlling for variables such as maternal age, education, and partner status, the investigators found a statistically significant, negative relationship between intrusive behaviors and positive maternal-child interaction in each group of mothers. However, for African American mothers, displays of affection were found to moderate the association. The African American mothers who were more interfering, but who also displayed more warmth and affection towards their children participated in

more positive parent-child interactions compared to the interfering mothers who displayed less warmth and affection towards their children.

Additional research has explored ethnic differences in single mothers' engagement in other parenting behaviors. Single, African American mothers have been found to engage less consistently in parent-child routines, and to spend less time in interactive play and cognitive activities like reading with their children, compared to mothers of other ethnic groups and particularly White mothers (Child Trends, 2012; Hofferth & Sandberg, 2001). African American mothers are also thought to have more positive attitudes about spanking (Child Trends, 2012), which some suggest may be linked to the lower amount of time invested in reading, singing, playing, and hugging their children (American Academy of Pediatrics [AAP], 2004).

Spanking in the African American community continues to receive a great deal of research attention because this population is thought to spank more often and more harshly, and to spank children at younger ages, as compared to parents in other ethnic groups (Chung, et al., 2009; MacKenzie et al., 2011; McLoyd & Smith, 2002; Regalado, Sareen, Inkelas, Wissow, & Halfon, 2004). Furthermore, studies suggest that the risks of spanking increase in families where mothers are the heads of the household (Day, Peterson, & McCracken, 1998; MacKenzie et al., 2011; McLoyd & Smith, 2002).

Several reasons have been advanced for African American mothers' greater use of spanking than mothers in other ethnic groups. The most salient are the high levels of stressors, including single parenthood, young motherhood, and lack of resources. These risk factors can create emotional and physical environments that undermine maternal functioning, contributing to harsher and more frequent use of spanking (Pinderhughes,

Dodge, Bates, Pettit & Zelli, 2000; Regalado et al., 2004; Zolotor, Robinson, Runyan, Barr, & Murphy, 2011). However, evidence also indicates that for some populations, particularly African Americans, non-abusive spanking can be a benign or beneficial way of disciplining children when accompanied by consistent maternal warmth and parent-child interaction (Bradley et al., 2001; Deater-Deckard et al., 2011; Grusec, Goodnow, & Kuczynski, 2000; Larzelere, 2000; McLoyd & Smith, 2002).

Potential Protective Factors

The resources that are available to single mothers can make a significant difference in the manner in which they parent. A mother's level of education, her health status, and the amount of support that she receives from the father of her child(ren) are a few salient factors that have been found to influence the type, frequency, and quality of parenting behaviors.

Maternal Education. Education has long been identified as an important construct with respect to its influence on parenting (Schaub, 2010). Despite the growing population of single, African American mothers with at least some higher education, this group continues to lag behind single, White mothers in educational attainment. In 2008, over twice the percentage of African American mothers (13%) had less than a high school diploma or equivalent compared to White mothers (5%) (National Center for Education Statistics, 2010).

Education is a vehicle that enables individuals to acquire the knowledge, resources, and the perspectives to cope with and limit their families' exposure to the normative and unexpected stressors of life (Beck, Cooper, McLanahan, & Brooks-Gunn, 2010). The increased educational attainment of all mothers over the latter half of the 20th

century has resulted in mothers spending a greater amount of time in positive interaction with their young children, including reading, telling stories, and cognitive play (Hofferth & Sandberg, 2001; Schaub, 2010). Increases in maternal educational attainment are also associated with less time spent in negative parenting interactions, particularly spanking (Child Trends, 2011).

The preponderance of available research has found higher maternal education to be a beneficial resource in the domain of parenting (Duckworth & Sabates, 2005; Schaub, 2010; Waylen & Stewart-Brown, 2010). For example, the Early Childhood Longitudinal Study (Child Trends, 2009) and the National Center for Education Statistics (2010) report a positive association between maternal educational level and positive parenting behaviors such as reading, telling stories, and singing to children. The Early Childhood Longitudinal Study (Child Trends, 2009) examined how parents raised and nurtured their children by tracking young children for six years; from birth in 2001 to the first grade. Findings indicated that the education level of the mothers influenced the amount of time they read to, sung to, and told stories to their nine-month-old children on a daily basis. These results were supported by a later study by Schaub (2010), who also found that maternal education predicted positive parenting practices (reading, storytelling, engaging in active play) over time.

With respect to spanking, research generally shows a negative association between mother's educational attainment and this type of parenting behavior, with increases in educational level related to decreases in spanking (Horn, Chen, & Joseph, 2004; Jackson, Thompson, Christiansen, Colman, Wyatt, Buckendahl et al., 1999). The 2008 General Child Trends Survey (Child Trends, 2011) suggests that college-educated

women are less likely to endorse spanking their children than women with lower levels of education. In contrast, large scale studies by Grogan-Kaylor and Otis (2007) and Berlin et al. (2009), who investigated spanking and other variables in low-income African American and other ethnic families with toddlers, found that the educational level of mothers was not related to maternal use of corporal punishment. Another study by Horn et al., (2004) investigated disciplinary methods of 189 African American parents (91.4% mothers) of children under four years of age from diverse socioeconomic backgrounds. The researchers found that lower and middle/upper socioeconomic status parents had similar beliefs about the appropriateness of spanking, but lower income parents were more likely to endorse spanking as a response to an unsafe behavior on the part of a child.

Maternal Health. Health has been defined as the “complete physical, mental, and social well-being and not merely the absence of disease or infirmity” (World Health Organization [WHO], 2001). Mothers’ perceptions of their health can have important implications for their parenting behavior. Previous literature suggests that mothers who are in better health are more likely to exhibit consistency in their parenting, practice more positive parenting behavior, and engage in less spanking than mothers who are in poor health (Gibson-Davis, 2008; Waylen & Stewart-Brown, 2010). From an ecological perspective, the good health of a mother can be a protective factor that enhances positive parenting and has a positive impact on family well-being.

According to the National Center for Health Statistics (2010), 70% of women between the ages of 18 and 44 in 2008 reported that they were in excellent or very good health, with more White women (72%) than Black women (60%) reporting this health status. When lower income was considered, the racial gap between excellent/very good

health narrowed for White (61%) and Black (57%) women, suggesting that income accounted for much of the health disparity between Black and White women.

African American mothers experience some of the highest levels of the four modifiable physical health risk behaviors that lead to chronic illness and death, including lack of physical activity, poor nutrition, tobacco use, and excessive alcohol consumption (Centers for Disease Control [CDC], 2011a). For example, one of the leading health concerns in the United States, obesity, has been diagnosed in nearly half (44.7%) of Black women over the age of 18 years. Furthermore, according to the Racial and Ethnic Approaches to Community Health across the U.S. study, approximately a third of Black women 18 years or older did not engage in leisure time physical activity one month prior to the survey (CDC, 2011). Self reported levels of hypertension, cardiovascular disease, and diabetes in the Black communities studied further indicated a much higher prevalence of disease than reported by their counties and states.

Compared to their married and cohabitating counterparts, single mothers experience higher levels of physical and mental health issues that could interfere with their ability to consistently practice positive parenting behaviors (Waldfogel et al., 2010). Waylen and Stewart-Brown (2010) utilized data from the Avon Longitudinal Study of Parents and Children (ALSPAC) to examine maternal health and parenting in over 1,100 families with children at ages 8 and 33 months. Their findings indicated that maternal parenting practices, including warmth, support, rejection, and control, were influenced by maternal ratings of their personal health, specifically, parenting behavior improved with improved general health, but there was no association when general health worsened. Parenting requires physical and mental stamina. Good physical health enables mothers to

respond more consistently to the unending needs of their children. The literature suggests that physically healthy mothers have an improved quality of life, including better moods and coping ability, and a greater ability and drive to perform positive, daily parenting activities, than mothers in poor physical health (CDC, 2011). Thus, research suggests that good physical health is a protective factor that will be related to mothers' greater use of positive parenting practices and less use of spanking.

Paternal Support. Social support is the provision of resources obtained from informal sources, such as family, kin, friends, and neighbors, and formal sources, such as schools, churches, and communities (Campbell-Grossman, Hudson, Keating-Lefler, & Fleck, 2005; Dunst & Trivette, 1990). Some resources may provide tangible support, such as instrumental support (child support, childcare, education, finances, insurance and medical assistance) or informational support (advice on coping with life stressors). Other resources may offer intangible support, such as emotional and psychological support from fathers or partners, the reciprocal warmth of children, support from extended family members, or professional psychological support. For the purpose of this research, paternal support will be addressed.

It is important to note that the mere availability of social support is insufficient if mothers do not perceive these resources as being available to them or if they are unable to utilize the support effectively. A number of studies suggest that social support can be considered an additional demand for mothers, producing added stress (Gee & Rhodes, 2003; Mowbray, Bybee, Hollingsworth, Goodkind, & Oyserman, 2005; Raikes & Thompson, 2005). Yet, the balance of evidence identifies social support networks as beneficial for single mothers (Cohen, McMahon, Tennant, Saunders, & Leslie, 2000;

Coyl, Roggman, & Newland, 2002; Hashima & Amato, 1994; Lipman & Boyle, 2005; McBride, Schoppe, & Rane, 2002). Although financial resources have been identified as a factor that could buffer single mothers from the negative effects of lower incomes and thus contribute to more positive and consistent parenting (Mandara et al., 2008), only 8% of child support is informally agreed upon by parents, and just about half of formal child support is partially paid or paid in full (Grall, 2009).

Informal support networks are important sources of support for low-income, single mothers who often rely on the fathers of their children and their network of family and friends to help them make ends meet (Gee & Rhodes, 2003). The complexities of parenting in conjunction with challenges of parenting toddlers underscore the need for such resources, and the ability of these resources to make a difference in parenting behavior (Carlson et al., 2007; Minkovitz et al., 2005). Paternal support benefits all families, and because African American mothers are less likely than mothers from other ethnic groups to have the fathers of their children reside in their homes, paternal support for this population may be essential to family well-being. One study found that low income mothers who receive greater social support were less likely to utilize spanking as a parenting strategy (Ceballo & McLoyd, 2002). Unfortunately, the social support of biological fathers often diminishes with time, particularly for younger mothers, mothers who cohabitate with fathers but never married them, and for mothers who have never lived in the same household with the fathers of their children (Acs & Nelson, 2003).

Research suggests that mothers are more consistent in their parenting and their children have better outcomes when parents who do not reside together are supportive of one another. One study (Lindsey, Caldera, & Colwell, 2005) that examined the paternal

supportive behavior of 60 mothers from two-parent families compared to single, mother-headed families found that although parents were more supportive of one another in dual-parent families, single mothers with greater paternal support were more supportive in co-parenting their children compared to single mothers with less paternal support (Carlson et al., 2007). A more recent study that utilized four waves of FFCW data to investigate the association between maternal mental health and perceived paternal support found that the relationship status between the mothers and the biological fathers influenced how mothers perceived the paternal support they received. It was not surprising that married mothers perceived the greatest support followed by cohabitating, non-cohabitating but romantically involved, and mothers who were not romantically involved with the fathers of their children (Meadows, 2011).

Evidence shows that children whose fathers do not reside in the household are often economically disadvantaged, and the type and amount of support that single mothers receive from these fathers often makes a crucial difference in the well-being of their families (Amato & Gilbreth, 1999; Carlson et al., 2007). Mothers who report receiving paternal support were more likely to positively co-parent, which promotes consistent, positive parenting behaviors (Carlson et al., 2007). In addition, previous research has shown greater paternal support to be linked with more positive interaction between mothers and children (Lindsey et al., 2005) and less frequent spanking (Regalado et al., 2004). Thus, the majority of research suggests that greater social support from fathers will be a protective factor contributing to more positive parenting and less use of spanking by low-income, single African American mothers.

Potential Risk Factors

Single motherhood in itself is a significant challenge for all mothers. However, there are countless other stressors that single mothers may face on a daily basis. The stress that mothers experience in the parenting role, having a young child with a chronic illness, and the responsibility of parenting more than one child are three potential risk factors that may compromise positive parenting and increase the use of spanking among poor, single mother families.

Parenting Stress. Parenting stress is the psychological, cognitive, and emotional response to events or experiences associated with the responsibilities of parenting (Abidin, 1995; Ostberg, 1998; Pipp-Siegel, Sedley, & Yoshinga-Itano, 2002). Research indicates that parenting stress can interfere with a mother's ability to function effectively, which may produce psychosocial risks for families (Cain & Combs-Orme, 2005; Kotchick et al., 2005; Shalowitz et al., 2006; Ostberg, 1998). Logically, one would expect that the amount, duration, and severity of parenting stress experienced by mothers would help to explain the manner in which they interacted with their children. Highly stressed mothers may engage in reduced quality parenting and less frequent positive interaction with their children (Gibson-Davis, 2008; Kotchick et al., 2005), as well as more frequent negative interaction with children, as compared to mothers who experience less stress (Gibson-Davis, 2008; Lessenberry & Rehfeldt, 2004; Mackenzie et al., 2011).

Stress is a normative part of life experienced by individuals and families at different points over a lifetime. It has been defined as the affective response to events or experiences associated with substantial adaptive demands (Abidin, 1995). Abidin (1995) has categorized parenting stress in three domains: Parental distress, difficult child

characteristics, and dysfunctional parental-child interaction. Parental distress is the domain directly associated with the parent. The strain and anxiety felt in the parenting role may negatively influence the manner in which mothers interact with their children. In an earlier study by Crnic and Greenberg (1990) that assessed parenting models, the daily irritations and frustrations of childrearing were found to adversely affect parent-child interaction. This finding was supported by a later study in which parenting stress and parenting hassles were shown to have direct negative effects on the quality of mother-child interaction with 5 year olds (Crnic, Gaze, & Hoffman, 2005).

Low socioeconomic status, ethnicity, and single motherhood are variables that have frequently been identified as factors associated with parenting stress (Campbell-Grossman et al., 2005). For example, in one study (Middlemiss, 2003) that explored parenting behavior in a group of low-income African American and European American mothers, researchers found that both groups of mothers reported high levels of stress, but African American mothers reported more experiences of daily stress. Differences in stress severity, however, were not significant across groups. In another study (Leiferman et al., 2005) examining stress in a group of mixed ethnicity, low income mothers, investigators assessed maternal engagement in daily routines (e.g., mealtime, bedtime) and enrichment activities (e.g., reading and singing to child), and they concluded that mentally distressed mothers were less likely to engage in consistent daily activities with their children than were non-distressed mothers. Moreover, mentally distressed African-American mothers were less consistent in involving children in daily routines than White and Hispanic mothers. However, no significant difference was found between distress and engagement in child enrichment activities in any ethnic group.

Extensive research on parenting stress indicates that becoming a new mother is a vulnerable period for all families (Cowan & Cowan, 1995; Curran, Hazen, Jacobvitz & Feldman, 2005; Ostberg, 1998), often contributing to parenting stress. However, disparities in the level of parenting stress can also be found between and among populations of mothers. Over the years, research suggests that low-income, single African American mothers are particularly at risk for stress and other negative outcomes. Therefore, parenting stress appears to be a risk factor that would diminish positive parenting and increase the use of spanking in this population.

Parenting a Child with Asthma. Since 1980, childhood asthma has increasingly gained the attention of the medical and public health communities. Affecting over 9 million children under the age of 18, and more than 1.3 million children under the age of 6 years, the debilitating effects of child asthma in the U.S. cost over three billion dollars a year (CDC, 2006; National Center for Health Statistics, 2006). Eliminating health disparities among different segments of the population was a primary goal of Healthy People 2010 (U.S. Department of Health and Human Services [HHS], 2005) and continues to be for Healthy People 2020. This goal is particularly salient for families of children with asthma.

Children with asthma have more problems sleeping, learning, fully participating in various activities, absences from school (Yawn, Flower, & Lanier, 2004), and internalizing and externalizing behavior problems (McQuaid, Kopel, & Nassau, 2001; Morawska, Stelzer, & Burgess, 2008) than children without this illness. Asthmatic children also have more physician and emergency/urgent care visits, more hospitalizations (Bartlett et al., 2004), higher medical costs (Yawn et al., 2004), and a

greater number of deaths (Bloom & Freeman, 2006) than healthy children. Asthmatic children frequently experience periods of time when symptoms of the disease are quiescent. However, periods of quiet can be interrupted by sudden attacks characterized by recurrent episodes of breathlessness, wheezing, coughing, chest tightness, and broken sleep patterns, which can result in serious injury or in extreme cases, death. There is no cure for asthma, but families who adhere to medication recommendations, recognize signs and symptoms of oncoming attacks, and control environmental triggers, can significantly minimize asthma attacks (Bloom & Freeman, 2006; National Asthma Education and Prevention Program [NAEPP], 2003). Early asthma diagnosis can prevent long-term physical changes in children (Skoner, 2002), and deleterious psychosocial effects in families (Bloom & Freeman, 2006; Mansour, Lanphear, & DeWitt, 2000). However, diagnosing asthma in very young children can be a complex undertaking.

The burden of child asthma does not stop at the negative effects on children, but extends to the entire family. Mothering asthmatic children has emotional, psychological, physical, and financial costs that mothering non-asthmatic children may not experience (Haltermann et al., 2004). Mothers of asthmatic children are likely to deal with more life stressors than peers with healthy children, including more disruptive sleep patterns, more lost workdays, less free time for themselves and their children, greater financial expenses, more restricted economic resources, and less access to preventative health care (Haltermann et al., 2004; Horton & Wallender, 2001; McLean, Harvey, Pallant, Bartlett, & Mutimer, 2004),

Current research on childhood asthma centers on factors that place children at risk for the illness, such as family history, sensitization to environmental irritants (Bloom &

Freeman, 2006; Klinnert et al., 2001), and factors that reduce effective asthma management, including parental health and stress, economic constraints, lack of family support, and lack of information and supportive family programs (Mansour et al., 2000). Much of the research examines the effects of asthma in school-age children. However, one longitudinal study (Klinnert et al., 2001) followed a birth cohort of children who were at increased risk for asthma. The purpose was to collect psychosocial and physiologic data in the first year of life to evaluate biological and environmental risks once the children reached ages six to eight years of age. One of the most interesting findings was that parenting difficulties (e.g, difficulties with relationship skills, social support, maternal affect and coping, and sensitivity and responsiveness to infants) measured at three weeks after birth, well before asthma onset, was a significant predictor of asthma prevalence at school age. The investigators suggested two reasons for these findings: 1) Parenting behavior in the child's early life might have an effect on the stress levels of infants, in turn, having an effect on their immune systems and placing them at increased risk for asthma, and 2) More attentive mothers are more in tune to indicators of illness in their infants and are more likely to respond promptly, leading to appropriate interventions.

Although disparities in asthma-related illness occur across gender, racial/ethnic, and socioeconomic lines, the available asthma literature suggests that child asthma is more prevalent and more severe in single parent households. Children who live in single parent households at birth, compared to children who live in married or cohabitating households at birth, have been found to have a higher incidence of asthma and more severe asthma (Dey et al., 2004) and to have a greater likelihood of asthma-related

emergencies by 15 months of age Harknett (2005). Compared to their White counterparts, African American mothers are more likely to parent asthmatic children and less likely to have adequate asthma knowledge, health insurance, primary care physicians (Corman et al., 2006), and sufficient financial and emotional support to reduce the burden of care for their asthmatic children (Newcheck, 2000; Newcheck, Stein, Bauman, & Hung, 2003; Warman, Johnson, McCourt, & Stein, 1999).

Harknett (2005) studied family structure disparities in pediatric asthma by employing longitudinal data from the FFCW study. This study found that asthma severity was influenced by gradients of family structure, ranging from married to cohabitating single parents, to non-cohabitating single parents. Within 15 months of their birth, children of unmarried parents and non-cohabitating parents were found to be twice as likely as children of married parents to be diagnosed with asthma, and three times as likely to require emergent care in relation to asthma. The investigator posited several reasons for these disparities, including the fact that children of parents who live in different households may have more contact with different environments, exposing them to a greater number of asthmatic triggers. Additionally, children whose parents live together may spend more time with them and provide them with more supervision (potentially reducing their exposure to triggers) than children of single parents.

In the past, the preponderance of research on child asthma investigated White, two-parent, middle class families (Amato & Fowler, 2002). More recently, the focus has shifted to single parent, minority populations of different socioeconomic classes. However, a great deal of asthma research is centered on families with children who are school age and older. A major reason is the complexity of diagnosing asthma in young

children, which may account for it being under-diagnosed and under-treated in this population (CDC, 2006; NAEPP, 2003).

For most parents, having a toddler in the home is a joyous time in family development, but it can be very challenging for mothers who have a child diagnosed with a chronic illness (Farmer, Marien, Clark, Sherman, & Selva, 2004; Deater-Deckard, 2005; Wallander & Varni, 1998; Woolfson, 2004). Mothers of children with chronic illnesses like asthma appear more vulnerable to demands that may result in less optimal parenting. Esdaile (2003) argues that mothers of children with disabilities experience higher stress levels compared to mothers of children without medical conditions, and the responsibility of the day-to-day management of children with asthma overwhelmingly falls on mothers. The added parental responsibilities of parenting an asthmatic child may place undue stress on mothers and could influence their use of positive parenting practices and likelihood to spank. The dearth of research on toddlers with asthma begs the question of how having a young child with asthma influences mothers' parenting behaviors.

Child asthma can be challenging in all family structures, but for single mothers, who often lack needed resources to face the normal daily demands of motherhood, the challenges of rearing a child with asthma can be overwhelming. Unlike the mothers of "healthy children," mothers of chronically ill children have many added daily responsibilities associated with managing their child's illness. Some researchers have hypothesized that these added demands are likely to result in less positive parenting practices and use of harsh discipline practices such as spanking (Bartlett et al., 2004). Although one would expect that having a child with asthma is a risk factor, the

relationship between parenting a toddler with asthma and the parenting behaviors of single mothers remains unclear. This study will explore whether having a child with asthma predicts use of positive parenting practices and spanking in a sample of low-income, single African American mothers.

Number of children. Raising more than one child is a major parenting challenge, especially for single mothers. Despite the fact that on average, single parent households bring in significantly less income than two-parent households, the financial cost of raising young children in single parent households (excluding costs of childbirth and child care) is virtually the same as in dual-earner households. This puts single parents at a real disadvantage, especially when they have many children (Lino, & Carlson, 2009).

Caring for more than one child has been found to reduce the resources (financial, health, parent-child time) that mothers provide for each child, resulting in the potential for inconsistent parenting and negative parent-child relationships (Ward et al., 2009). One study that investigated resource dilution among mothers parenting multiple children (Strohschein, Gauthier, Cambell, & Kleparchuk, 2008) found that the addition of children to the family did, in fact, decrease the amount of positive parenting, including the time that mothers spent playing and providing affection and attention to individual children. However, they also found that parenting more than one child increased consistent parenting behaviors, suggesting that mothers were aware and concerned about how they invested their time.

The idealized rewards of raising children are increasingly debated in the parenting literature. Some researchers have suggested that the negative emotional and

psychological costs of raising more than one child and their effects on families may be underestimated (Eibach, & Mock, 2011). As the number of children in the family increases, the demands experienced by mothers also increase. The stress and strain of providing adequate time, love, support, and financial resources to more than one child can be very stressful and could lead to less maternal-child engagement (Strohschein et al., 2008). Having multiple children in the home has been associated with an increase in use of physical discipline (e.g., Gibson-Davis, 2008). For example, secondary data from the FFCW study was used to investigate positive parent-child engagement and spanking by the parents of 15 to 36 month old children. The sample was primarily minority with nearly half African American and a quarter Hispanic. This investigator found that the mothers with multiple children in the home engaged in more spanking. MacKenzie et al. (2011) also employed FFCW data to examine African American mothers of children with a mean age of 14 months. Contrary to the Gibson-Davis study, these investigators found that African American families with only the toddler child were 68% more likely to spank their child than mothers with multiple children in the household. Another study investigating parents' differential treatment of siblings (12.5 to 15 years of age) in 188 White families found that mothers disciplined first-born children more at younger ages, particularly when the children exhibited more emotional behaviors, and disciplined their second-born children more when they exhibited either emotional or unexpressive behaviors (Coldwell, Pike, & Dunn, 2008). Overall, the literature suggests that having more than one child in the home may create additional parenting demands and challenges that result in less positive parenting practices and greater use of spanking.

Child's Gender. Previous research suggests that there are differences in the way mothers parent sons and daughters (Elliot, 2010; Hofferth & Sandberg, 2001; MacKenzie et al., 2011; Small, Melnyk, & Sidora-Arcoleo, 2009). The preponderance of the evidence indicates that mothers are more likely to use positive parenting practices with their daughters (Chaplin, Casey, Sinha, & Mayes, 2010; Mandara, Murray, Telesford, Varner, & Richman, 2012) and use spanking more with their sons (Bloom & Freeman, 2006; Huang & Lee, 2008; Mansour et al., 2000; National Center for Health Statistics, 2006). However, there is some conflicting research, particularly with respect to African American families with older children. For example, Smetana, Abernethy, and Harris (2000) suggest that African American mothers may shelter their adolescent (11- to 14-year old) sons by being more responsive and use more supportive control to raise independent daughters, with the goal of shielding their children from discrimination and other societal ills. However, single mothers engaged in less supportive validation of their sons compared to married mothers. Telesford and Murray (2008) investigated the premise that African American mothers “loved their sons and raised their daughters,” but did not find a significant difference in the way mothers parented their 7- to 16- year old children. In view of the mixed literature on gender differences and parenting behavior, the variable of child's gender was controlled in the current study.

Positive Parenting

Research reveals a number of potential risk and protective factors that may influence the parenting behaviors of mothers of toddlers. Identification of factors that predict positive parenting behaviors is important given their influence on child development. Positive parenting may buffer a child against adversity (e.g., poverty,

single parenthood) and promote optimal physical, social/emotional and cognitive well-being (e.g., Bradley & Caldwell, 1995).

Positive parenting is believed to have three essential components: parental support, structure, and positive control (Maccoby & Martin, 1983; Slater & Power, 1987). Parental support, includes maternal displays of warmth and affection, which may be exhibited during activities such as reading, singing, and playing together. Such support builds children's self esteem, facilitates positive peer relationships, and helps children to develop effective communication and coping skills (Leiferman et al., 2005; Prevatt, 2003). Structure includes providing organization, routines, and consistency in the child's environment, helping a child to develop cognitive skills and socially mature behavior (Slater & Power, 1987). Control involves setting and enforcing boundaries to ensure the safety and well-being of both children and others (Slater & Power, 1987). These components of positive parenting strengthen the family bond and may buffer the impacts of various stressors on children's development.

According to attachment theorists (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969), an infant's survival is contingent on consistent contact with his/her caregiver, which the infant tries to maintain by communicating via crying and fussing. The manner in which mothers respond to their infants/toddlers can provide either a secure or an insecure base from which children can explore their environment. By the time infants become toddlers, they have figured out which behaviors elicit specific responses from their caregivers and begin to adapt their own behaviors to those of the caregiver. The child's behavior then affects the nature and frequency of maternal-child interactions. This research suggests that when mothers are affectionate, attentive, and responsive to

their toddlers, the children are more likely to develop emotional attachment, language skills, and social skills. In contrast, the lack of maternal warmth, support, consistent routines, and positive control can foster low self-esteem, hostility, and antisocial behavior in children (Kotchick et al., 2005; McIntyre & Dusek, 1995). Developmental researchers indicate that the quality of parenting during the early childhood years may influence how children approach relationships and events throughout their lifetime (Belsky et al., 1984; Foss, Hirose, & Barnard, 1999).

Spanking

Research on parenting has also focused on the way parents discipline their children, including their use of spanking. There is a significant amount of literature that associates spanking with negative child outcomes (Baumrind, Cowan, & Larzelere, 2002). In many countries and cultures, including much of Europe, Japan, China, the Middle East, spanking is perceived as harsh parenting and paddling of any form is banned. However, non-abusive spanking, defined as “hitting a child on buttocks or extremities with the intent of disciplining without leaving bruises or causing physical harm” (Baumrind, 2001), even if done with a paddle, is lawful in the United States and parts of Canada and Australia (Robinson et al., 2005).

Many clinicians, developmentalists, and social/family scientists do not endorse spanking as a form of punishment, particularly for infants and young toddlers who have an increased chance of injury and who are unlikely to understand why they are being spanked (AAP, 2011; Child Trends, 2002; Baumrind et al., 2002; Scaramella & Leve, 2004; Zolotor et al., 2011). Some researchers point to the risk that spanking can escalate into physical child abuse under some conditions (Gershoff, 2002; Straus & Gelles, 1990).

The American Academy of Pediatrics (AAP, 2011) formally states that spanking should not be utilized as a form of discipline. However, the vast majority of mothers, and single mothers in particular, continue to spank their children---a quarter of whom are toddlers (Regalado et al., 2004; Zolotor et al., 2011).

The frequency of spanking, and its impact on child development, continues to be examined and debated by policymakers, researchers, and the general public. In a recent study, Zolotor et al. (2011) investigated spanking behavior in a representative stratified sample of all mothers in North Carolina who had live births and whose children were less than 2 years of age. The investigators found that 70% of the mothers said that they had spanked their young children. Although the study indicated that the likelihood of spanking increased with the age of the child, 5% of the mothers admitted to spanking their 3-month old babies.

Empirical evidence suggests that spanking does not teach positive behavior, but can lead to low self-esteem (Bradley et al., 2001), behavior problems (Lansford et al., 2004), and reduced academic success (Child Trends, 2002) in children. However, the impact of this type of parenting behavior has been found to vary among ethnic groups. There is some evidence that mild, non-abusive spanking is not harmful when used infrequently in a warm, loving maternal-child relationship, and when combined with other methods of discipline such as reasoning (Baumrind et al., 2010). Over the years, several studies have indicated that the effects of spanking might be less harmful for African American children compared to European children, especially when high emotional support from the mothers was involved (Grogan-Kaylor & Otis, 2007; Deater-Deckard, Dodge, Bates, & Pettit, 1996; McLoyd & Smith, 2002). In their study

examining maternal spanking interaction and its effects on several ethnic groups, Deater-Deckard et al. (1996) concluded that spanking was harmful for European children, but not for African American children. Contrary to this finding, Amato and Fowler (2002) examined several factors from waves 1 and 2 of the National Survey of Families and Households, and found that spanking was related to detrimental child outcomes in all ethnic groups. McLoyd and Smith (2002), and Bradley et al. (2001) had mixed findings based on age of the child; prior to school entry, there was no relationship between physical discipline and harmful outcomes, but as children grew older physical discipline was correlated with negative outcomes in all groups. A longitudinal study by Slade and Wissow (2004) examined the relationship between spanking toddlers under the age of two years and their behavior once they reached school age. A significant percentage of all toddlers in the study were spanked. However, unlike White non-Hispanic children, African American children who were spanked as young toddlers were not found to have significant behavior problems once they entered school. Still another study of low-income White, African American, and Mexican American toddlers (Berlin et al., 2009) found that spanking predicted child aggressive behavior problems at age two, but not at age three.

Thus although, a large number of studies point to the adverse effects of spanking on children, several studies involving African American children have failed to find this relationship. Given that spanking may be an indicator of elevated risk for negative outcomes and later child maltreatment (Gershoff, 2002), and that there are alternative, non-coercive methods of controlling child behavior, it is important to examine factors

that predict the use or nonuse of spanking in a sample of single, low-income, African American mothers.

Purpose of the Study

Currently, poor, single Black mothers of toddlers are a vulnerable population with limited resources and numerous daily stressors that may influence their parenting behaviors. Despite abundant research on parenting, there remains a formidable gap in the literature on factors that predict the ways in which low income mothers parent their toddlers. Research focusing on the positive parenting and disciplinary behaviors of single African American mothers is also scarce. Utilizing the Ecological/Risk and Resilience Model and drawing on previous research, the present study had two major objectives identified in the conceptual model below. Specifically, the study sought to examine the role of selected microsystem, mesosystem, and individual child risk and protective factors in predicting mothers': 1) use of positive parenting practices and 2) use of spanking in parenting their toddler children. The study focused on three potential protective factors, including maternal education, maternal health, and paternal support, and three potential risk factors, including parenting stress, presence or absence of a child with asthma, and presence or absence of more than one child in the home. The major research questions were explored with a sample of low-income, single, African American mothers of toddlers from the FFCW study. Child's gender served as a control variable in this study.

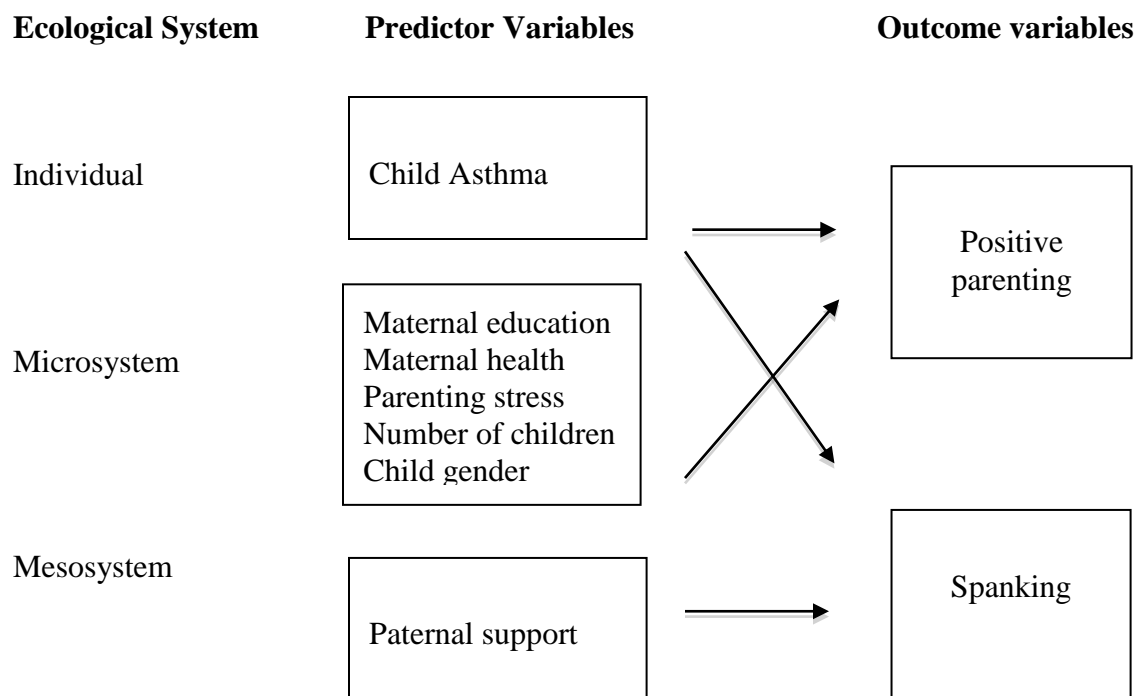


Figure 2. Conceptual Model of Study Variables

Independent Variables

Mother's Education: The highest level of education the mother attained, with categories ranging from less than high school to college or graduate school.

Maternal Health: The mother's view of her general health, categorized from poor to excellent.

Paternal Support: The instrumental and emotional support the mother received from the father of her toddler child.

Parenting Stress: The stress experienced by the mother in her role as a parent.

Child with Asthma: The mother's affirmation or denial that her toddler child had been diagnosed with asthma by a health professional.

Number of children: The presence (or lack of presence) of more than one child in the mother's home during the period of the one-year survey.

Control Variable

Child's Gender: Gender of the toddler child, male or female.

Dependent Variables

Positive Parenting: The amount of time each week that a mother spent actively engaged in seven positive parenting activities with her toddler child.

Spanking: The frequency with which mothers struck the toddler child for the purpose of punishment in the one-month period prior to the one-year survey.

Research Questions and Hypotheses

This study asks two major research questions. Following each question are hypotheses based on theory and existing research.

Question 1: are maternal education, maternal health, paternal support, parenting stress, presence of a toddler with asthma, and the number of children in the home significant predictors of low-income, predominantly single, African American mothers' use of positive parenting practices with their toddlers?

The hypotheses for Question 1 are the following:

- 1A. Mothers with higher education will exhibit more positive parenting than mothers with lower education.
- 1B. Mothers who report better health will exhibit more positive parenting than mothers in poorer health.

- 1C. Mothers who receive more support from their toddler's biological father will exhibit more positive parenting than mothers who receive less support from their child's father.
- 1D. Mothers who experience more parenting stress will exhibit less positive parenting than mothers who experience less parenting stress.
- 1E. Mothers who have an asthmatic toddler will exhibit less positive parenting than mothers who do not have an asthmatic toddler.
- 1F. Mothers of multiple children will exhibit less positive parenting than mothers of one child.

Question 2: are maternal education, maternal health, paternal support, parenting stress, presence of a toddler with asthma, and number of children in the home significant predictors of low-income, predominantly single, African American mothers' likelihood of spanking their toddlers?

The hypotheses for Question 2 are the following:

- 2A: Mothers with higher education will be less likely to spank their toddler than mothers with lower education.
- 2B. Mothers reporting better health will be less likely to spank their toddler than mothers in poorer health.
- 2C. Mothers who receive more support from their toddler's biological father will be less likely to spank their toddler than mothers who receive less support from the child's father.
- 2D. Mothers who experience more parenting stress will be more likely to spank their toddler than mothers who experience less parenting stress.

- 2E. Mothers who have an asthmatic toddler will be more likely to spank their toddler than mothers who do not have an asthmatic toddler.
- 2F. Mothers of multiple children will be more likely to spank their toddler child than mothers of only one child.

Chapter III: Methodology

Fragile Families Core Sample

The present study utilized the FFCW study, a multistage, national study conducted by Princeton University's Office of Population Research (Reichman et al., 2001). Between 1998 and 2000, core data were collected on a cohort of parents who had recently given birth, including 3,712 unwed couples and 1,186 married couples and their children. The researchers conducted follow-up assessments on families when the child was one, three, five, and nine years old. The major goal of the study was to learn about the relationships and competencies of unmarried parents, as well as the health and well-being of parents and children over time. Four major themes were addressed: 1) the circumstances and capabilities of unwed parents, especially fathers; 2) the nature of relationships between unwed parents; 3) the well-being of children in these families; and 4) the effect of various policies and environmental conditions on these families (Bendheim-Thoman Center for Research on Child Well-being, 2005).

Although mothers answered the questions in the FFCW survey, births were the sampling unit (FFCW, 2008). The mothers in the original FFCW study were drawn from a random, stratified, national sample of 77 hospitals in 20 U.S. cities with populations over 200,000, grouped according to policy environments (e.g., welfare generosity and strength of the child support system) and labor markets (e.g., strength of the local labor market). Cities with high and low extreme values with respect to these environments were called "large cities" and "small cities" respectively. The cities with extreme values obtained data from 325 births (250 non-marital and 75 marital), and cities with non-extreme values obtain data from 100 births (75 non-marital and 25 marital). The

mothers, who were randomly sampled from selected hospitals, were asked about their marital status (baseline), and non-marital births were purposely over-sampled (Carlson, 2008; Reichman et al., 2001).

The following reasons excluded mothers from participating in the original FFCW study: mothers planned to place their infant for adoption; fathers of the children had died prior to the birth of the child; mothers were non-English or non-Spanish speakers; mothers were ill; or their babies were ill with a condition other than asthma. After receiving approval from the Institutional Review Boards of individual hospitals, and acquiring the consent of participants, randomly selected married and unmarried new mothers in each of the targeted hospitals were interviewed (99% within one week after birth) until the preset quotas were acquired (Bendheim-Thoman et al., 2005).

Information on study participants was collected in three waves: (1) baseline data were collected between February 1998 and September 2000, primarily via face-to-face interview; (2) one-year follow-up data were collected between June 1999 and March 2002, by telephone interview or field visit, and (3) three-year follow-up data were collected between April 2001 and December 2003, by telephone interview or field visit. When hospital guidelines allowed, participants were each given a monetary incentive of \$20 for participating in baseline study, \$30 for completing the one and/or three year telephone interviews, and \$50 each if they completed the one and/or three year field visit interviews (Bendheim-Thoman et al., 2005). More recently, the FFCW study has expanded to five and nine year follow-ups. To help maintain participant confidentiality and identify complete family groupings, respondents were provided with individual and family identification numbers.

The majority of the mothers in the national core FFCW sample (N= 4,898) were U.S. citizens (87%). Approximately 47.5% were Black non-Hispanic, 21.0% were White non-Hispanic, 27.3% were Hispanic, and 4.2% were from “other” ethnic backgrounds. The mothers ranged in age from 15 to 42 years with a mean age of 24.9 years. More than 60% of mothers had at least one other biological child in addition to the focal child. Less than a quarter of the mothers were married to the biological father when the focal children were born; however, more than 60% of mothers cohabitated with the biological father.

Present Study Sample

The present study employed the FFCW One-Year data set (90% response rate) to analyze a sub-sample that included all Black non-Hispanic mothers of toddlers (N=1,161). The inclusion criteria for the sample were two-fold. First, the mothers identified themselves as Black non-Hispanic. Second, they identified themselves as non-married when the focal toddler child was born (baseline). Other exclusion criteria for the present study were those previously identified in the original FFCW study (Reichman et al., 2001).

Procedure

The use of secondary FFCW data in the present study did not require approval of the University of Maryland College Park Institutional Review Board (see Appendix A). The study procedures were the same as those described above, and study measures were adapted from the original FFCW study.

Measures

Maternal Education: During the baseline survey, mothers were asked about the highest grade or year of schooling they had completed. Responses were originally categorized: 1 = less than high school, 2 = high school, 3 = some college or technical school, and 4 = college or graduate school.

Maternal Health: Mothers in the FFCW study were asked a question to determine how they viewed their general health. Mothers chose from one of the following five alternatives: 1= excellent, 2 = very good, 3 = good, 4 = fair, and 5 = poor. Responses were reverse coded so that higher scores indicated better health.

Paternal Support: A significant percentage of missing data for items assessing support from extended family and friends on the FFCW survey prevented use of these data in the current study. However, a primary focus of the FFCW study was to assess paternal circumstances and parenting capabilities. The study provided sufficient data to assess the support that single mothers received from the fathers of their focal children. Four Likert-scale items in the FFCW survey examined the level of instrumental support that each mother received from the biological father in raising the focal child.

Alternatives included: 1 = never, 2 = rarely, 3 = sometimes, 4 = always. Specifically, fathers were asked how often they watched the child, ran errands for the mother, took the child to daycare or the doctor, and maintained/improved the house. Six additional items assessed the frequency of fathers' emotional support of the mother; examples included whether the mother trusted the father and whether she perceived him as respecting the rules and schedules she had in place for the child. Alternatives included 1 = not applicable, 2 = rarely, 3 = sometimes, 4 = often. The four instrumental support and six

emotional support items comprised the 10-item paternal support scale in this study.

Although the current investigator understands that the “non-applicable” response for the six emotional support questions may be appropriate for particular reasons (father’s death, incarceration, unknown identity), it can be assumed that the “not applicable” response implies the same level of support as the “never” response for the four instrumental support questions. For the purpose of this study, both “never” and “not applicable” are coded 1 on the scale assessing paternal support. Similarly, the high point of “always” on the instrumental support scale and “often” on the emotional support scale are both coded “4” on the paternal support scale created for this study. Thus, the paternal support scale included a total of 10 items from the FFCW survey, with total scores ranging from 10 to 40.

Parenting Stress: The Parenting Stress Inventory-Short Form (PSI-SF; Abidin, 1995) is an instrument used to evaluate the stress parents feel in the parenting role. The instrument is comprised of three subscales: Parent Distress, Difficult Child, and Parental-Child Dysfunctional Interaction. The current study utilized the items from the first subscale, Parent Distress, that were considered appropriate for the present study. A 4-point Likert scale assessed mothers’ parenting stress by asking them about the extent to which they agreed with four items about their role as parents. Examples included, “Being a mother is harder than I thought” and “I feel trapped by maternal responsibilities.” Alternatives ranged from 1= strong agreement with the statement to 4 = strong disagreement. Items were reverse coded so that higher scores would indicate greater parenting stress and then were summed; thus, possible scores ranged from 4 to 16. The

full scale PSI-SF has a reported Cronbach alpha of .91 (Abidin, 1995) and has proven robust for lower income, African-American samples (Reitman, Currier, & Stickle, 2002).

Child with Asthma: The presence or absence of a focal child with asthma in the mother's home was assessed with a dichotomous (no = 0, yes = 1) item in the FFCW one-year dataset. It is understood that although the focal child/toddler in this study may not have been diagnosed with asthma, the mother might have had another child in her family with this same condition.

Number of children: The presence or absence of additional children in the home, other than the focal toddler, was assessed with a dichotomous item in the FFCW study. Mothers who reported that the toddler child was their only child received a score of 0. Mothers who reported that they had more than one child in the home received a score of 1.

Child's Gender: The gender of the focal child in this study was coded 0 to designate a female child and 1 to designate a male child.

Positive Parenting: Seven items from the FFCW survey were used in a positive parenting scale, which assessed the amount of time each week mothers spent actively engaged in seven parenting activities with their toddler children. Examples of items were playing peek-a-boo, reading stories, and hugging/showing physical affection. Scores for each item ranged from 0-7, depicting the actual number of days each week the mothers engaged in an individual activity. This continuous measure summed the responses to the seven items, with possible scores ranging from 0-49.

Spanking: Use or nonuse of spanking was assessed with a dichotomous question on the FFCW survey, "Have you spanked your child in the past month because the child

was misbehaving or acting up?” Respondents answered either no = 0 or yes =1. Mothers responded to this item for the month prior to answering the FFCW one-year interview, which was conducted when the focal child was approximately 12 months of age.

Reliability of Study Scales

The reliability of the continuous scales used in the present study was evaluated by computing the Cronbach coefficient alphas for the paternal support, parenting stress, and positive parenting scales (see Table 1). Ideally, a reliable scale would have an alpha of .7 or greater. However, since a scale can be sensitive to the number of items it contains, it is not atypical for a scale of less than 10 items to have a Cronbach coefficient alpha as low as .5 (Pallant, 2005), but still maintain reliability (Greenstein, 2001). All of the scales for this study have a Cronbach coefficient alpha of at least .64 and mean inter-item correlations of at least .2, which according to Briggs and Cheek (1986) is within the optimal range of .2 to .4 for reliability.

Table 1
Coefficient Alphas for Scales

Measures	No. Items	Range	Alpha
Paternal support	10	10-40	0.92
Parenting stress	4	4-16	0.64
Positive parenting	7	0-49	0.67

Data Analysis

All of the analyses for the present study were completed using the Statistical Package for the Social Sciences (SPSS) 20 Premium software (International Business Machine Corporation

[IBM], 2012). Given the multi-stage sampling design where cities were randomly chosen from a national group, hospitals were randomly chosen from within a selected group, of cities, and births were randomly chosen from within a selected group of hospitals, the FFCW investigators took steps to weight the data so that it would be representative of all eligible births in U.S. metropolitan cities with populations over 200,000. To calculate the probability of birth selection, and to adjust for the non-response and attrition of the mothers, the data were weighted at each stage of the longitudinal study (Carlson, 2008; Reichman et. al., 2001). Because the actual sampling unit for the FFCW study was births, baseline weights (sample weights) made births in the baseline sample representative of all births in large cities with populations over 200,000, while the follow-up weights for each survey thereafter summed to the baseline total, making them representative of the population of births that were eligible for the study at baseline. The final weight for births was the sum across the three stages of the sample design.

To protect the anonymity of the FFCW original study population, masking the geographic markers but allowing for variance, the investigators created replica weights for each study wave so that in conjunction with the base weights, researchers could correctly analyze the FFCW data on a national or city level. Replication, which allowed for sampling error but hid identifying characteristics like sample cities and hospitals, randomly excluded hospitals within randomly chosen cities of approximately the same size and representation. Cities were the primary sampling unit (PSU) for the national estimates and hospitals were the PSU for the cities. The normalized national weight was employed to analyze the FFCW one-year data for the current study (Carlson, 2008).

To reduce the chance of errors, such as values well out of range of other scores and missing data that might have distorted statistical results, the dataset was first screened and cleaned by running distributions on individual items for each variable. Cases with missing data germane to the study were examined for consistency (data uniformly missing) and, when appropriate, excluded from the sample. Descriptive statistics (e.g., means, standard deviations, frequencies) were conducted for each study variable.

Pearson correlation coefficients were calculated for all continuous-continuous pairs. Point-biserial correlations were calculated for all continuous-dichotomous variable pairs; Kendall's Tau was calculated for the continuous and ordinal pair, Phi correlation coefficients calculated for all dichotomous-dichotomous variable pairs, and Ranked-biserial was calculated for all dichotomous-ordinal pairs. To test the first set of study hypotheses, multiple linear regression analysis was used to determine the degree to which the independent variables were predictors of the continuous variable, positive parenting. To test the second set of hypotheses, logistic regression analysis was used to assess the degree to which the independent variables predicted the dichotomous variable, presence or absence of spanking in the past month.

Chapter IV: Results

Demographic Characteristics of the Sample

One thousand one hundred sixty-one (1,161) mothers in the FFCW study met the inclusion criteria for the present study. The mothers in this sample were low-income, single (at the onset of the study) African American mothers of toddlers in U.S. cities with populations over 200,000. Table 2 presents descriptive statistics for the study sample.

Many of the demographic characteristics of the mothers in the sample were similar to national characteristics of African-American mothers in the U.S. during the study period (U.S. Census Bureau, 2005a). Most mothers identified themselves as U.S. citizens. Their ages ranged from 15 to 44 years, with a mean age of 22.9 years. Sixty-five percent of the data on total household income was missing. The vast majority (51.7%) of the missing data was due to mothers skipping the question. Of those who responded to the question, most of the mothers were at the low end of the income spectrum, reporting incomes less than \$15,000 a year. At the year one interview, 7.6% of study mothers had married their toddler's biological father but more than nine in ten mothers (92.4%) remained single. Approximately 33.8% of mothers were living with the father of their toddler child, either as a result of marriage or cohabitation. The focal toddler children were between the ages of 9 and 30 months, with a mean age of 13 months, at the time of the mother's interview.

Independent Variables

The majority of the mothers (52.2%) in this study had less than a high school education, followed by 30% of mothers with a high school education. A small

percentage of mothers (17.8%) had higher levels of education. About half of the mothers (48.7%) reported that

Table 2
Descriptive Statistics for Sample

	Range	Percent	<i>M</i>	<i>SD</i>
<i>Demographics</i>				
Age	15-44		22.9	5.85
Age of toddler child in months	9-30		13.0	3.50
Total household income before tax				
<\$5000		34.2%		
\$5001-\$10K		24.0%		
\$10001-\$15K		10.2%		
\$15001-\$20K		8.0%		
\$20001-\$25K		4.6%		
\$25001-\$30K		6.9%		
\$30001-\$40K		6.9%		
\$40001-\$60K		3.7%		
>\$60K		1.4%		
Marital status of mother (1yr.)				
Married to father of toddler		7.6%		
Unmarried to father of toddler		92.4%		
Living status of mother				
Married/cohabitating with father of toddler		33.8%		
Not living with father of toddler		66.2%		
<i>Independent Variables</i>				
Maternal Education	1-4			
Less than high school (h.s.)		52.2%		
High school (hs) or equivalent		30.0%		
Some education beyond hs		15.7%		
College / graduate school		2.1%		

Table 2 continued.
Descriptive Statistics for Sample

	Range	Percent	<i>M</i>	<i>SD</i>
Maternal health	1-5			
Poor		2.2%		
Fair		13.7%		
Good		21.1%		
Very good		27.6%		
Excellent		35.4%		
Paternal support	10-40		32.12	7.88
Parenting stress	4-16		9.00	3.05
Child asthma				
Toddler w/asthma diagnosis		18.0%		
Child without asthma		82.0%		
Number of children				
One child		42.6%		
More than one child		57.4%		
Gender of child				
Girl		47.1%		
Boy		52.9%		
<i>Dependent Variables</i>				
Positive parenting	0-49		38.40	8.28
Spanking in last month				
Spanked toddler		26.4%		
Didn't spank toddler		73.6%		

they were in good (21.1%) or very good health (27.6%), and more than a third (35.4%) reported being in excellent health. Paternal support scores ranged from 10-40, with a mean score of 32.12 ($SD = 7.88$). The mean item score of 3.2 indicates that fathers “sometimes” provided instrumental and emotional support to the mother in parenting her toddler child. Overall, fathers were more likely to provide emotional support (mean item

score = 3.5) than instrumental support (mean item score = 2.8). The current sample of mothers reported a mean parenting stress score of 9.00 (SD = 3.05) on a scale ranging from 4 to 16. The mean item score was 2.3, indicating that the average mother's response was between "disagree" and "agree" with statements that parenting was hard work, tiring, and more difficult than expected. There was considerable variability in mothers' responses on this scale, indicating that individual mothers experienced different levels of stress.

Approximately 18% of the mothers were parents of a toddler child with asthma, and consistent with the literature, more of these mothers were the parents of boys (66%) than of girls (Akinbami, Moorman, Garbe, & Sondik, 2009; National Center for Health Statistics, 2006). Approximately four in ten mothers (42.6%) were parenting only the toddler child, while more than half of the sample of mothers (57.4%) was parenting more than one child in their home.

Control Variable

With respect to the sex of the toddler child, a slightly higher percentage of the mothers had a son (52.9%) as compared to a daughter (47.1%).

Dependent Variables

On the dependent measure, positive parenting, results revealed that with a sample mean score of 38.4 (SD = 8.28) out of 49, mothers reported a moderately high level of positive parenting practices. The measure of positive parenting assessed the number of days per week the mother engaged in seven different parenting activities with their toddler children. Table 3 summarizes the average number of days mothers in the sample participated in these activities. As the table indicates, mothers were most likely to engage

in showing physical affection (e.g., hugs) to their children, playing games with them (e.g., peek-a-boo) and putting them to bed. Mothers participated in the latter parenting activities six or more days per week. Mothers were least likely to read and tell stories to their children, engaging in these activities on an average of four or fewer days per week.

The second dependent variable examined whether or not parents had spanked their toddler child within the last month. Most mothers reported that they did not spank their toddlers, but over a quarter (26.4%) stated that they had spanked their toddler during this time period.

Table 3
Mean Days per Week Mothers Engaged in Positive Parenting Behaviors

	<i>M</i>	<i>SD</i>
Playing games with child like peek-a-boo	6.03	1.78
Singing songs or nursery rhymes to child	5.32	2.20
Reading to child	4.00	2.38
Telling stories to child	3.72	2.58
Playing with toys inside like blocks or legos	5.87	1.94
Showing physical affection to child	6.81	0.82
Putting child to bed	6.62	1.17
Total positive parenting behaviors	38.41	8.28

Bivariate Analyses

Table 4 presents bivariate relationships between all study variables.

Table 4
Bivariate Relationships Between Variables

	1	2	3	4	5	6	7	8	9
<i>Independent Variables</i>									
1 Maternal education	-								
2 Maternal health	-0.02	-							
3 Paternal support	0.09**	0.07**	-						
4 Parenting stress	-0.12**	-0.18**	-0.13**	-					
5 Child asthma ¹	-0.10**	-0.11**	-0.05	0.08**	-				
6 Number of children ²	0.00	0.02	-0.04	-0.01	-0.00	-			
<i>Control Variable</i>									
7 Child's gender ³	-0.01	0.06*	0.01	0.03	0.09**	0.04	-		
<i>Dependent Variables</i>									
8 Positive parenting	0.03	0.14**	0.18**	-0.22**	0.04	0.04	-0.03	-	
9 Spanking	-0.02	0.04	-0.08**	0.08**	-0.14**	-0.11**	0.09**	-0.01	-

Note: * $p \leq .05$, ** $p \leq .00$

¹No asthma = 0*; asthma = 1

²Toddler is only child = 0*; More than one child = 1

³Female = 0*; Male = 1

As shown in Table 4, maternal education was positively correlated with paternal support, $\tau = .09, p \leq .01$. Mothers with higher education had more support from their toddler's father. Maternal education was negatively correlated with parenting stress ($\tau = -.12, p \leq .01$) and with child asthma ($r_{rb} = -.10, p \leq .01$). More educated mothers reported less parenting stress and were less likely than their peers with lower levels of education to have a child with asthma. Maternal health positively correlated with paternal support ($\tau = .07, p \leq .01$), child gender ($r_{rb} = .06, p \leq .05$), and ($\tau = .14, p \leq .01$), but negatively correlated with parenting stress ($\tau = -.18, p \leq .01$) and child asthma ($r_{rb} = -.11, p \leq .01$). Mothers in better health reported more paternal support and more positive parenting practices, as well as less parenting stress, than mothers in poorer health. Mothers in better health were also more likely than their peers in poorer health to have a boychild and a child without an asthma diagnosis. The support that mothers received from the fathers of their toddler child was negatively correlated with parenting stress ($r = -.13, p \leq .01$) and spanking ($r_{pb} = -.08, p \leq .01$), and positively related to positive parenting ($r = .18, p \leq .01$). Mothers who reported more paternal support reported less parenting stress, less use of spanking, and more use of positive parenting practices with their toddler than mothers who had less paternal support. Parenting stress was positively correlated with child asthma ($r_{pb} = .08, p \leq .01$) and spanking ($r_{pb} = .08, p \leq .01$), and negatively correlated with positive parenting ($r = -.22, p \leq .01$). Mothers with higher levels of parenting stress were more likely to have a toddler with an asthma diagnosis, more likely to engage in spanking, and less likely to use positive parenting practices than mothers with lower levels of parenting stress.

Child asthma was positively correlated with child gender ($\phi = .09, p \leq .01$) and negatively correlated with spanking ($\phi = -.14, p \leq .01$). The asthma diagnosis was more common for boys than girls, and toddlers with asthma were less likely to have mothers who spanked them than toddlers without asthma. There was a negative correlation between number of children and spanking ($\phi = -.11, p \leq .01$) and between child gender and spanking ($\phi = .09, p \leq .01$). Mothers with multiple children were less likely to spank their toddler child than mothers of only one child, the focal toddler. Mothers of a toddler boy were more likely to spank their child than mothers of a toddler girl.

Multiple Regression Analysis for Positive Parenting

This study sought to identify factors that predicted the use of positive parenting practices and spanking in a sample of low-income African American mothers of toddlers who were single when they gave birth to their children. Multivariate analyses were used to determine the relative strength of the independent variables (maternal education, maternal health, paternal support, parenting stress, child asthma, and number of children) in predicting the two dependent variables: use of positive parenting practices and spanking. Child's gender was a control variable in the analyses because several previous studies revealed its previous association with the dependent variables.

Multiple linear regression analysis was used to examine the influence of the independent variables and the control variable in predicting mothers' use of positive parenting practices with her toddler child. Table 5 presents the results of this analysis, which included 1,099 cases. Cases with missing data are excluded. The overall model was significant $F(1099) = 14.64, p < .001$ with an adjusted R^2 of .09. The combination of predictor variables accounted for approximately 9% of the variance in positive parenting,

with paternal support and parenting stress contributing to the majority of the variance for this dependent variable.

Table 5
Multiple Regression: Positive Parenting (N = 1099)

Variables	B	Std. Error	Beta	<i>t</i>	<i>p</i>
(Constant)	34.68	1.87		20.46	0.00
Maternal education	0.19	0.32	0.02	0.59	0.56
Maternal health	0.64	0.24	0.09	2.71	0.01
Paternal support	0.16	0.03	0.15	4.66	0.00
Parenting stress	-0.50	0.09	-0.19	-5.71	0.00
Child asthma ¹	1.53	0.68	0.07	2.24	0.03
Multiple children ²	0.78	0.52	0.05	1.49	0.14
Child's gender ³	0.42	0.52	-0.03	-0.80	0.42

* = Reference category

¹No asthma = 0*; asthma = 1

²Toddler is only child = 0*; More than one child = 1

³Female = 0*; Male = 1

Independent variables found to be significant predictors of maternal use of positive parenting practices were maternal health ($p = .007$), paternal support ($p = .000$), parenting stress ($p = .00$), and child asthma ($p = .025$). Mothers who reported better health employed more positive parenting practices than those reporting poorer health. Mothers with more paternal support in raising their toddler child also engaged in more positive parenting than those with less paternal support. Mothers who reported more stress in the parenting role engaged in less positive parenting than mothers who reported less stress in this role. Findings also revealed that mothers of asthmatic toddlers practiced higher levels of positive parenting than mothers of children without an asthma

diagnosis. Maternal education, number of children, and child's gender were not found to be statistically significant predictors of positive parenting.

Logistic Regression Analysis for Spanking

Because the second outcome variable is dichotomous, logistic regression analysis was employed to analyze the influence of the full set of independent variables and the control variable on the dependent variable, maternal use of spanking. Table 6 presents the results of this analysis, which included 903 cases. Cases with missing data were excluded. The overall model for spanking was significant, $X^2(7, N = 903) = 56.83, p < 0.001$, with the group of variables explaining approximately 9% of the variance in the probability of spanking in this population.

Table 6 presents the adjusted odds ratios and 95% confidence intervals for the study variables. When spanking was regressed on the predictor variables, findings revealed that five of the independent variables had a unique, statistically significant contribution to the odds that mothers spanked their toddler. The factors associated with an increase in likelihood that mothers spanked their toddlers have an odds ratio greater than one, while those associated with a decreased likelihood that mothers spanked their toddlers have an odds ratio of less than one.

Table 6
Logistic Regression: Spanking (N = 903)

Variables	Odds Ratio	p-Value	95% C.I.	
			Lower	Upper
Maternal education	1.07	0.49	0.886	1.287
Maternal health	1.20	0.02	1.029	1.408
Paternal support	0.98	0.01	0.957	0.993
Parenting stress	1.06	0.03	1.008	1.121
Child asthma ¹	0.30	0.00	0.178	0.491
Number of children ²	0.63	0.00	0.46	0.847
Child's gender ³	1.18	0.29	0.868	1.597
Constant	0.17	0.02		

* Reference category

¹No asthma = 0; asthma = 1

²Toddler is only child = 0*; Toddler is not only child = 1

³Female = 0*; Male = 1

Significant variables included maternal health, paternal support, parenting stress, child asthma, and number of children. Maternal education and child's gender were not found to be statistically significant predictors of maternal use of spanking. Maternal health was a significant positive predictor of spanking; with each one-unit increase in maternal health (e.g., from "fair" to "good"), the odds of a mother spanking her toddler increased by 20%. Paternal support was a second significant predictor of spanking; in this case, each one-unit increase of paternal support in raising the focal toddler decreased the mother's odds of spanking her child by 2%. A third significant predictor of spanking was parenting stress. With each one-unit increase in parenting stress, the odds of a mother spanking her toddler child increased by 6%. Child asthma was a fourth significant

predictor; compared to the mothers of non-asthmatic toddlers, the mothers of asthmatic toddlers were 70% less likely to spank their child. The fifth and final significant predictor of maternal use of spanking was the number of children in the home. In families where there was more than one child, mothers were 37% less likely to spank their toddler than in families with only the focal toddler child.

Hypotheses and Summary of Results

Table 7 presents a summary of all of the study hypotheses and the results of the multivariate analyses.

Table 7

Hypotheses and Summary of Results

No.	Hypothesis	Results
1A	Mothers with higher education will exhibit more positive parenting than mothers with less education.	Not Supported
1B	Mothers who report better health will exhibit more positive parenting than mothers in poor health.	Supported
1C	Mothers who receive more support from their toddler's biological father will exhibit more positive parenting than mothers who received less support from their child's father.	Supported
1D	Mothers who experience more parenting stress will exhibit less positive parenting than mothers who experience less parenting stress.	Supported

Table 7 continued.

Hypotheses and Results Summary cont.

No.	Hypothesis	Results
1E	Mothers who have an asthmatic toddler will exhibit less positive parenting than mothers who do not have asthmatic toddler	Not Supported Significant, but in opposite direction
1F	Mothers who parent multiple children will exhibit less positive parenting than mothers who parent one child.	Not Supported
2A	Mothers with higher education will be less likely to spank than mothers with less education.	Not Supported
2B	Mothers who report better health will be less likely to spank than mothers in poor health.	Not Supported Significant, but in opposite direction
2C	Mothers who receive more support from their toddler;s biological father will be less likely to spank than mothers who receive less support from their child's father	Supported
2D	Mothers who experience more parenting stress will be more likely to spank than mothers who experience less parenting stress.	Supported
2E	Mothers who have an asthmatic toddler will be more likely to spank than mothers who do not have an asthmatic toddlers.	Not Supported Significant, but in opposite direction
2F	Mothers of multiple children will be more likely to spank their toddler child than mothers of only one child.	Not Supported Significant, but in opposite direction

Chapter V: Discussion

The current study used a combined ecological/risk and resilience framework (Bronfenbrenner, 1986; McCubbin & Patterson, 1982) to examine predictors of positive parenting and spanking in a population of low-income, predominantly single, African American mothers. The study examines these relationships among mothers who were parenting children who had just entered the toddler years, averaging 13 months of age. Specifically, the model examined the role of six ecological factors, including four microsystem factors: maternal education, maternal health, parenting stress, and number of children; one toddler child characteristic, the presence or absence of asthma; and one mesosystem factor, paternal support. Within the context of a risk and resilience framework, the study sought to determine which factors might be protective, contributing to positive parenting and less spanking, and which factors might place mothers at risk for less positive parenting behavior and greater likelihood of spanking their toddler children.

Based on previous literature, it was hypothesized that higher maternal education, better health, and greater paternal support would be protective factors, and thus linked to more positive parenting practices and less likelihood of the mother spanking her toddler child. On the other hand, it was hypothesized that greater parenting stress, having a child with asthma, and having more than one child would be risk factors, and thus associated with less positive parenting practices and greater likelihood that a mother would spank her toddler.

The current study extends the literature on parenting in several important ways. First, it is unique in focusing on an understudied group of low income, African American

mothers, all of whom were single parents when their focal toddler child was born. There is little research that has examined both positive parenting practices and use of spanking by this population of African American mothers in the same study. Spanking continues to be a controversial method of child control (Deater-Deckard, 2005; Deater-Deckard et al., 2011; Zolotor et al. 2011), linked with a number of negative child outcomes (Berlin et al., 2009; Bradley et al., 2001; Child Trends, 2002; Landsford, Deater-Deckard, Dodge, Bates, & Pettit, 2004). Thus, research investigating predictors of its use may be valuable in designing future interventions for this population of low-income African American mothers.

Second, this study focuses on the ways in which mothers parent children who are just entering their toddler years. Researchers have devoted less attention to the toddler age group in the parenting literature as compared to the parenting of infants, preschoolers, and school age children (MacKenzie et al., 2011).

A third contribution of this study is its investigation of mothers who have a child with an asthma diagnosis. Given that African American children are at greater risk of asthma than children in the general population (Corman et al., 2006; Newcheck, 2000) and caring for a child with asthma poses special medical and other challenges, it is important to investigate how the presence of an asthmatic toddler may predict maternal parenting behaviors.

Fourth, the study used data from the Fragile Families study, examining mothers who were single when their toddler was born and the majority (92.4%) of whom remained single a year later. Given that almost half (47.5%) of the mothers in this large sample were African American, the findings can be generalized, with some limitations, to

the larger population of urban, low-income, predominantly single, African American mothers of toddlers.

Characteristics of Study Mothers

Examining the characteristics of study mothers provides an important context for interpreting study findings. Overall, the African American mothers in the sample had low levels of education. Slightly more than half (52.2%) of the mothers in the study had less than a high school degree, compared to about 19.6% of the general U.S. population of adults in 2000, the period of the data collection (U.S. Census Bureau, 2005b). Only 47.8% of the study sample had a high school degree or equivalent, compared to 80.4% of the American adult population in 2000. A fraction of mothers in the study sample had completed college: only 2.1% compared to 24.4% in the U.S. adult population in 2000 (U.S. Census Bureau, 2005b).

Mothers in this study were also more likely to be single than mothers in the general population and the larger population of African American mothers. In this study, only 7.6% of the mothers were in married households at the time of the year one FFCW interview (6.7% of mothers lived with their husbands), compared to 72% of all U.S. households with a child under 18 headed by married couples in 2000 (U.S. Census Bureau, 2000). Approximately 34% of the mothers in this study were living with the fathers of their toddler child, either as a result of marriage or cohabitation. Among African American families with children in the U.S., 38.9% were married and 4.2% were cohabitating in 2000, for a total of 43.1% Dupree & Primus (2001). Thus, the percentage of married and cohabitating mothers in this study was below the national average for African American families with children (34% in the current study vs 43% nationally).

Overall, mothers in this study were less likely than those in the African American population and general U.S. population to have a father in the home to assist with parenting responsibilities.

The FFCW study focused on a population of low income parents, the vast majority of whom were unwed at the time of their child's birth. Thus, it is not surprising that the household incomes of mothers in this study (68.4% below \$15K, 1.4% greater than \$60K) were below the median income of U.S. families with children in the U.S. In 2000, the median income for all U.S. families with children born in the states was \$57,000. (Kids Count, 2012).

Overall, more than six in ten African American mothers (63%) in this study reported very good or excellent health. Although African American women suffer disproportionately from poor health compared to their Caucasian peers (Jacob-Arriola, Borba, & Wilkins-Thompson, 2007) only 2% of the young mothers in this study reported "poor" health and 14% reported "fair health." Study mothers reported, on average, that fathers provided a moderate level of instrumental and emotional support, "sometimes" helping by watching the toddler child, transporting the child to appointments, and/or discussing childrearing problems with the mother. With respect to parenting stress, there was considerable variability in mothers' responses, with the average mother near the midpoint between disagreeing and agreeing that parenting was hard work, tiring, and more difficult than she expected.

Positive Parenting

The vast majority of mothers in this study provided their children with daily displays of physical affection, put their children to bed each night, and played simple

games (e.g., peek-a-boo) with them. Mothers reported participating in these activities, on average, six days a week or more. Mothers also indicated that they engaged in play with toys and sang to their children an average of five days per week. Notably, mothers in this study were least likely to read or tell stories to their children, engaging in these activities three to four days per week.

Previous studies have also found that low-income African American mothers used a number of positive parenting practices with their preschool-age children (Koblinsky, Morgan, & Anderson, 1997; McGroder, 2000). These results reveal mothers' efforts to provide nurturance and consistency in rearing their young children. Mothers' lower level of engagement in reading to their children and telling them stories is likely due, in part, to the very young age of their children. Given that study children averaged 13 months, mothers were likely focusing on their children's motor development (standing, early walking) and language development (first words, connecting objects to words) and may not have appreciated the importance of reading and telling stories to their young children. Since approximately two thirds of the mothers in this study were not living with the father of their children, mothers may have also been consumed with other household and/or work responsibilities, limiting the amount of time they could interact with their toddler child. They were most likely to engage in parenting activities, such as simple games or singing, which could be carried out with little planning and easily interrupted.

Spanking

Approximately 26% of mothers in the study reported that they spanked their toddler within the last month. This finding is consistent with several previous studies reporting that a majority of mothers, and single mothers in particular, spank their

children, a quarter of whom are toddlers (Regalado et al., 2011). One national study found that paternal spanking increased substantially with the age of the child; 6% of parents of 4- to 9-month old children reported ever having spanked their child and this percentage rose to 64% for parents of 19- to 35-month old children (APA, 2004).

Research has found that African American mothers express positive attitudes towards spanking (Child Trends, 2011; Chung et al., 2009). One study also found that many African American mothers combine coercive disciplinary strategies with warmth and affection in parenting young children (McGroder, 2000). This approach has been termed the “no nonsense” style of parenting by Brody and Flor (1998), which is characterized by high levels of both control and nurturance. Over the years, several studies have indicated that the effects of spanking may be less harmful for African American children compared to European children, especially when combined with high nurturance from mothers (Grogan-Kaylor & Otis, 2007; Deater-Deckard et al., 1996; McLoyd & Smith, 2002). The current study did not explore mothers’ joint use of nurturance/warmth and spanking, or the impact of this parenting style on child outcomes.

Predictors of Positive Parenting and Spanking

Maternal Education. A major goal of this study was to examine predictors of positive parenting and spanking in a population of low-income, predominantly single, African American mothers of toddlers. Specifically, the study examined the role of six ecological factors, including maternal education, maternal health, parenting stress, paternal support, the presence of a child with or without asthma, and number of children in predicting parenting outcomes. It was hypothesized that mothers with higher levels of education would exhibit more positive parenting behaviors than mothers with lower

levels of education. It was further predicted that more educated mothers would be less likely to spank their toddlers than less educated mothers.

Contrary to the first hypothesis, maternal education was not a significant predictor of positive parenting in this study. The data did not support the expectation that more maternal education would be linked to more positive parenting practices. This finding is likely influenced by the lack of variability in maternal levels of education in this study. As noted, 82% of the African American mothers in the sample had a high school degree or less than a high school education. Only 2% of the sample had completed college. Many previous studies using samples with a wider range of education levels have found that more educated mothers are more likely than their less educated peers to engage in positive parenting practices, such as reading, telling stories, and singing to their children (ED, 2005; Schaub, 2010; Waylen & Stewart-Brown, 2010). Mothers with low levels of education are unlikely to have been exposed to childrearing classes or advice that promotes the importance of engaging in cognitive activities with infants and toddlers.

As noted earlier, study mothers were less likely to engage in reading and storytelling than in other parent-child activities. This finding is troubling because Early Head Start and other research indicates that children who are read to early in their lives perform better academically, socially, and behaviorally than those without this advantage (Landry et al., 2011; National Scientific Council on the Developing Child, 2007; Raikes et al., 2006). Mothers in this sample had very limited resources, and thus were more likely to have focused their time and energy on nurturing and caregiving activities (e.g., showing affection, putting child to bed) as compared to activities that promote cognitive development (Craigie, 2006; Schaub, 2010). Finally, the failure of education to predict

positive parenting could also be due to the young age of the child (averaging 13 months); it is possible that even small differences in single mothers' educational attainment would be associated with positive parenting behaviors as children grew older.

Another hypothesis was that maternal education would predict maternal use of spanking, with higher levels of education related to less spanking. Findings also failed to support this hypothesis; maternal education was not a significant predictor of spanking. This outcome contrasts with previous research revealing that mothers with higher levels of education are less likely to spank their children (Child Trends, 2011; Jackson et al., 1999). However, two studies of low-income African American mothers found that maternal education was not related to mothers' use of corporal punishment (Berlin et al., 2009; Grogan-Kaylor & Otis, 2007). Again, the overall low level of education and lack of variability in educational attainment in this sample may influence results. The current finding may also be influenced by the general acceptance of spanking as a measure of controlling child behavior among African American parents (Child Trends, 2011). It is likely that mother's use or nonuse of spanking was influenced largely by their own mothers' and grandmothers' use of this disciplinary method (Chung et al., 2009). The low level of education in the sample also suggests that most mothers would have limited exposure to childrearing classes and books that advocated against spanking. It seems likely that most study mothers had not received instruction on non-coercive disciplinary practices that could be used instead of spanking to control their children's behavior.

Maternal Health. This study also hypothesized that maternal health would be a significant predictor of positive parenting, with mothers in better health exhibiting more positive parenting than mothers in poor health. Findings confirmed this hypothesis,

indicating that better maternal health was associated with more positive parenting practices. This outcome is consistent with other studies that also found better maternal health to predict more positive parenting behaviors, such as nurturance, consistency, and responsiveness (Gibson-Davis, 2008). As noted earlier, the majority (63%) of mothers in this study rated their health as “excellent” or “very good.” It appears that these very healthy mothers had the energy, motivation, and focus to engage in positive parenting practices with their children, ranging from displays of affection to engaging in play and reading activities. From an ecological, risk and resilience perspective, maternal health appears to have been a protective, microsystem factor linked to more positive parenting.

A second hypothesis with respect to maternal health was that mothers in better health would be less likely to spank their toddlers than mothers in poorer health. Although maternal health was, in fact, a significant predictor of the likelihood that mothers would spank their children, results were in the opposite direction of the hypothesis. Single, low-income, African American mothers in better health were more likely to spank their children than their peers in poorer health; with each one unit increase in maternal health (e.g., from “good” to “very good”), the odds of mothers spanking their toddlers increased by 20%. This finding contradicts literature (e.g., Gibson-Davis, 2008; Waylen & Stewart-Brown, 2010) indicating that mothers in better health spank their toddlers (8 to 38 months) less than mothers in poorer health. However, it should be noted that the previous studies were not limited to African American mothers and children; they also included sizable numbers of White, non-Hispanic mothers and some mothers from other ethnic backgrounds.

The finding that better health was predictive of more spanking of toddlers in this study may reflect the general acceptance of spanking as an appropriate disciplinary practice among African American families (Child Trends, 2012). A majority of African American mothers have a positive attitude toward spanking (Child trends, 2011; Chung, 2009) so they likely perceive use of this disciplinary technique as contributing to the development of well-behaved, responsible children. Mothers in better health were not only engaged in more parenting practices that promoted warmth, nurturance, structure, and consistency, but also exhibited more control of their children's behavior by engaging in spanking. Research on parenting in low income neighborhoods, including those with high levels of community violence, has shown that African American mothers feel a need to act quickly and decisively in controlling children's behavior to protect them from neighborhood threats (Murry et al., 2001). Thus, healthier mothers may be more sensitive to potential risks to their children and more vigilant in disciplining their children, even at a very young age. In this situation, they may view spanking to have a protective function. Mothers in poorer health may be less likely than their counterparts in better health to have the emotional energy to focus on potential threats to their toddler's well-being and to follow-through in disciplining their child (Cox & Paley, 1997). These findings suggest the importance of educating this population of young mothers about alternatives to physical punishment so that they will have a broader range of strategies for controlling their toddlers' challenging behaviors.

Paternal Support. Another study hypothesis was that paternal support would be a significant predictor of positive parenting behavior. Specifically, mothers who received more support from their toddler's biological father would exhibit more positive parenting

than mothers who received less support from the father. As hypothesized, instrumental and emotional support provided by biological fathers of toddler children was associated with mothers' engagement in more positive parenting practices. This finding is consistent with studies showing the overall positive impact of social support on parenting (Lindsey et al., 2005; Regalado et al., 2004) as well as the benefits of paternal support for single mothers who are rearing children (Mandara et al., 2008).

In this study, the average father "sometimes" provided instrumental and emotional support to the mother of his toddler child. Instrumental support included activities such as home maintenance, running errands, and watching toddlers when needed. Emotional support was comprised of activities such as supporting mothers' childrearing practices and rules, and being available to discuss parenting problems. Fathers were more likely to provide emotional than instrumental support to the predominantly single mothers of their toddler children. Even at the occasional level, this support had a significant impact on maternal engagement in positive parenting. Presumably, paternal support provided mothers with more time to engage in positive activities with their children and gave mothers a break from a task that some considered to be tiring and demanding.

Consistent with a second hypothesis, paternal support was a significant negative predictor of maternal use of spanking. Mothers who received more support from their toddler's father were less likely to spank their child than those who received less paternal support. With each one unit increase in the paternal support score (ranging from 10-40), the odds of mothers spanking their toddlers decreased by 2%. Fathers' instrumental and emotional support likely helped mothers parent their children in a positive manner,

reducing the frustration of having to “do it all” in raising their toddler children. Help in caring for the child and support for the mother’s parenting practices may have increased mothers’ confidence in the parenting role and buffered the stress of single parenting. From an ecological/risk and resilience perspective, paternal support appears to have been a protective, mesosystem factor contributing to mothers’ lower use of spanking and greater use of positive parenting practices.

Parenting Stress. This study further hypothesized that parenting stress would be a significant predictor of maternal engagement in positive parenting, with greater parenting stress linked to less positive parenting practices. Findings confirmed this hypothesis. Mothers with more parenting stress were less likely to engage in positive parenting practices, such as displays of affection, routines, and reading to their toddlers, than those with less stress. Current results were consistent with a body of literature finding negative associations between parenting stress and positive parenting (Mackenzie et al., 2011; Rafferty, Kenneth, & Griffin, 2010). Research has also found that single African American mothers experience more parenting stress than their married or cohabitating counterparts, with family stressors often outweighing their family resources (Kendig & Bianchi, 2008). Thus, it is not surprising that single mothers in this study who perceived parenting as difficult, and who felt more trapped or worn out by childrearing, were less likely than peers who reported less parenting stress to engage in positive parenting behaviors.

Parenting toddlers is a challenging time in all family structures, but it can be particularly difficult for single mothers. Children around 13 months of age (the average age of children in this study) are actively crawling, learning to walk, beginning to use

language, and eating new foods; at the same time, many engage in picky eating, biting, hitting, throwing objects, and having temper tantrums (CDC, 2012). Such behaviors demand the constant attention of mothers to ensure that children are safe and that there is some harmony and order in the home. Researchers such as Crnic et al. (2005) have found that there are cumulative effects of parenting stress. As mothers experience more and more stress, they engage in less positive parenting practices and negative interactions with children become more prevalent (Mackenzie et al., 2011).

A second hypothesis regarding parenting stress was that mothers who felt more stress in parenting their toddler would be more likely to spank their child than those who felt less stress. Again, results were consistent with this expectation. The parenting literature supports this outcome; mothers who are highly stressed in their parental roles have been found to practice more frequent and harsher physical discipline than mothers who are less stressed (Cain & Combs-Orme, 2005; Kotchick et al., 2005; Lessenberry & Rehfeldt, 2004). Presumably, when mothers are relieved of stress through the greater availability of parenting support and assistance, they have more energy to engage in age-appropriate alternatives to spanking. Thus, the current findings suggest that parenting stress is a microsystem risk factor, contributing to mothers' greater use of spanking and less engagement in positive parenting practices.

Child Asthma. Another objective of this study was to examine the extent to which having a child with or without asthma predicted single mothers' use of positive parenting practices. It was hypothesized that mothers who had a toddler with asthma would engage in less positive parenting than mothers whose toddler did have this chronic illness. Findings did not support this hypothesis. Contrary to predictions, results

revealed that mothers with an asthmatic toddler utilized significantly more positive parenting behaviors than their peers without an asthmatic toddler.

The current finding was initially surprising given previous research indicating that many asthmatic children have internalizing and externalizing difficulties that negatively affect parents' quality of life and interactions with their children (McQuaid et al., 2001; Morawska et al., 2008). In addition, the responsibilities of day-to-day management of children with asthma overwhelmingly fall to mothers (Bartlett et al., 2004; Esdaile, 2003; Halterman et al., 2004). These factors suggested that mothers with an asthmatic toddler would utilize less positive parenting practices than those without an asthmatic toddler.

On the other hand, mothers of asthmatic children are likely to have more encounters with professionals and other individuals outside of their immediate environment than mothers without an asthmatic child. For example, mothers of asthmatic toddlers often interact with their toddler's physician, nurses, other health care professionals, pharmacists, child care providers, and parent educators to learn about and effectively manage their child's illness. During these interactions, mothers may benefit from direct and indirect parenting information and advice. Professionals are likely to share the advantages of parenting behaviors such as maintaining routines and engaging in activities that would calm a child and refocus the child's attention during an asthmatic event (Bloom & Freeman, 2006; NAEPP, 2003). Notably, engagement in nonphysical activities such as singing, reading, and storytelling may also help to prevent the onset of an asthma attack.

The current study also hypothesized that mothers of asthmatic toddlers would be more likely to spank their children than mothers of non-asthmatic toddlers. As in the

case of positive parenting, having an asthmatic child was a significant predictor of spanking, but results were in the opposite direction as expected. Mothers of asthmatic toddlers were 70% less likely to spank their child than their peers without an asthmatic toddler. Again, given that parents with asthmatic toddlers generally have many interactions with health care and childcare professionals, it is reasonable to assume that these professionals have suggested and modeled disciplinary techniques other than spanking. The latter professionals are not only likely to share alternative methods of child control, but also to explain how physical punishment might trigger an asthmatic event. Still another possibility is that mothers may worry more about a child with asthma than one without this illness, and have greater empathy for the asthmatic child. As a result, they may be more cautious in their use of spanking and be more lenient in using physical discipline when their asthmatic toddler misbehaves. Taken together, these findings suggest that the interaction with health care and child care professionals resulting from having a child with asthma may have a protective function, contributing to African American mothers' greater use of positive parenting practices and less use of spanking.

Number of Children. This study also hypothesized that mothers of only one child, the focal toddler, would engage in more positive parenting practices than mothers of more than one child. Contrary to expectations, the number of children in the family was not a significant predictor of mothers' positive parenting. This finding suggests that other child and family factors may be more salient in explaining single African American mothers' engagement in positive parenting. Possible child factors might include the child's age, temperament, and history of internalizing and externalizing behavior

problems. Notably, the FFCW dichotomized the number of children in the mother's home into categories of one child and more than one child; use of a continuous age variable might have contributed to a different outcome. Possible family factors that may influence maternal engagement in positive parenting other than the number of children in her home include maternal depression, maternal employment, and the nature and amount of her social support.

It was also hypothesized that mothers of an only child would be less likely to spank than mothers of more than one child. Findings failed to support this hypothesis, but number of children was found to be a significant predictor of spanking. Mothers of multiple children were 37% less likely to spank their toddler than mothers with only the focal toddler child. This outcome was inconsistent with previous research by Gibson-Davis (2008) who employed Fragile Families data to assess parenting behaviors and spanking of young children. Her findings, which included mothers from all racial/ethnic backgrounds and children slightly older than those in the current study (15 to 36 months of age) revealed that mothers with multiple children engaged in more spanking than those with one child in the home. However, present findings were consistent with MacKenzie et al. (2011) who also used Fragile Families data and found that African American mothers of only toddlers were 68% more likely to use this form of physical punishment than their peers with multiple children. It can be argued that mothers of multiple children had more than one child to discipline, and so their use of spanking was spread amongst their children. Mothers of only one child had a singular focus on their child's positive and negative behaviors, with their responsibility restricted to controlling one child. Mothers with multiple children must attend to all of their children's behaviors, and thus,

may have only had the energy to use spanking for the most serious transgressions. It is also reasonable to believe that the lack of parenting experience for first time mothers may have factored into their greater likelihood to spank. Overall, the number of children in the home, as measured in the current study, did not predict positive parenting but being an only child placed toddlers at greater risk of being spanked by their mothers.

Summary

The ecological/risk and resilience framework was employed to identify microsystem, mesosystem, and individual child characteristic risk and protective factors that influenced parenting in a population of single, low- income, African American mothers of toddlers. Overall, maternal health, paternal support, parenting stress, and child asthma were significant predictors of positive parenting; mothers in better health, with more paternal support, less parenting stress, and an asthmatic toddler engaged in more positive parenting practices than those with poorer health, less maternal support, more parenting stress, and a toddler without asthma.

In addition, maternal use of spanking was predicted by five study variables: maternal health, paternal support, parenting stress, child asthma, and number of children. Mothers in better health with less paternal support, more parenting stress, a child without asthma, and an only child engaged in more spanking than their peers who had poorer health, more paternal support, less parenting stress, a child with asthma, and multiple children in their home. Maternal education was not found to be a significant predictor of either positive parenting or spanking, a finding likely influenced by the low level of education of the majority of the study sample.

Finally, although many of the variables in this study were significant predictors of mothers' parenting practices, they explained only a fraction of the variance in positive parenting (9%) and use of spanking (9%). Thus, many other important influences on parenting were omitted from the models. This finding highlights the need to examine other ecological factors that may account for differences in maternal parenting practices among low-income, single African American mothers.

Study Limitations

Although the present study expands the existing literature on the parenting behaviors of low-income, predominantly single African American mothers of toddlers, there are important limitations of the research. First, the research is cross-sectional, demonstrating associations between study variables. However, no conclusions about causation can be made from detected relationships.

Second, the study utilized secondary data, limiting the number of variables available to investigate and determining the way in which study variables were defined. For example, a large percentage of missing data in the FFCW dataset for this particular sample made it impossible to examine the role of social support provided by mothers' friends and family members other than the father of her toddler child. Similarly, the measure of paternal support did not assess the father's financial support of his child. More in-depth exploration of the social support provided by fathers and other family members and friends would have strengthened the study. As noted, the FFCW study also failed to include an item asking about the number and ages of all of the mother's children in the home; instead, the current investigation was limited to using a dichotomous item that assessed whether the toddler was the "mother's only biological child."

Third, participation in the national FFCW study was voluntary, making this sample neither random nor entirely representative of all low-income, single, African American women. The study also utilized mothers from large urban areas, which limits generalization of the findings to low-income, predominantly single, African American mothers in other geographic areas, such as rural or suburban settings.

Fourth, the information in this study was obtained from maternal self-report. Thus, the data were not only susceptible to recall bias, but the mothers' responses might have been affected by their desire to place themselves in a desirable light. In this situation, mothers may have over-reported the number of days they participated in a positive parenting practice (e.g., playing games with their toddler child) and under-reported whether or not they had spanked their toddler within in the last month. Additionally, the spanking variable assessed use of the practice in the month prior to the year-one maternal interview so it is possible that some mothers used this discipline technique, but not in the targeted time period. Unfortunately, it was not possible to obtain other reports of the mothers' parenting practices, even from fathers who were cohabitating with mothers. Although the Fragile Families study interviewed a high percentage of fathers, there was considerable missing data for mothers' partners (fathers of the toddler children) in this sample, so their data could not provide additional information about maternal parenting practices.

A fifth limitation of the study was the measurement of positive parenting. This study used a comprehensive measure of parenting practices, adding together items addressing affection, routines, playing, singing, reading, and storytelling. Thus, a mother who was low in affection and high in storytelling might receive the same parenting score

as a mother who was high in affection and low in storytelling. The current study provides no information about how selected variables predict specific domains of positive parenting (e.g., warmth/affection, structure/ routines).

A sixth likely limitation of the study concerns the diagnosis of asthma for the toddler children in the study. The literature suggests that diagnosing asthma in very young children can be difficult (CDC, 2006; NAEPP, 2003). Compared to their White counterparts, single, low- income African American parents often lack medical insurance and have limited access to high quality, comprehensive medical care (HHS, 2010a). Studies also suggest they take their children to the doctor less frequently than their White counterparts (CDC, 2011). Given these factors, it is reasonable to conclude that some of the toddlers who were categorized as “non-asthmatic” in this study may have actually had the chronic illness, but had yet to receive a medical diagnosis.

Study Implications

Despite the limitations, this study has implications for parent educators, early childhood education staff, health professionals, social service personnel, policymakers, and others seeking to promote positive parenting behaviors and encourage alternatives to spanking among low-income, single, African American mothers. The study builds on family and psychosocial literature addressing parenting behavior, and it also points to new areas for academic study. The findings suggest several concrete strategies to enhance the parenting of a particularly vulnerable population of mothers.

Maternal education was not found to be a significant predictor of mothers’ use of positive parenting practices or spanking in this sample. However, findings did reveal that low-income, African American mothers in this study were less likely to engage in

cognitive development activities with their toddlers, such as reading and storytelling, in comparison to other positive parenting practices. Thus, it is important to find opportunities to provide parenting interventions for this group of mothers prior to or early in their parenthood. High schools with child development courses should focus on the benefits of promoting children's early learning through activities like reading, storytelling, and talking with young children during their infant and toddler years. These classes should also introduce young women to alternatives to spanking as a method of positively controlling young children's behavior. Educators should also look for other venues to introduce these parenting and child development lessons, such as childbirth education, post-natal education, Early Head Start, and home visitation programs. Many short courses offered to new mothers in medical or community settings focus on baby care basics, such as breastfeeding, feeding, diapering, and bathing, and devote little time to strategies that address child discipline or promote children's learning (Tribeca Parenting, 2012). Parenting interventions should also help new parents to enhance their toddlers' cognitive development, promote children's autonomy, and use methods other than physical punishment to deal with challenging toddler behaviors.

Given the importance of reading and storytelling in children's development (ED, 2009; National Scientific Council on the Developing Child, 2007; Raikes et al., 2006), another venue that might offer early childhood education programs to parents is the local public library. Weekend library programs for parents of toddlers could begin with popular "touch and feel" books such as *Pat the Bunny*, which promote positive parent-child interaction. Parents could then be introduced to the wide range of picture books featuring African American children. It is critical that programs develop culturally

sensitive strategies to motivate young parents to participate in parent education and to promote parents' reading and storytelling to their young children. Culturally-sensitive, early intervention can prevent mothers from 'shutting down' or tuning out' parenting education, giving them the confidence to try parenting practices that may not have been modeled in their own upbringing.

With respect to maternal health, current findings revealed that better maternal health predicted more positive parenting practices, but also a higher level of spanking. Overall, interventions that help mothers to take better care of their physical health should have a positive impact on their parenting, providing mothers with more energy to devote to caregiving and child learning activities. However, findings also support the need to teach young, low-income, African American mothers disciplinary practices other than physical punishment so they can channel their energy to deal effectively with toddlers' temper tantrums, hitting, whining, and other difficult behaviors. Such interventions should address strategies such as distraction, redirecting behavior, setting limits, and structuring the environment to discourage behavior problems. Educators can build on these lessons to educate parents about positive parent-child communication and age-appropriate alternatives to harsh physical discipline as their children grow older.

Paternal support was found to predict both positive parenting and less frequent use of spanking among the African American mothers of toddlers in the study sample. Such findings indicate that encouraging emotional and instrumental support from fathers of young children, even at a modest level, has a positive impact on maternal parenting practices. To date, state policies have focused on collecting financial support from unwed fathers for their children (HHS, 2010b). Current findings suggest that there are

other ways for fathers to make an active and positive contribution to the parenting of their children, such as babysitting, taking children to appointments, maintaining the mother's home, and supporting the mothers' parenting practices. While efforts should continue to encourage fathers' financial responsibility for their children, this study also suggests the value of promoting other forms of paternal support and regular involvement of single fathers in childrearing. Fostering paternal support (assuming it is welcomed by the mother) from fathers during children's toddler years may help build a foundation for future paternal responsibility, parental cooperation, and stable family functioning (Cowan, Cowan, Pruett, Pruett, & Wong, 2009).

While paternal support and maternal health were found to be predictors of positive parenting, greater parenting stress predicted mothers' engagement in less positive parenting practices and greater use of spanking. Given the limited resources available to low-income mothers, these results suggest the importance of developing interventions to help mothers cope more effectively with parenting stress and enlarge their support networks. Parenting classes and home visitation programs may teach mothers to identify symptoms of stress and to employ effective stress management techniques. Such interventions may also help mothers meet parents with children of similar ages and find social support. Similarly, parent educators may help mothers develop childcare exchanges to provide them with temporary breaks from the demands of single parenting. Interventions should also capitalize on the importance of the Black Church to many African American families (Billingsley & Howard-Caldwell, 1991). Churches might be enlisted to offer parent support groups, parent education classes, and short-term child care. Efforts to reduce parenting stress may increase single mothers'

sense of parental agency and confidence and enhance their coping skills in rearing young children.

Finally, this study revealed that there is value in the interactions that single mothers with asthmatic children have with healthcare, social welfare, and childcare professionals. Although mothers of children with this illness faced more parenting challenges than their peers without an asthmatic child, they were more likely to engage in positive parenting practices and less likely to spank their toddler. Interactions with doctors, nurses, caseworkers, early childhood educators and other professionals likely provided direct and indirect parenting information, including the chance to observe professionals engaging in positive parenting behaviors and positive methods of child control. Single mothers with asthmatic children, and especially those with limited education, should be provided with multiple opportunities to gain knowledge about their children's illness, including asthma symptomology, triggers, medication, prevention strategies, and effective management of the disease. Equally important, community professionals may help single mothers of asthmatic toddlers to learn new ways to foster their children's social, emotional and cognitive development, and to use alternatives to spanking. Home visitation programs may be particularly beneficial for this target group, offering opportunities for visitors to identify environmental triggers, propose culturally-sensitive plans for remediation, and model optimal parenting behaviors.

Recommendations for Future Research

The current findings suggest that maternal health, paternal support, parenting stress, child asthma, and number of children may influence the parenting behaviors of low-income, single, African American mothers of toddlers. Future research is needed to

explore how these factors influence mothers' engagement in positive parenting and use of spanking over time.

Longitudinal studies using the Fragile Families study's three- and five-year datasets may be used to determine whether or not the same group of factors continues to predict maternal parenting practices among low-income, single, African American mothers as children grow older. Since one third of the African American mothers in the sample were living with the biological father of their child at the time of the first year survey, it is important to consider the living arrangement of fathers in these analyses. Fragile Families data and other national datasets may also be used to examine these relationships among low income mothers from other racial/ethnic groups.

As noted in the Limitations, future studies examining predictors of positive parenting would benefit from more comprehensive measures of parenting practices. Studies should employ measures that include parenting subscales, such as warmth/affection, structure/routines, and promoting cognitive development, to obtain more information about how study variables might influence specific domains of parenting. Measures of child discipline might also examine methods other than spanking used to control toddler behaviors, such as distraction, setting limits, or redirecting behavior.

Given the significant role of paternal support in predicting positive parenting and spanking in this study, future research should examine the mother's larger network of social support. Such studies should investigate informal support from partners, parents, extended family, fictive kin, and friends, and formal support from healthcare professionals, caseworkers, childcare professionals, parent educators, and the Black

Church. Research should also explore different types of support, including instrumental support (e.g., cash, food, transportation) and emotional support (e.g., encouragement, trust), and the role of perceived versus received support. Such research will help to clarify which aspects of social support are most significant in predicting maternal parenting practices in this population.

Future studies should also explore new risk and protective factors at the microsystem, mesosystem, exosystem, and macrosystem levels that may influence the parenting behaviors of single, low-income African American mothers. Such factors might include maternal age (adolescent versus older mother), maternal employment, maternal mental health, maternal religiosity/church attendance, family financial status (income and wealth), paternal employment, and exposure to discrimination. Qualitative research with low-income, African American mothers may help to identify contextual factors that should be investigated. Future studies might also examine how various child characteristics predict maternal engagement in positive parenting and spanking. For example, research should explore how the severity of asthma, assessed with reliable and valid measures, is associated with targeted parenting behaviors. Future studies should also investigate the role of additional child characteristics, such as child temperament, behavior problems, and other illnesses, in predicting parenting outcomes.

Finally, future studies should employ more complex models to examine possible mediators or moderators of individual and family variables in predicting parenting outcomes. For example, studies might examine whether social support moderates the relationship between parenting stress and use of spanking. Results of such studies may suggest interventions that promote a range of optimal parenting practices.

Conclusion

Improving the well-being of women, infants, children, and families is one of the nation's major public health goals (Healthy People 2020, 2012). Maternal well-being contributes to the health and optimal development of the next generation and can reduce future public health challenges for families, communities, and the health care system. A large body of research emphasizes the key role of maternal parenting in fostering positive outcomes for children, particularly during the early years of children's development. Given this literature, it is important to identify factors that predict positive parenting so that interventions can be developed to improve parenting practices in the most vulnerable populations of families with young children.

This study used an ecological risk and resilience framework to investigate risk and protective factors at two ecological levels that predicted the parenting behaviors of low-income, predominantly single, African American mothers of toddlers. At the microsystem level, better maternal health and lower parenting stress was associated with more positive parenting practices, as was the child characteristic of having a toddler diagnosed with asthma. The mesosystem level factor of greater paternal support was also protective in its relationship to more positive maternal parenting practices. With respect to spanking, microsystem factors of more parenting stress, only one child in the home, and better maternal health were linked to greater use of spanking. The child characteristic of having a child with asthma and the mesosystem factor of greater paternal support were protective in their association with lower levels of maternal spanking.

Current findings indicate the need for parent educators, health care professionals, family practitioners, and policymakers to introduce interventions that will reduce

parenting stress, increase paternal support, and improve maternal health among this population of low income mothers. Programs and policies should educate mothers about alternatives to spanking and encourage mothers' engagement in activities that foster young children's cognitive development. The discovery of better parenting practices and less use of spanking among mothers of asthmatic children also suggests the value of maternal exposure to health care and child development professionals in clinic visits, child care settings, and home visitation programs. Efforts to develop culturally sensitive parenting interventions may contribute to mothers' use of optimal parenting practices, and ultimately better child outcomes, in low-income, African American families headed by single mothers.

Appendix A: Institutional Review Board



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irb@deans.umd.edu
www.umresearch.umd.edu/IRB

Date: June 23, 2009

To: Jacqueline Wallen, Ph.D.
Department of Family Studies

Robin Denise Bruton, Doctoral Candidate
Department of Family Studies

From: Joseph M. Smith, MA, CIM
IRB Manager
University of Maryland, College Park

Re: Request for Non-Human Subject IRB Form #07-NHS-0035

Title: Child Asthma Severity: Parenting and Social Support in Single Black Mother Families of Toddlers with Asthma

The request for determination of Non-Human Subject Research for the above-cited project has been reviewed by the University of Maryland College Park Institutional Review Board. According to the information provided, it has been determined that this project does not meet one or both of the following definitions and therefore does not require further evaluation by the University of Maryland College Park Institutional Review Board.

§46.102 - (d) Research means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge.

§46.102 - (f) Human subject means a living individual about whom an investigator (whether professional or student) conducting research obtains:

- (1) Data through intervention or interaction with the individual, or
- (2) Identifiable private information.

If the scope of your project changes and meets one of the above definitions, an IRB protocol must be created and submitted to the UMCP IRB for approval. For further clarification, questions or concerns please contact the IRB Office at 301-405-0678.

Appendix B: Paternal Support Scale

Paternal Support Scale

Scale	Description
Informal Paternal Support	<p>How often does father watch child when mother needs to do things?</p> <p>How often does father run errands for mother?</p> <p>How often does father fix/paint/maintain or improve around home?</p> <p>How often does father take child to daycare, doctors, etc...?</p> <p>How often-When w/child, father acts like father you want for child?</p> <p>How often-Can you trust father to take good care of child?</p> <p>How often-Does father respect schedules/rules you make for child?</p> <p>How often-Does father support you in the way you want to raise child?</p> <p>How often-You & father talk about problems that come up raising child?</p> <p>How often-Can count on father to watch child for a few hours?</p>

Note: This scale of 10 items with a range of 10 to 40 has a Chronbach alpha of .87.

Appendix C: Parenting Stress Scale

Parenting Stress Scale

Scale	Description
Parenting Stress	<p>Being a parent is harder than I thought</p> <p>Feel trapped by parental responsibilities</p> <p>Taking care of children is more work than pleasure</p> <p>Often feel tired or worn out from raising a family</p>

Note: This scale of 4 items with a range of 4 to 16 has a Chronbach alpha of .65.

Appendix D: Positive Parenting Scale

Scale	Description
Positive Maternal Parenting	<p># days/wk mom play games like peek-a-boo or gotcha w/child</p> <p>#days/wk mom sing songs or nursery rhymes to child</p> <p># days/wk mom read stories to child</p> <p># days/wk mom tell stories to child</p> <p># days/wk mom play inside w/toys such as blocks and legos</p> <p># days/wk mom hug or show physical affection to child?</p> <p># days/wk mom put child to bed</p>

Note. This scale of seven items range from 0 to 49 and has a Cronbach alpha of .69.

Appendix E: Analytic Recode of Study Variables

Name	Recode	Label	Range
<i>Inclusion Criteria</i>			
Race	m1h3r	What is the mother's race/ethnicity?	2 = Black Non-Hispani
Married to Father (BI)	cm1marfr	Constructed:Is mother married to biological father (Official)	2 = no
<i>Dependent Variables</i>			
Positive Parenting (7-items)	PosPar		
	m2b18ar	# days/wk mom play games like peek-a-boo or gotcha w/child?	0 = none
	m2b18br	# days/wk mom sing songs or nursery rhymes to child?	1 = one day
	m2b18cr	# days/wk mom read stories to child?	2 = two days
	m2b18dr	# days/wk mom tell stories to child?	3 = three days
	m2b18er	# days/wk mom play inside w/toys such as blocks and legos?	4 = four days
	m2b18gr	# days/wk mom hug or show physical affection to child?	5 = five days
	m2b18hr	# days/wk mom put child to bed?	6 = six days 7 = seven days
Spanking	Spanking	Have you spanked child in the last month?	1 = yes 0 = no
<i>Independent Variable</i>			
Mother's Health (reverse recode)	m2j1rREV	In general, How is your health?	1 = poor 2 = fair 3 = good 4 =very good 5 = excellent
	_MothersHealth		
Informal Support (reverse recode)	PatSupportRec	How often does father-Watch child when mother needs to do things?	1 = never / n/a
	m2c6ar	How often does father-Run errands for mother?	2 = rarely
	m2c6br	How often does father-Fix/paint/maintain or improve around home?	3 = sometimes
	m2c6cr	How often does father-Take child to daycare, doctor, etc?	4 = often / always
	m2c6dr	How often-When w/child, father acts like father you want for child?	
	m2d2ar	How often-Can you trust father to take good care of child?	
	m2d2br	How often-Does father respect schedules/rules you make for child?	
	m2d2cr	How often-Does father support you in the way you want to raise child?	
	m2d2dr	How often-You & father talk about probs that come up raising child?	
	m2d2er	How often-Can count on father to watch child for a few hours?	
m2d2fr			
Mother's Education	cm1edur	Mother's education at baseline	1= < HS 2= HS deg or equiv 3= Some edu > HS 4= Coll / Grad
Child Asthma	m2b11r	Has a healthcare professional ever told you child has asthma?	0 = no 1 = yes

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