THE INFLUENCE OF INCOME, ETHNICITY, AND PARENTING ON CHILD HEALTH

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Children in low-income and ethnic minority families are more likely to be in poor health, which may impact physical and economic well-being in adulthood. This study explored how maternal depression and parenting efficacy were associated with child health outcomes in a sample of low-income African American and Latino families. Results demonstrated that children in optimal health were more likely to have mothers with high parenting efficacy and fewer depressive symptoms. Differences between African American and Latino families illustrated the importance of considering both socioeconomic and racial and ethnic disparities in child health simultaneously. Parent characteristics may be opportune targets for addressing child health disparities, and future research should focus on understanding these associations and identifying parent behaviors associated with child health.
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CHAPTER 1

INTRODUCTION

In the United States, children from low-income families tend to have poorer health, experience more severe chronic health problems, and have higher rates of mortality than children in wealthier families (Aber, Bennett, Conley, & Li, 1997; Case, Lubotsky, & Paxson, 2002; Chen, Matthews, & Boyce, 2002; Hughes & Ng, 2003; Newacheck, 1994). This economic gradient in health status grows steeper with age, increasing the disadvantage that poor children face when they enter adulthood (Case et al.). Children in poor health tend to miss more days of school and may develop chronic health problems that interfere with their ability to maintain employment as adults. Health-related factors may therefore help explain the transmission of low socioeconomic status from one generation to the next. In addition, African American and Latino children are more likely than European American children to be in poor health, even after controlling for socioeconomic status (Flores, Olson, & Tomany-Korman, 2005; Wen, 2007). This is an alarming trend as these ethnic minority populations will comprise an increasingly large proportion of the population of the United States in the decades to come (Doucet & Hamon, 2007). Understanding child health disparities among low-income, ethnic minority families is thus a crucial endeavor for researchers, policymakers, and practitioners.

A critical component of this effort is identifying what factors may underlie the relations between income, ethnicity, and child health. The emphasis in the political sphere has been on ensuring that children and families have adequate health insurance coverage. Yet, past expansion of public insurance programs has not substantially
reduced disparities in children’s health (Case & Paxson, 2002; Hughes & Ng, 2003). Children who are eligible for these programs may not be enrolled to receive benefits or may not see health professionals on a regular basis. It is parents, not doctors or politicians, who make the everyday decisions about their children’s medical care, nutrition, supervision, and other health-related matters. In order to create policies and interventions that target parental health-related behavior, it is important to first understand how parenting in low-income families may be related to child health. The family stress model and the social-cognitive concept of self-efficacy provide a theoretical framework for understanding this relationship.

Theoretical Framework

Family stress theory focuses on how the interactions among a stressor event, family resources, and family perception of the stressor result in a process of crisis, adaptation, and reorganization (McCubbin et al., 1980). Although this theoretical formulation initially viewed stressors as discrete life events, such as natural disasters or the death of a loved one, more recent work has sought to understand how ongoing contextual stressors impact family functioning and child development. The family stress model of economic hardship posits that the influence of economic distress on child outcomes is mediated by its impact on parents (Conger, Rueter, & Conger, 2000). According to the model, stress over financial difficulties creates emotional distress for parents and may lead to parental depression and increased marital conflict. Parental depression reduces the quality of parent-child interaction and may increase harsh parenting, both of which have been found to adversely affect child outcomes (Conger et al., 1992; Conger et al., 1993).
A key aspect of the family stress model is that individuals and families have resources and characteristics that may act as protective factors against stress (Conger et al., 2000). One possible protective factor may be parenting self-efficacy. Self-efficacy is defined as personal belief in one’s ability to take actions that will produce the effect desired (Bandura, 1997). Within social cognitive theory, self-efficacy is central to understanding human agency. People lack motivation to act when they do not believe their actions will result in success. Parenting efficacy refers to parents’ beliefs in their competence to meet their children’s needs and have a positive impact on their development (Coleman & Karraker, 2000). According to Bandura, parents who are self-efficacious take actions that promote their children’s development, such as advocating for their child’s needs in the school or health care systems and working to strengthen their child’s sense of personal efficacy. Parenting efficacy may thus take on a mediating role, intervening between contextual stressors, parental emotional distress, and parenting to minimize adverse effects on child outcomes (Teti, O’Connell, & Reiner, 1996). Although economic hardship may reduce parenting efficacy directly and indirectly through parental depression, maintaining a high sense of parenting efficacy despite these stressors is related to parenting behaviors that minimize risk and promote optimal development (Elder, Eccles, Ardelt, & Lord, 1995).

Though originally based on data from European American families, the associations between economic hardship, parental depression, and disrupted parenting as proposed in the family stress model have been replicated in both African American (Conger et al., 2002; Jackson, Brooks-Gunn, Huang, & Glassman, 2000; Nievar & Luster, 2006) and Mexican American families (White, Roosa, Weaver, & Nair, 2009).
Low-income ethnic minority families also face additional contextual stressors that may impact parental depression and parenting behavior. African American and Latino families are more likely to live in poor quality, segregated neighborhoods that lack social resources and economic opportunities (Charles, 2003). In impoverished and often dangerous neighborhoods, the influence of parenting efficacy on child outcomes may be even more important because parents must exert more effort to protect and provide for their children (Ardelt & Eccles, 2001). For some Latino families, the process of acculturation may produce another source of stress (White et al.). Language barriers and reconciling cultural differences in values and norms may contribute to parental emotional distress and negatively impact parenting. Thus, integrating sociocultural factors into the family stress model demonstrates the critical role of context in understanding family stress and its influence on developmental outcomes.

**Purpose of the Study**

The purpose of this study is to investigate how maternal depression and parenting efficacy are associated with child health outcomes, an area for which there is little prior research. This study also explores how income, race, and ethnicity are related to child health in a predominantly low-income sample of African American and Latino families. The family stress model suggests that the negative effect of economic hardship and other contextual stressors on child outcomes may be mediated by parent psychosocial characteristics, such as depression and self-efficacy. Although it is beyond the scope of this thesis to provide a full test of the family stress model, the primary aim of this study is to examine how the proposed associations between stress, parenting, and development apply in the domain of child physical health.
factors that may mediate the observed relationship between social inequality and poor child health is key to understanding and reducing health disparities.
CHAPTER 2
LITERATURE REVIEW

This chapter reviews and synthesizes the literature on disparities in children’s health and the influence of parental depression and parenting efficacy on developmental outcomes. First, the relation between low income and child health is established to demonstrate the severity and extent of this problem in the United States. A focus on racial and ethnic health disparities follows this as both ethnicity and socioeconomic status have both been linked to health outcomes. Research investigating the influence of parental depression on children’s physical health and access to medical care is reviewed next, followed by a brief summary of the few studies available on parenting efficacy and child health.

Socioeconomic Disparities in Child Health

A strong positive association between child health and family income exists in the United States, wherein children from higher-income families tend to be in better health than children in lower-income families (Aber, Bennett, Conley, & Li, 1997; Case, Lubotsky, & Paxson, 2002; Chen, Matthews, & Boyce, 2002; Hughes & Ng, 2003). Since the negative effects of poor childhood health may have lifelong consequences, this finding has stimulated research in a variety of fields, including public health, economics, public policy, psychology, human development, and family studies. Research using large, nationally representative samples has helped establish what effects income, and in particular poverty, have on child health outcomes.

From the very start of life, children born into low-income households are at risk for poor health outcomes. Infant mortality is highest among families living in poverty,
despite the fact that improvements in medical technology have greatly reduced the overall rate of infant mortality in the United States (Gortmaker & Wise, 1997). Poverty also appears to increase the risk of low birthweight infants, although this finding may be related to maternal behavior and access to health care during the prenatal period (Aber et al., 1997). Low birthweight infants are more likely to die within the first year of life, and those who survive are more likely to suffer from neurological, cognitive, behavioral, and health problems during later development (U.S. Department of Health and Human Services, 2009a). For children of all ages, mortality rates increase as socioeconomic status (SES) decreases, and lower SES children are more likely to die from acute illness, chronic conditions, and injury than higher SES counterparts (Chen et al., 2002).

In addition, youth in families with lower household incomes tend to have poorer overall health than youth in relatively wealthier families (Case et al., 2002; Chen et al., 2002). Parents are more likely to rate their child as being in fair or poor health as family income decreases. In adults, this categorical measure of perceived health has been linked to mortality and functioning (Case et al.). Although the same predictive utility has yet to be verified in children, parent ratings of children’s health are positively associated with children’s actual health status (Roberts, 1973). Furthermore, alternative measures of health, such as days in bed for illness and hospitalizations, yield the same association with family income (Case et al.). As children grow older, the income gradient in child health status strengthens, which suggests that poverty has a cumulative impact on health (Case & Paxson, 2002).

A number of factors associated with low socioeconomic status may help explain the association between family income and children’s health. Several studies have
found that better child health outcomes are associated with having a parent who has completed high school or some amount of higher education (Case et al., 2002; Victorino & Gauthier, 2009), perhaps because individuals who lack education may struggle to find employment and are likely to have lower income (Fiscella & Williams, 2004). Low socioeconomic status is also associated with reduced access to health care and being uninsured. Low-income children who have health insurance or Medicaid coverage have better access to health care and use more preventative health services than uninsured children, though it is not clear how much this improves children’s health status (Hughes & Ng, 2003). Another risk factor for low-income children is living in poor quality neighborhoods where they may have increased exposure to environmental toxins, violent crime, and substance use (Fiscella & Williams).

Chronic health conditions may partially account for the poor health of children in low-income families. There is an increased prevalence of digestive disorders, hearing and vision problems, heart conditions, epilepsy, and higher blood lead levels at lower incomes (Case et al, 2002; Chen et al., 2002). Asthma occurs at a higher rate only for low-income children under the age of 8, and severity of asthma is greater for poor children at all ages. Children in low-income families also tend to suffer from more severe chronic conditions and experience more hospitalizations than children in higher income households (Newacheck, 1994). Furthermore, in higher income families, children with chronic conditions tend to have better health outcomes due to greater access to quality health care; this buffering effect of income is largest for the most severe chronic health conditions (Case et al.).
Low income may also be linked to substandard nutrition, and this has negative consequences for children’s physical development. Korenmon and Milller (1997) found that long-term poverty over the first 7 years of a child’s life increased the risk of low height-for-age, a phenomenon called stunting. In addition, children who were poor only during the first 3 years of life were as likely to have stunted growth as those who experienced poverty of longer duration. This supports the contention that the detrimental effects of poverty may be greatest earlier in a child’s life. There was no relation between income and low weight-for-height, or wasting. This result was expected since weight is more responsive than height to improved circumstances later in development. Weight may experience “catch up” growth when access to food improves, but the children will likely remain of short stature. In fact, some authors suggest that children who experience stunting and wasting due to early malnutrition may be at risk for developing obesity later, particularly among immigrants to the United States (Mendoza, Javier, & Burgos, 2007).

The Influence of Race and Ethnicity

In the United States, socioeconomic disparities in health must be understood within the context of race and ethnicity (Fiscella & Williams, 2004). Ethnic minorities in this country continue to experience the residual negative effects of a long history of racism and discrimination, and they are disproportionately represented in lower socioeconomic classes. Almost a quarter of both African Americans (24.7%) and Latinos (23.3%) were in poverty in 2008, compared to only 8.6% of European Americans (DeNavas-Walt, Proctor, & Smith, 2009). Racial and ethnic minorities also tend to have poorer health, less access to health care, and higher mortality rates.
(Smedley, Stith, & Nelson, 2003). Considering the population under study, health disparities as experienced by African American and Latino children will be the primary focus here, although this issue impacts all minority populations across the lifespan.

Findings consistently indicate that African American and Latino children are more likely to be in fair or poor health than European American children (Flores, Bauchner, Feinstein, & Nguyen, 1999; Flores, Olson, & Tomany-Korman, 2005; Wen, 2007). The most recent estimates for the U.S. population show that 3.8% of African American children and 2.1% of Latino children are in fair or poor health as opposed to only 1.4% of European American children (Bloom, Cohen, & Freeman, 2009). This disparity between ethnic groups also widens as children grow older. In Wen’s detailed analysis, African American and Latino children were each about three times as likely as European American children to be in fair or poor health in early childhood, but these odds increased to over four and half times as likely in adolescence. According to this study, African American children were slightly less likely to be suboptimal health than Hispanics in early and middle childhood, but the difference between these groups disappeared by adolescence. However, it appears that the percentage of children with a limiting health condition is higher for African American children than European American or Latino children (Ashiabi, 2008; Wen).

Due to group differences in household income, it is possible that the underlying cause of these racial and ethnic health disparities is socioeconomic inequality. Flores et al. (1999) conducted one of the first analyses on the health of ethnic minority children that accounted for family socioeconomic status (SES). As predicted, children in suboptimal health were more likely to be living in poverty and to have parents with lower
levels of education. However, even after controlling for the influence of family SES, African American and Latino children were still more likely than European American children to be in poor health. Later studies supported this conclusion and also showed that, regardless of SES, African American and Latino children were also more likely to not have had health insurance coverage in the past year (Flores et al., 2005). Wen (2007) found that family SES accounted for only about the third of the variance in children’s health, and it was a slightly stronger predictor for Latino than African American children.

One explanation for racial and ethnic health disparities is the experience of discrimination. At the institutional level, racial discrimination perpetuates differential access to resources while at the individual level it may lead to unequal treatment and feelings of depression, anger, anxiety and hopelessness (Fiscella & Williams, 2004). This chronic stress may directly impact children’s health through increased levels of cortisol and decreased functioning of the immune system (Sanders-Phillips, Settles-Reaves, Walker, & Brownlow, 2009). In addition, there are racial and ethnic disparities in health care experiences. Health care providers were twice as likely to refer European American children to a specialist, even after controlling for health status (Flores et al., 2005). African American and Latino parents were also more likely to report that their child’s health care provider did not understand their child-rearing preferences, did not respect them as the expert on their child, and initiated discussions about community violence and household drug and alcohol use with them. Flores and colleagues suggest that negative stereotypes of minority families may influence health care providers, resulting in a lower quality of care.
Other research suggests that language barriers may contribute to some of the disparities in health and health care for Latino children. Children of Spanish-speaking parents are more likely to be in suboptimal health and to be uninsured than those who live in English-speaking households (Flores et al., 2005; Yu, Huang, Schwalberg, & Nyman, 2006). In addition, lack of English language proficiency is often associated with having recently immigrated to the United States. In one study, Spanish was the primary language spoken in the home for the majority of first- and second-generation Mexican American families (Burgos, Schetzina, Dixon, & Mendoza, 2005). Children in these households were substantially more likely to be in fair or poor health and to not have health insurance coverage. It is possible that differences in cultural beliefs about health or parental lack of knowledge about the health care system may also contribute to these disparities (Hughes & Ng, 2003).

Maternal Depression

According to the family stress model of economic hardship (Conger, Reuter, & Conger, 2000), family income impacts children primarily through its effect on parenting. Parenting behaviors have been associated with both child health and family income. Case and Paxson (2002) found that children in better health tended to have parents who did not smoke and who enforced a regular bedtime and seat belt use. Not smoking is directly beneficial to children’s health, and seat belt use represents one of many safety measures parents may take that protect their children’s health. In a similar manner, having a regular bedtime may be an indicator of predictable routines and family stability. Each of these behaviors was more common among higher-income families, and the relations with income became stronger for children over age 8. To explain
these associations, Case and Paxson suggest that parents who are under financial strain may lack the energy to enforce routines or enact safety precautions and may smoke as a way to relieve stress. In other words, low-income parents may be more likely to experience emotional distress that negatively influences their parenting behavior.

The stress of economic hardship may result in parental depression, leading to lower quality parenting practices and disruption of child development (Conger et al., 2000). It has been well-established that maternal depression has a negative impact on child behavior, socioemotional development, and cognitive development (Downey & Coyne, 1990; Petterson & Albers, 2001), but only a handful of studies have looked at a possible effect on child physical health (Minkovitz et al., 2005). Although maternal depressive symptoms have been linked to both poor child health status and financial hardship, it remains unclear whether a causal relationship exists (Casey et al., 2004).

There is some empirical support for the idea that depression influences parents’ health-related behaviors. Leiferman (2002) found that mothers who were depressed, either postpartum or during early childhood, were more likely to report that they smoked and were less likely to report regularly using a child car seat or administering vitamins to their preschool-aged child. Leiferman suggests that, since depressed mothers lack energy and experience feelings of hopelessness, it reduces the likelihood that they will take positive steps to promote healthy child development. Maternal depression also influences utilization of acute and preventative health care services during early childhood (Minkovitz et al., 2005). Children whose mothers had more depressive symptoms postpartum were less likely to be in excellent health at age 3, tended to have
more visits to the emergency room, and received less preventative care, including fewer
well-child visits and age-appropriate immunizations. However, depressive symptoms
were not associated with health care seeking when measured concurrently. These
findings may suggest a causal pathway in which depression precedes a problematic
pattern of child health care utilization. An alternative explanation is that the effect of
maternal depression on use of child health services is stronger in infancy and lessens
over time.

Integrating these findings, Ashiabi and O'Neal (2007) conducted an analysis that
specifically employed the family stress model of economic hardship to understand
associations with child health. This study proposed that poverty had both a direct effect
on child health and an indirect effect via its impact on parental depression and parenting
behaviors. As predicted, income and other factors associated with socioeconomic
status, including race, parental education, and family structure, accounted for 78% of
the variance in child health status; higher income was associated with better child
health. The addition of parental depression and positive parenting behaviors to the
model reduced the effect of income on child health, although the association remained
significant. Parental depression was related to poorer child health and less positive
parenting behavior while positive parenting was associated with better health. In
support of the family stress model, Ashiabi and O'Neal concluded that the impact of
family income on child health is partially mediated by its effect on parental depression,
and the impact of parental depression on child health may be partially explained by its
effect on parenting behavior.
Parenting Efficacy

Parenting efficacy may be a key concept for understanding the associations among family risk factors and child outcomes (Elder, Eccles, Ardelt, & Lord, 1995; Teti, O’Connell, & Reiner, 1996). Although parental depression is associated with less positive parenting, Teti and Gelfand (1991) found that parenting efficacy mediated the relation between maternal depression and parenting competence in mothers of infants. Depressed mothers who felt efficacious in their parenting role demonstrated adequate mothering skills. For preschool children, a recent study with low-income Latina mothers showed that a higher sense of parenting efficacy lessened the negative impact of parenting stress and maternal depression on the home learning environment (Nievar, Jacobson, Dier, & Johnson, 2009). A sense of parental efficacy has also been associated with the use of more proactive parenting strategies for adolescents, especially among African-American parents (Elder et al.). These findings suggest that high parenting efficacy can mediate the impact of depression on parenting behavior. Self-efficacious parents who believe in their ability to overcome obstacles may be able to buffer the impact of stress on their children.

Little research has been conducted to investigate the influence of parenting efficacy on child health. Janicke and Finney (2003) explored how parental self-efficacy was related to utilization of pediatric primary health care services. For parents reporting more stressful life events, a greater sense of parental self-efficacy predicted more visits to a primary care professional. This interaction between parent stressors and self-efficacy explained 11.5% of the variance in primary health care utilization. The authors suggest that efficacious parents are more likely to seek the help they need to overcome...
stressful life situations. One of the only other studies on the topic found that parental self-efficacy did not mediate the relation between maternal depression and increased likelihood of stunted growth among low-income children (Surkan et al., 2008). However, this research was conducted in Brazil with an extremely disadvantaged sample, and thus its findings are not likely to generalize to the United States.

It should also be noted that the relation between parenting efficacy and depression is complex. Social cognitive theory suggests that low perceived self-efficacy predisposes an individual to depression (Bandura, 1997). Thus, when parents with a low sense of efficacy are under stress, they may become depressed and feel unable to cope with the additional challenges, such as having a child in poor health. In a study of mothers of children with chronic health conditions, the severity of children’s illness-related limitations and low maternal self-efficacy were both associated with higher maternal psychological distress (Silver, Bauman, & Ireys, 1995). These two factors had a significant interaction effect. Mothers of children with the most functional impairment had more psychological distress only when efficacy was low, indicating that the combination of poor child health and low self-efficacy is most detrimental. Silver et al. suggest that interventions that enhance parents’ sense of control and self-worth could help mitigate the strain of having a chronically ill child.

**Summary**

It is clear from the literature that socioeconomic disparities exist in children’s health. Children from low-income families are more likely to have poor health and to suffer from more severe chronic conditions than children from families with higher income (Case et al. 2002). Children from ethnic minority groups face additional risk
factors for poor health, including racial discrimination and language barriers in health care (Hughes & Ng, 2003). Socioeconomic factors cannot entirely account for child health disparities, but parenting characteristics and behaviors may help explain the relations between family income, ethnicity, and child health. Maternal depression and parenting efficacy each show promise for enhancing our understanding of the influences on child health, yet research in this area is lacking. The present study seeks to fill a gap in the current literature by assessing the associations between maternal depression, parenting efficacy, and child health variables in a low-income, ethnic minority sample.
CHAPTER 3

METHODS

This study was conducted as part of a research project with the Home Instruction for Parents of Preschool Youngsters (HIPPY) program in the Dallas, Texas. HIPPY is a home visiting intervention for low-income families with children between the ages of 3 and 5 years that seeks to improve school readiness and parent involvement. To qualify for HIPPY, families must be considered low-income (meaning children receive reduced-price or free school lunch) or be primarily Spanish-speaking. The University of North Texas Institutional Review Board for Human Subjects Research approved an investigation of family relationships and parenting practices in the Dallas HIPPY 3-year-old HIPPY program. Of the nearly 300 families currently participating in the Age 3 program, most are from ethnic minority backgrounds, and 80% speak Spanish in the home (Adriana Treviño, personal communication, November 12, 2009). Although the overall research project includes numerous variables, this thesis focused on the associations among child health, maternal parenting efficacy, maternal depressive symptomatology, and demographic factors.

Hypotheses

Three hypotheses were formulated for evaluation in this study. The first two hypotheses predict a specific direction of effects based upon the findings of previous research and presumed theoretical relations between parent characteristics, children’s health status, and children’s chronic health conditions. However, the third hypothesis is non-directional due to the lack of research on parent characteristics and emergency
room utilization. It is believed there may be some relation between these variables, but it is unclear what direction of effects should be expected.

1. Parents whose children are in optimal health will have higher parenting efficacy and fewer depressive symptoms than mothers whose children are in suboptimal health.
2. Mothers who have a child with a chronic condition will have lower parenting efficacy and more depressive symptoms than other mothers.
3. Utilization of the emergency room will be related to parenting efficacy and maternal depressive symptomatology.

Participants

The sample consisted of 63 mothers who were currently enrolled in the Dallas HIPPY program for 3-year-old children. All participants identified themselves as either Hispanic/Latino ($n = 52$) or non-Hispanic African American ($n = 11$). Of the Latina mothers, the majority were Mexican or Mexican American ($n = 46$) and 46 mothers indicated a country of origin other than the United States (67.2% Mexico, 3.3% El Salvador, 3.3% Honduras, and 1.3% Cuba). Two mothers did not report country of origin. Eighty-five percent of families had an annual household income under $30,000, and nearly a fourth reported earning less than $4000 in the past year. Most mothers were married (61.9%) or living with a partner (20.6%), and nearly 80% were living with the father of their 3-year-old. Mean maternal age was 30.3 years, and most mothers had at least a high school diploma or the equivalent. Half of the mothers described themselves as homemakers. Of the other half, 21% were working full- or part-time, 24% were unemployed and looking for work, and 3% were in school.
As this study was part of an ongoing research project, the data included here are restricted to the first 12 elementary schools sampled. Approximately 108 families were participating in the HIPPY Age 3 program at these schools, and attempts were made to include all interested families in the study. Of the mothers who are not included in the present sample, 13 completed the survey later, 12 declined to participate, and 20 could not be reached by phone.

Data Collection

In cooperation with HIPPY, mothers enrolled in the Age 3 program were contacted by telephone and invited to complete a survey during a meeting at their neighborhood elementary school. Trained bilingual research assistants explained that the purpose of the study was to better understand the experiences of mothers of young children in order to help parenting programs like HIPPY improve their services. At the start of the meeting, this explanation was reiterated, and mothers were assured that their participation was completely voluntary and confidential. Their involvement with HIPPY would not be affected in any way by their choice to participate or not participate in the study. In addition, each survey was assigned a code number, and their names were not on any of the measures. Identifying information was kept in a locked file cabinet, and HIPPY would not have access to it.

After obtaining informed consent, participants completed a written survey containing the following instruments: Home Observation for Measurement of the Environment – Short Form (Caldwell & Bradley, 1984), Parental Involvement and Efficacy (Diener, Nievar & Wright, 2003), Center for Epidemiological Survey – Depression (Radloff, 1977), Revised Conflict Tactics Scales (Straus, 1995), and
questionnaires regarding previous history of family violence, cultural identity, and demographic characteristics. Completion of the survey generally took 45 minutes to 1 hour. Participants were provided with childcare and refreshments during the meeting and received $5.00 as compensation for their time. Due to the personal and possibly upsetting nature of some of the questions, participants were also given a list of mental health and domestic violence services in the community were they could talk to someone or receive help.

Consent forms and surveys were available in both Spanish and English, and participants were able to indicate which language they preferred. Only 15 mothers (4 Hispanic and 11 African American) elected to complete the survey in English; all others preferred the Spanish version. If a participant had difficulty reading, a research assistant would read the survey to the participant and point to the responses so that the mother could mark her answer confidentially. Partners or friends were not allowed to be with the participant while they filled out the survey. One husband insisted on helping his wife complete the survey; these data were excluded from the study.

Mothers who were unable to attend the group data collection meetings were contacted again by telephone to arrange individual meetings at their convenience. Two trained research assistants (at least one of whom spoke the language of the participant) would travel to the participant’s home or another location (i.e., fast food restaurant or friend’s home). Researchers followed the same procedures in obtaining informed consent and administering the survey as described above for group meetings. Of the 63 mothers in this sample, 53 completed the survey during a group meeting and 10 during a home visit.
Measures

Maternal Depression

The Center for Epidemiological Survey – Depression scale (CES-D; Radloff, 1977) was used to assess maternal depressive symptomatology. This instrument is not intended to make a clinical diagnosis but is frequently used in research and as a screening tool. This self-report measure contains 20 items asking about the frequency of depressive symptoms experienced during the previous week. Example questions include “I felt sad,” “I felt everything I did was an effort” and “My sleep was restless.” Response categories range from 0 (rarely/none of the time/1 day) to 3 (most/all of the time/5-7 days). Four items related to positive affect are reverse-scored, and then all items are summed. A higher total score indicates more depressive symptoms. A score of 16 or more indicates clinically significant depressive symptomatology (Eaton & Kessler, 1981), and in some analyses the CES-D was dichotomized at this cutoff score. The CES-D showed acceptable reliability with this sample (α = .79).

Parenting Efficacy

The Parental Involvement and Efficacy (PIE) scale is a self-report measure that assesses how mothers perceive their self-efficacy as parents (Diener, Nievar, & Wright, 2003). The instrument includes 18 items measuring parent beliefs about their influence over children’s learning, development, and health. Parents indicated their level of agreement with each statements on a 5-point Likert scale where 1=strongly agree and 5=strongly disagree. Reverse-scoring is used for 6 items. Items were recoded so that a high score on this scale reflects a high sense of parenting efficacy. The reliability of the PIE with this sample was .82.
Health efficacy. In addition to measuring a general sense of parenting efficacy, a separate indicator of parenting efficacy in the domain of health was calculated using the mean score for two health-specific items. Most items on the PIE refer to parent beliefs regarding child development and parental involvement in education. It was presumed that the items that specifically addressed health ("I can do a lot to help my child be healthy" and "I feel confident that I take good care of my child’s health") would better reflect parenting efficacy in regard to child health. These items were highly correlated with one another ($r = .55, p < .001$) and had a less strong but still significant association with the total PIE scale ($r = .32, p < .05$). The reliability of the health efficacy indicator was .71.

Child Health

Health status. Parents were asked to rate the general health of their child on a 4-point scale that included the categories “poor,” “fair,” “good,” and “excellent.” Parent rating is one of the most frequently used measures of child health status. It has been shown to correlate with alternative measures of child health (Case et al., 2002) and with children’s actual health as determined by a physician (Roberts, 1973). In keeping with previous work on child health disparities, child health status was dichotomized to represent optimal child health and suboptimal child health (Flores, Bauchner, Feinstein, & Nguyen, 1999; Perez, Fang, Inkelas, Kuo, & Ortega, 2009). Parent ratings of excellent were recoded as *optimal* while all other responses were recoded as *suboptimal*.

Chronic condition. This is a dichotomous variable representing whether or not the child has a chronic health condition. The item asked, “Has a doctor or other medical
professional ever told you that your 3-year-old child has a condition or illness that may restrict your child's activities or interfere with his/her development?” If parents responded yes, they were prompted by an open-ended question to specify what condition or illness their child has.

*Emergency room utilization.* This question assessed how frequently families had recently utilized acute health care services. It asked, “In the last 6 months, how many times has your 3-year-old child needed to visit an urgent care clinic or hospital emergency room for any of the following reasons?” The reasons included receiving medical treatment for a recent illness, a chronic condition, or an injury as well as an option to explain another reason. Parents were asked to indicate the number of times the child had been to the emergency room for each type of visit. This variable was dichotomized to represent whether or not the child had been to the emergency room in the past 6 months.

*Demographic Characteristics*

Participants also reported basic demographic information on their race and ethnicity, country of origin, household income, maternal age, marital status, household size, educational level, and current employment status.

*Race and ethnicity.* For the initial race and ethnicity question, categories included: White/Non-Hispanic, Black/African American/Non-Hispanic, Hispanic/Latino, Asian/Pacific Islander, and “other.” Individuals who responded Hispanic/Latino were prompted to select a more specific subgroup that matched their ethnic identification from the following list: Puerto Rican, Cuban, Cuban American, Mexican, Mexican American, Latin American, Anglo American, South American, Central American or
“some other group.” In order to determine country of origin and approximate immigrant status, an open-ended question asked, “In what state, territory, or country were you born?”

*Household income.* Annual household income for the previous year was measured categorically. Response categories started at “$4,000 or less” and initially increased in $2000 intervals (i.e. “$4,001 to $6000”). As income increased, the interval categories became wider (i.e. “$10,001 to $15,000” and “$20,000 to $30,000”) with the highest category being “more than $80,000.” Income-to-poverty ratios were calculated for each household by taking the highest possible value for the income range reported and dividing it by the federal poverty guideline for that household size. Federal poverty guidelines are used to determine eligibility for certain government programs and are updated yearly (U.S. Department of Health and Human Services, 2009b). A family is considered to be in poverty if the income-to-poverty ratio is below 1.00.

**Data Analysis**

Predictive Analytic Software (PASW®) Statistics, Version 17, was used to analyze the data for this study. Mean scores and standard deviations were calculated for continuous measures while frequencies are reported for categorical data. Differences on study variables due to poverty status and ethnicity were assessed with chi-square tests of independence and independent *t*-tests. Mothers with income-to-poverty ratios below 1.00 were compared to mothers living above the federal poverty line, and African American mothers were compared to Latina mothers. The statistical tests used to evaluate each hypothesis are described below. An alpha level of .05 was used for all statistical tests.
Hypothesis 1

To determine whether mothers of children in optimal health had higher parenting efficacy and fewer depressive symptoms, participants were grouped according to parent ratings of child health status. Mothers of children in optimal health were compared to mothers of children in suboptimal health. Three independent samples t-tests were performed using parenting efficacy, health efficacy, and maternal depression scores as the dependent variables. One-tailed tests of significance were selected because this hypothesis predicted a specific direction of effects. Chi-square tests of independence were conducted to determine whether mothers with significant depressive symptomatology were less likely to have a child in optimal health.

Hypothesis 2

To determine whether there were differences between mothers of children with a chronic health condition and mothers of those without a chronic condition, one-tailed independent t-tests were conducted. Again, one-tailed tests of significance were utilized because this hypothesis predicted a specific direction of effects. Presence of chronic condition was used as the grouping variable, and parenting efficacy, health efficacy, and maternal depression scores were the dependent variables. Chi-square tests of independence were conducted to determine whether mothers with significant depressive symptomatology were more likely to have a child with a chronic condition.

Hypothesis 3

To examine differences based on emergency room utilization, participants were grouped according to whether or not the child had been to the emergency room in the past 6 months. As this hypothesis did not predict a specific direction of effects, two-
tailed independent $t$-tests were conducted. Parenting efficacy, health efficacy, and maternal depression were used as the dependent variables. Chi-square tests of independence were conducted to determine whether mothers with significant depressive symptomatology were more likely to have taken their child to the emergency room.
CHAPTER 4

RESULTS

Preliminary Analyses

Descriptive data for the parenting characteristics assessed in this study are reported in Table 1 while frequencies for child health variables and maternal depression are provided in Table 2. Mean scores indicate that most mothers had a high sense of parenting efficacy, both in general and in the specific domain of child health. While only 14.8% of mothers had clinically significant depressive symptomatology, over 40% scored above the median for this sample, indicating higher levels of depressive affect. Over a third of mothers reported that their 3-year-old was in suboptimal health, and more than a quarter had taken their child to the emergency room in the past 6 months. Though only a few mothers had a child with a chronic condition, a chi-square test showed that children with chronic conditions were significantly more likely to have been to the emergency room, $\chi^2 (1, N = 63) = 13.786 \ p < .001$. Suboptimal child health status did not have a statistically significant relation with emergency room utilization, $\chi^2 (1, N = 63) = .140 \ p > .05$, or having a chronic condition, $\chi^2 (1, N = 63) = .401 \ p > .05$.

Table 1

*Descriptive Data for Parenting Characteristics*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$n$</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parenting Efficacy</td>
<td>63</td>
<td>4.31</td>
<td>.438</td>
</tr>
<tr>
<td>Health Efficacy</td>
<td>63</td>
<td>4.80</td>
<td>.417</td>
</tr>
<tr>
<td>Maternal Depression</td>
<td>61</td>
<td>10.54</td>
<td>7.247</td>
</tr>
</tbody>
</table>
### Table 2

**Frequencies for Child Health Variables and Maternal Depression**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Frequency</th>
<th>%</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Health Status</td>
<td>Poor/Fair/Good</td>
<td>22</td>
<td>34.9</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>Excellent</td>
<td>41</td>
<td>65.1</td>
<td></td>
</tr>
<tr>
<td>ER Visit in Past 6 months</td>
<td>Yes</td>
<td>17</td>
<td>27.0</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>46</td>
<td>73.0</td>
<td></td>
</tr>
<tr>
<td>Chronic Condition</td>
<td>Yes</td>
<td>7</td>
<td>11.1</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>56</td>
<td>88.9</td>
<td></td>
</tr>
<tr>
<td>Maternal Depression</td>
<td>Clinically Significant (16+)</td>
<td>9</td>
<td>14.8</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Above Median (10+)</td>
<td>26</td>
<td>41.3</td>
<td></td>
</tr>
</tbody>
</table>

To examine differences based on economic inequality, Table 3 presents frequencies and chi-square values for child health variables and maternal depression based on poverty status of the household. Mothers living in poverty were more likely to report their child was in suboptimal health status ($p = .039$), but poverty status did not have a statistically significant relation with utilization of the emergency room or having a chronic condition. Poverty status was also associated with clinically significant depression ($p = .050$) and having depression scores above the median ($p = .020$). In fact, all mothers with clinically significant depressive symptomatology in this sample were living in poverty, and over half of mothers living in poverty had depression scores above the median. Mothers living in poverty also had slightly lower mean scores on parenting efficacy ($M_{poverty} = 4.26$; $M_{not} = 4.47$) and health efficacy ($M_{poverty} = 4.75$; $M_{not} = 4.93$). Two-tailed independent $t$-tests with parenting efficacy and health efficacy as the dependent variables and poverty as the independent variable were not statistically significant.
### Table 3

**Associations of Child Health Variables and Maternal Depression with Poverty Status**

<table>
<thead>
<tr>
<th>Variable</th>
<th>In Poverty (n = 44)</th>
<th>Not in Poverty (n = 16)</th>
<th>$\chi^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>%</td>
<td>Frequency</td>
</tr>
<tr>
<td>Child Health Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor/Fair/Good</td>
<td>18</td>
<td>40.9</td>
<td>2</td>
</tr>
<tr>
<td>Excellent</td>
<td>26</td>
<td>59.1</td>
<td>14</td>
</tr>
<tr>
<td>ER&lt;sup&gt;a&lt;/sup&gt; Visit in Past 6 months</td>
<td>13</td>
<td>29.5</td>
<td>4</td>
</tr>
<tr>
<td>Chronic Condition</td>
<td>6</td>
<td>13.6</td>
<td>1</td>
</tr>
<tr>
<td>Maternal Depression</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinically Significant (16+)</td>
<td>9</td>
<td>20.5</td>
<td>0</td>
</tr>
<tr>
<td>Above Median (10+)</td>
<td>23</td>
<td>52.3</td>
<td>3</td>
</tr>
</tbody>
</table>

* *p* ≤ .05

*Note:* Poverty status was determined according to the 2009 federal poverty guidelines (U.S. Department of Health and Human Services, 2009b).

<sup>a</sup> Emergency Room

Table 4 presents frequencies and chi-square values for child health variables and maternal depression based on race and ethnicity. Latina mothers were more likely to report that their child was in suboptimal health ($p = .048$), but African American mothers were more likely to have taken their 3-year-old to the emergency room in the past 6 months ($p = .023$). Race and ethnicity did not have a statistically significant association with childhood chronic illness. African American mothers were also more likely than Latina mothers to report clinically significant depressive symptomatology ($p = .026$), although the groups did not differ significantly on the proportion of mothers scoring above the median. Two-tailed independent $t$-tests did not find any statistically significant difference between African American and Latina mothers on parenting efficacy or health efficacy.
### Table 4

**Associations of Child Health Variables and Maternal Depression with Race and Ethnicity**

<table>
<thead>
<tr>
<th>Variable</th>
<th>African American (n = 11)</th>
<th>Latino (n = 52)</th>
<th>( \chi^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>%</td>
<td>Frequency</td>
</tr>
<tr>
<td>Child Health Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor/Fair/Good</td>
<td>1</td>
<td>9.1</td>
<td>21</td>
</tr>
<tr>
<td>Excellent</td>
<td>10</td>
<td>90.9</td>
<td>31</td>
</tr>
<tr>
<td>ER(^a) Visit in Past 6 months</td>
<td>6</td>
<td>54.5</td>
<td>11</td>
</tr>
<tr>
<td>Chronic Condition</td>
<td>2</td>
<td>18.2</td>
<td>5</td>
</tr>
<tr>
<td>Maternal Depression</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinically Significant (16+)</td>
<td>4</td>
<td>36.4</td>
<td>5(^b)</td>
</tr>
<tr>
<td>Above Median (10+)</td>
<td>7</td>
<td>63.6</td>
<td>19(^b)</td>
</tr>
</tbody>
</table>

* \( p \leq .05 
\(^a\) Emergency Room \(^b\) n = 50

### Hypothesis 1

In order to test the hypothesis that mothers of children in suboptimal health would have lower parenting efficacy and fewer depressive symptoms, a series of one-tailed independent samples t-tests were performed. Levene’s test for equality of variances was used to determine if the variances of the optimal health group and the suboptimal health group were homogenous. The homogeneity of variances assumption was met for parenting efficacy, \( F(1, 61) = .120, p = .730 \), and maternal depressive symptoms, \( F(1, 59) = 1.222, p = .274 \). However, the assumption of homogeneity of variances was not met for health efficacy, \( F(1, 61) = 19.077, p = .000 \), and therefore a t value that does not assume homogeneity of variance was computed.

Parents of children in optimal health were found to have higher overall parenting efficacy \( p = .008 \) as well as higher health-specific parenting efficacy \( p = .017 \).
According to Cohen’s guidelines, the effect sizes for both overall parenting efficacy \(d = .652\) and health efficacy \(d = .648\) were moderate. The difference in mean scores for maternal depressive symptoms was not statistically significant, although it was in the predicted direction, \(t(59) = -1.100, p > .05\). Detailed results of these independent t-tests are reported in Table 5.

Table 5

*Results of Independent t-Tests Comparing Optimal and Suboptimal Child Health Groups*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mothers of Children in Optimal Health</th>
<th>Mothers of Children in Suboptimal Health</th>
<th>df</th>
<th>t</th>
<th>p</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parenting Efficacy</td>
<td>(M = 4.40, SD = .419)</td>
<td>(M = 4.13, SD = .427)</td>
<td>61</td>
<td>2.473</td>
<td>.008</td>
<td>.652</td>
</tr>
<tr>
<td>Health Efficacy</td>
<td>(M = 4.90, SD = .255)</td>
<td>(M = 4.61, SD = .576)</td>
<td>25.517</td>
<td>2.237</td>
<td>.017</td>
<td>.648</td>
</tr>
<tr>
<td>Maternal Depression</td>
<td>(M = 9.83, SD = 7.98)</td>
<td>(M = 12.00, SD = 5.33)</td>
<td>59</td>
<td>-1.100</td>
<td>.138</td>
<td>.320</td>
</tr>
</tbody>
</table>

Two chi-square tests of independence were conducted to determine whether mothers who reported more depressive symptoms were more likely to have a child in poor health. In the first chi-square, the standard cutoff score of 16 was used to designate a group of mothers with clinically significant depressive symptomatology. The proportion of children from this group who were in suboptimal health (.333) was nearly the same as the proportion of children in suboptimal health whose mothers did not have clinically significant scores (.326). Results of the chi-square analysis confirmed that there was no statistically significant difference, \(\chi^2(1, N = 61) = .001, p = .97\). In the second chi-square, a median split was used to designate a group of mothers who scored above the median of 9 on the CES-D scale. The proportion of children from
this group who were in suboptimal health was .50 while the proportion of children in suboptimal health whose mothers scored below the median was .20. This was a statistically significant difference, $\chi^2(1, N = 61) = 6.093, p = .014$.

Hypothesis 2

In order to test the hypothesis that mothers of children with a chronic health condition would have lower parenting efficacy and more depressive symptoms, a series of one-tailed independent samples t-tests were performed. Levene’s test for equality of variances was used to determine if the variances of the chronic condition group and the no chronic condition group were homogenous. The homogeneity of variances assumption was met for all three parent variables: parenting efficacy, $F(1, 61) = .544, p = .463$; health efficacy, $F(1, 61) = 3.162, p = .080$; maternal depressive symptoms, $F(1, 59) = 2.513, p = .118$. Results of the t-tests showed there were no statistically significant differences on parent characteristics between mothers who had a child with a chronic health condition and those who did not.

Two chi-square tests of independence were conducted to determine whether mothers who had child with a chronic condition reported more depressive symptomatology than other mothers. Of the mothers who had a child with a chronic condition, the proportion who had clinically significant CES-D scores (.22) was over twice as large as the proportion of mothers who did not have clinically significant depressive symptomatology (.10). However, the results of the chi-square analysis were not statistically significant, $\chi^2(1, N = 61) = 1.200, p = .273$. In the second chi-square, the proportion of mothers of chronically ill children who scored above the median on the
CES-D was .19 while the proportion scored below the median was .057. However, the results of this test were also not statistically significant, $\chi^2 (1, N = 61) = 2.683, p = .101$.

Hypothesis 3

To determine whether parents who had taken their child to the emergency room differed on parenting efficacy and depressive symptoms, a series of two-tailed independent samples $t$-tests were performed. Levene’s test for equality of variances was used to determine if the variances between the group who had utilized the emergency room (ER group) and the group who had not (no-ER group) were homogenous. The homogeneity of variances assumption was met for parenting efficacy, $F(1, 61) = .450, p = .505$, and maternal depressive symptoms, $F(1, 59) = 1.412, p = .240$. However, the assumption of homogeneity of variances was not met for health efficacy, $F(1, 61) = 4.904, p = .031$, and therefore a $t$ value that does not assume homogeneity of variance was computed. There were no statistically significant differences on parent characteristics between mothers in the ER group and the no-ER group.

Two chi-square tests of independence were conducted to determine whether mothers in the ER group reported more depressive symptomatology than mothers in the no-ER group. The proportion of mothers in the ER group who had clinically significant depressive symptoms (.12) was slightly smaller than the proportion of mothers in the no-ER group who had significant depressive symptomatology (.16). However, the results of the chi-square analysis were not statistically significant, $\chi^2 (1, N = 61) = .167, p = .682$. The results of the second chi-square were similar. Although a higher
percentage of mothers in the no-ER group scored above the median on the CES-D, the chi-square test was not statistically significant, $\chi^2(1, N = 61) = 1.026, p = .311$.

Supplementary Analyses

As described above, preliminary analyses revealed significant differences between African American and Latina mothers on perceived child health status, emergency room utilization, and clinically significant maternal depression. Further examination of the data revealed that these groups differed on several demographic characteristics. On average, Latina mothers were about 6 years older than African American mothers, $t(59) = 3.135, p < .01$, and tended to have higher household incomes, $t(58) = 4.292, p < .001$. Latina mothers were also much more likely to be living with a spouse or partner, $\chi^2(1, N = 63) = 38.302, p < .001$, and to describe themselves as homemakers, $\chi^2(1, N = 62) = 13.373, p < .001$.

Since these group differences may have influenced this study’s findings, the statistical tests described above for each hypothesis were conducted again using only the data from Latina mothers. Results of the subsample analyses were comparable to those for the full sample with one exception. In a one-tailed $t$ test with Latinas only, mothers who rated their children as being in suboptimal health had higher total maternal depression scores than mothers with children in optimal health, $t(49) = 2.209, p = .010$. The effect size for this finding was also moderate ($d = .706$). This analysis was not statistically significant in the full sample. Separate analyses for African American mothers alone were not conducted due to the limited statistical power of tests performed on such a small subsample.
CHAPTER 5
DISCUSSION

In order to expand on previous research, this study examined how maternal depression and parenting efficacy may be related to child health. A theoretical framework that integrated parenting efficacy into the family stress model was used to hypothesize about associations among contextual stressors, parent characteristics, and child health. It was predicted that parenting efficacy would be related to better child health outcomes, and maternal depression would be associated with poorer child health. The results of the study provide some support for the utility of this theoretical perspective for understanding parental influences on children’s overall health status. However, parent psychosocial characteristics were not associated with the presence of a chronic condition in the child or utilization of emergency care services.

The first hypothesis predicted that mothers who reported their children were in optimal health would have higher parenting efficacy and fewer depressive symptoms. This hypothesis was partially supported in the full sample. Both overall parenting efficacy and health-specific parenting efficacy were higher for mothers of children in optimal health. Even though effect sizes for these findings were still within the small range, they do indicate that the concept of parenting efficacy may have practical significance for understanding children’s health. One commonality among low-income children in optimal health may be that their mothers tend to have higher parenting efficacy. This lends support to the theoretical proposition that parenting efficacy can mediate the effects of contextual stress on children’s health.
The relation between maternal depression and child health status was more complex. In the full sample, depressive symptoms were only higher for mothers with children in suboptimal health when a median split was used in place of the higher standard cutoff for clinically significant symptoms. Further examination of the data showed that differences between the African American and Latina mothers may have contributed undue variability into this analysis, and thus data from Latina mothers were analyzed separately to create a more homogenous group. As hypothesized initially, total depression scores were higher for Latina mothers of children in suboptimal health than for Latina mothers of children in optimal health. This is in accordance with the family stress model because parental depressive affect was associated with poorer child outcomes.

Results of this study did not support the second hypothesis. Mothers of children with chronic conditions did not have lower parenting efficacy or more depressive symptoms than mothers of children without chronic conditions. This is likely due to small sample size. Although the percentage of children with a chronic condition was comparable to other studies (Wen, 2007), the actual number was too small to yield statistically significant results for this sample. As this data is from an ongoing study, future analyses of the larger final sample may yield different results. Additionally, qualitative research in this area would help to determine how a child’s chronic illness impacts parents’ well-being. As the Silver et al. (1995) study demonstrates, it is not merely having a child with a chronic illness that matters, but rather the severity of the child’s impairment is the factor associated with lowered self-efficacy and increased psychological distress. A qualitative study would reveal what types of health limitations
cause the greatest stress for parents as well as show how parents cope with these challenges.

Study findings also did not provide support for the third hypothesis. Mothers of children who had been to the emergency room in the past 6 months did not differ on parenting efficacy or maternal depression from mothers of children who had not been to the emergency room. Previous research found maternal depression was associated with emergency room utilization, but this was only true when mothers reported depressive symptoms shortly after their child’s birth (Minkovitz et al., 2005). Depression when children were 3 years old was not related to prior health care utilization, and thus the findings of this study are in line with prior research. As for parenting efficacy, Janicke and Finney (2003) found an association between parents’ sense of efficacy and utilization of pediatric primary care services when parents were under stress. It seems possible that a similar association would exist for acute care services because efficacious parents would be more likely to take proper steps to address serious child health concerns. An alternative, though, is that parents with low parenting efficacy may delay preventative care and thus utilize emergency services more because they wait until health problems are severe before seeking medical care. As previously suggested, the lack of significant findings in this study may be due to small sample size, and analysis of the final sample from this project may provide a clearer picture.

Another possible explanation for why use of emergency services was not significantly related to parenting characteristics may the historical context of the study. Data collection took place in the months immediately following widespread alarm over the H1N1 influenza pandemic. As children were at highest risk of infection and
mortality, visits to pediatric emergency departments increased dramatically (Costello, Simon, Massey, & Hirsh, 2010). Parents tended to respond to children’s flu-like symptoms with an excess of caution, resulting in a higher volume of low acuity emergency room visits. It is likely that reports of emergency room visits in this study are higher than would usually be observed and do not indicate actual medical emergencies. It is thus difficult to determine from these data whether any relation between parent characteristics and utilization of emergency services would exist under normal circumstances.

This study also illustrated the importance of examining both socioeconomic and racial and ethnic disparities in child health simultaneously. About 35% of mothers rated their children as being in suboptimal health, which is double the most recent national estimate (Bloom, Cohen, & Freeman, 2009). Mothers living in poverty and Latina mothers were more likely to rate their children as being in suboptimal health. In contrast, all but one of the African American mothers reported that their children were in excellent health, even though they tended to have much lower household incomes than Latina mothers. Despite being more likely to have a child in optimal health, African American mothers were more likely than Latina mothers to have taken their child to the emergency room in the past 6 months. The racial and ethnic differences between the mothers in this sample may be partly due to their difference socioeconomic situations. The Latina mothers would be considered at lower risk because they had higher household incomes, were older parents, and were more likely to be living with a spouse or partner.
However, this study’s findings also suggest that socioeconomic inequality alone cannot account for the existence of racial and ethnic health differences (Flores, Bauchner, Feinsteian, & Nguyen, 1999; Wen, 2007). Culture, language barriers, and immigration status provide additional explanations. The Latina mothers in the sample were primarily Spanish-speaking, first-generation Mexican Americans. Previous research has shown that use of emergency medical services is lower among children of Mexican ancestry (Perez, Fang, Inkelas, Kuo, & Ortega, 2009) and children who live in households were English is spoken very little or not at all (Yu, Huang, Schwalberg, & Nyman, 2006). Utilization of health care is also lower among first-generation Mexican American immigrants because they often lack health insurance and access to culturally competent services in their native language (Burgos, Schetzina, Dixon, & Mendoza, 2005). In contrast, African American children are more likely to utilize emergency care services for non-urgent reasons (Zimmer, Walker, & Minkovitz, 2005), particularly those from low-income and single-parent families (Halfon, Newacheck, Wood, & St Peter, 1996). The African American children in this sample may be in better health because their mothers were more comfortable taking them to the emergency room to receive routine health care whereas the Latina mothers may have been more likely to experience barriers to care that lowered their children’s overall health.

Limitations

Although these findings are intriguing, several caveats are in order. First, it is important to note that this study did not attempt to validate all aspects of the family stress model, which posits causal relationships and mediation effects. The aim was merely to establish whether the predicted relations between variables even existed for
the developmental outcome of child physical health. Thus, although some findings lend support to the utility of this theoretical framework, further research is needed to establish whether parental depression and parenting efficacy actually operate as mediators between contextual stress and child health.

Second, the data are cross-sectional, and causality should not be inferred from the associations reported. The directionality of the observed associations may differ from what was predicted. It is possible that having a child in suboptimal health may lead parents to feel more depressed and less efficacious in their parenting. Research with parents of children with chronic conditions lends support to this alternative explanation. Children’s level of functional impairment, which is presumably related to the severity of their pre-existing health condition, has been associated with greater psychological distress and lower efficacy in mothers (Silver, Bauman, & Ireys, 1995). On the other hand, even with chronic conditions, it is possible that parental depression and low parenting efficacy may negatively impact parents’ caregiving behaviors in ways that influence children’s health. Parents who are depressed due to economic strain may not have the energy or motivation to ensure their children adhere to the health care regimens that chronic illnesses typically require. Longitudinal research that examines parents’ actual health-related behaviors is needed to fully understand the associations among parental depression, parenting efficacy, and child health.

It must also be acknowledged that the mothers in this sample may not be representative of the population of low-income African American and Latina mothers due to their involvement in the Home Instruction for Parents of Preschool Youngsters (HIPPY) program. Mothers who voluntarily enroll in a school readiness intervention are
more likely to believe in their ability to influence their children’s development, and the structure of the program itself may also increase this perception. Previous research has shown that HIPPY mothers have a higher sense of parenting efficacy than mothers in a comparison group (Nievar, Jacobson, Dier, & Johnson, 2009), and most mothers in this study also had high parenting efficacy scores. Additionally, despite the fact that contextual stressors are presumed to negatively impact parenting efficacy, there was no difference between mothers living in poverty and those who were not on this measure. This suggests that another factor, perhaps an unmeasured parent characteristic or involvement in the HIPPY program, is influencing the parenting efficacy of the mothers in this sample.

Another limitation of this research is the reliance on parental self-report for each measure. This is problematic because significant findings may partially result from shared method variance rather than valid associations among study variables. Also, unlike other studies that have linked parental depression and parenting efficacy to specific caregiving behaviors (e.g. Teti & Gelfand, 1991), this study does not measure the parent behaviors that may directly impact child health. The associations discussed here are meant to draw attention to the possible role of the parent characteristics in understanding child health, but it remains unclear exactly how parental depression and parenting efficacy might operate on child health outcomes.

A related limitation may be the use of parent report of child health status. Although this is a widely used measure, it is not clear how parents from different socioeconomic statuses and cultural backgrounds respond to this question. The factors that parents take into consideration when asked to rate their child’s general health could
differ systematically between groups. Parents from some cultures may perceive health differently than others, and relying on parent ratings could lead to under- or over-reporting of health problems in some populations (Burgos et al., 2005). It is important to recognize that this indicator is a measure of parents’ perceptions of their children’s health and may not correspond perfectly to the child’s actual physical health. Future studies of child health would benefit from qualitative investigations of how parents evaluate the health of their child and, if necessary, the development of a more culturally valid indicator of child health status.

Conclusions

The persistence of disparities in children’s health is a national public health concern that has its roots in socioeconomic and racial inequality (Fiscella & Williams, 2005; Huges & Ng, 2003). Child health disparities are evident in the present study of primarily low-income, African American and Latina families from one urban community. Mothers who were living in poverty were significantly more likely to report that their children were in suboptimal health. For Latina mothers, this disparity was apparent in a higher proportion of children in suboptimal health whereas African American mothers exhibited greater utilization of emergency care services for their children. These findings are important because poor health in childhood can have far-reaching consequences for adult health and economic well-being (Case, Lubotsky, & Paxson, 2002).

A key objective of this study was to understand why some children maintain optimal health despite the negative influence of economic hardship and minority status. The results suggest that parental depression and parenting efficacy may provide part of
the explanation. Children rated as being in optimal health were more likely to have mothers with high parenting efficacy and fewer depressive symptoms, and the association of suboptimal child health with depression was stronger for Latina mothers.

Since long-standing social and racial inequities have often proven difficult to eradicate, these parent characteristics may be opportune targets for addressing child health disparities at the individual level. Future research needs to investigate how parental depression and parenting efficacy are related to specific parent behaviors that impact children’s health. Professionals who work with low-income and minority families should focus on interventions that support parents and empower them to enhance their children’s lives. Though a great deal more work will be necessary in the years to come, this study proposes a starting point for alleviating the chronic problem of health disparities among America’s children.
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