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Maternal Responsiveness in Infancy and Early Childhood among a Burundian Refugee Community

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I am submitting herewith a thesis written by Erin Lane Gangaware entitled "Maternal Responsiveness in Infancy and Early Childhood among a Burundian Refugee Community." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Child and Family Studies.

Hillary, N, Fouts, Major Professor

We have read this thesis and recommend its acceptance:

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Maternal Responsiveness in Infancy and Early Childhood among a Burundian Refugee
Community

A Thesis Presented for the Master of Science Degree

The University of Tennessee, Knoxville

Erin Lane Gangaware

August 2012

Abstract

Post-migration contexts often provide many challenges for refugee families' integration into a host society such as language barriers, mental and physical illness, social and community relationships (Berry, 2001; Daud, 2008; Weine, 2011). Traumatic life events, loss, and depression have all been shown to negatively impact parenting (Daud, Skoglund, & Rydelius; Diener, Nievar, & Wright, 2003, Evans, 2006; Garmezy, 1987). These environmental and emotional factors often prevent parents from providing adequate care. Not only does the quality of parenting affect children's social-emotional development, many contextual factors such as family SES, social supports, and neighborhood have also been shown to impact social-emotional development (Klebanov, Brooks-Gunn, & Duncan, 1994; Shaw & Vondra, 1995; Werner & Smith, 2001). The purpose of this research is to identify the role that maternal responsiveness plays in children's social-emotional and attachment behaviors while considering the availability of social support from extended kin as caregivers in Knoxville's Burundian refugee population. This thesis provides analysis of observational and interview data from 21 individuals about maternal responsiveness and sensitivity behaviors, child attachment behaviors and maternal perceptions of social support.

Key words: refugee parenting, maternal responsiveness, social support, attachment

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Chapter 1.

Introduction

The worldwide number of refugees has grown tremendously due to increasing amounts of political unrest. UNHCR's 2010 report estimated 43.7 million people worldwide have been forced from their homes, 15.4 million of which had to flee their country. Recent political turmoil has produced the highest rates in over 15 years (UNHCR, 2010). These numbers exemplify just how many families have been forced to abandon their homes, communities, friends, and family.

Of these numbers, around 650,000 people have fled from Burundi due to genocide and mass destruction in the past 40 years. Burundi has been in a state of political unrest due to an ongoing conflict between the Hutu and Tutsi tribes since gaining its independence from Belgium in 1962 (Cultural Orientation Resource Center, 2007). During the 1972 massacre over 200,000 Burundians were killed and around 150,000 fled to neighboring Tanzania for refuge. This group often referred to as the 1972 Burundians, have spent most of their lives in refugee camps. Again in 1993, due to the assassination of Burundi's Hutu president, over 500,000 Burundians fled the country (CORC, 2007). Due to the inability of Tanzania to host the large amount of asylum seekers, the UN stepped in to resettle these refugees into permanent homes. Over 9,000 were relocated to the U.S., and approximately 300 Burundians ended up in Knoxville, TN.

Along with the violence in their home country, refugees face many pre and post migration stressors, which often include relocation, acculturation, relational problems, and decreased social economic status (Yakushko, Watson, & Thompson, 2008). Not only does relocation cause economic strain on a refugee family, many refugees struggle with mental health issues related to the relocation. Leaving behind family and friends as well as trying to adapt to

new societal norms often causes emotional exhaustion. These challenges compounded by potentially traumatic events experienced by many refugees may result in serious mental health issues including anxiety and depression (Johnson, Thompson & Downs, 2009).

Past research has shown that the challenges faced by many of the refugee families have the potential to interfere not only at the individual level, but also at the family level (Daud, Skoglund, & Rydelius, 2005). Traumatic life events, loss, and depression have all been shown to negatively impact parenting (Daud, Skoglund, & Rydelius, 2005; Diener, Nievar, & Wright, 2003, Evans, 2006; Garmezy, 1987). These environmental and emotional factors often prevent parents from providing adequate care. Less involved parenting has been shown to lead to a wide range of social-emotional problems in children. Lack of parental interaction and warmth has been associated with children's inability to form a secure attachment with a caregiver, increased behavioral problems, as well as difficulty forming social relationships later in life (Shaw & Bell, 1993; Shaw & Vondra, 1995). Not only does the quality of parenting affect children's social-emotional development, many contextual factors such as family SES, social supports, and neighborhood have also been shown to impact social-emotional development (Klebanov, Brooks-Gunn, & Duncan, 1994; Shaw & Vondra, 1995; Werner & Smith, 2001). Many refugee families experience a number of these life and contextual factors, which research has shown to greatly affect parent-child bonding (Daud, Klintenber, & Rydelius, 2008; Werner and Smith, 1992). Not only is proper social-emotional development important for the parent-child relationship, but studies have also shown that insecure attachment, one of the most common social-emotional indicators, may lead to higher rates of anger, mistrust and displays of aggressive behaviors later in childhood (Greenbert & Speltz, 1988; Shaw & Bell, 1993; Shaw & Vondra, 1995).

Until recently most research on refugees has focused on pre and post-migration stressors (Price, Price, & McKenry, 2010). The majority of studies have focused on relocation strain, acculturation, and pre-migration experiences, while parenting in refugee families has been almost entirely overlooked (Price, Price, & McKenry, 2010; Van Hook, 2003). Due to the cumulative risks experienced by many refugee families, examining parenting practices of refugees may provide a unique chance to look at how the culmination of risk affects parenting. The purpose of this research is to examine infant and young children's social-emotional behavior in relations to their caregiving experiences. More specifically, to identify the role that maternal responsiveness plays in children's social-emotional and attachment behaviors while considering the availability of social support from extended kin as caregivers in Knoxville's Burundian refugee population.

Chapter 2.

Literature Review

Refugee Families and Cumulative Risk

“Refugee families are affected by the re shaping of pre-existing values, ideas, and cultural practices along with the ways in which individuals are perceiving or reconstructing being in these new spaces” (Williams, 2010).

Refugee families experience varying degrees of family stressors both pre-migration, intra-migration, and post-migration. Not only do stressors occur in every stage of the migration process, but they also exist at various levels. Refugee families experience stressors in the community or societal, family, and individual level (Price, Price, & McKenry, 2010). Community stressors often include public policy, differing cultural practices, and unsafe neighborhoods. Family level stressors experienced by many refugee families may involve

changing family roles, parent-child conflict, partner violence, or loss of familial support due to relocation. Depression, mental health issues, physical illness, and isolation are stressors at the Individual level. While these stressors are labeled as different levels (community, family, individual), the majority of these stressors will impact the whole family (Price et al., 2010).

Children and families with refugee status are more likely to have experienced greater amounts of stressful or even traumatic events that may place them at higher risk for family problems than the majority of non-refugee families. Children of families that have experienced some sort of trauma are at higher risk for mental illness, behavioral issues, lowered academic achievement, and child maladaptive stress syndrome, even if only their parents experienced the trauma (Daud, Skoglund, & Rydelius, 2005). The daily stressors experienced by many refugee families can lead to inadequate development in children. Emotionally stressful relations in the family and lack of continuity in caregiving are two factors that put children at risk for negative developmental outcomes such as developmental disabilities (Garmezy, 1987).

Another stressor that impacts many refugee families is limited economic resources. For many families, work that sustained the family in their home country (e.g. farming, trading goods) is not sufficient in the host country. Many of their skills are not applicable to their new context; therefore, they have limited employment options. Even if refugees do obtain jobs barriers such as childcare and lack of transportation often create strain and may make it difficult to keep a job. Immigrant families are twice as likely to be living below poverty than families born in the U.S. (Van Hook, 2003). Economic difficulties experienced by refugees often lead to poor living conditions as well. Although often times refugee housing is better in their new country than what they experienced pre-migration, housing is still usually cramped and crowded. Evans (2006) showed how overcrowded living arrangements could be associated with negative parenting and

adverse child outcomes. The study showed that overcrowded homes was related to less responsiveness and less monitoring from parents as well as diminished social and cognitive outcomes and even psychological distress in children (Evans, 2006).

Language barriers are often a major source of stress in refugee families. Language is a part of everyday life, therefore not knowing the language of the country hinders day to day functioning of families. Language barriers often prevent refugees from obtaining work, learning cultural norms of their new country and forming social supports, and even in being involved in their children's life in that they cannot speak to teachers and other service providers (Price et al., 2010). Unlike immigrant families, most refugee families are unable to begin any language learning before their relocation, and learning the language is very difficult post-migration for many adults. Work constraints, childcare needs, and unreliable or lack of transportation are all factors that often keep adults from attending English classes (Price et al., 2010).

While many refugee parents have trouble picking up the new language, children usually learn the language much more quickly than their parents. This usually results in increased conflict in the parent-child relationship (Price et al., 2010). Parents often feel as if they lose parental authority over their children due to the language imbalance, and are often frustrated by the increasing independence that their children acquire in their new country (Lewig, Arney, & Salverson, 2010). Not only do children gain a sense of independence from learning the new language faster than their parents, they also often come to act as cultural brokers for the family. That is, the children act as translators or mediators between the two cultures (Price et al., 2010). Acting as cultural brokers for the family typically places more stress on the child as they take on many adult responsibilities. This also places strain on the parent-child relationship by creating a sort of role reversal where parents are reliant on their children to be responsible for meeting the

family's daily needs such as making sure families pay bills, pay for food and clothing in stores, and interacting with doctors, case workers, and other service providers (Bhattacharya & Schoppelrey, 2004; Kwak, 2003).

Language barriers may also prevent families from becoming familiar with the cultural norms of their new country (Price et al., 2010). Lack of familiarity with U.S. norms may result in family level problems and issues affecting parenting. Parents following their traditional cultural norm surrounding childrearing may be at risk of being accused of child abuse, neglect, or even having their children removed (Lewig et al., 2010). Norms surrounding childcare in the U.S. often carry over in the laws. Therefore, many refugee parents may not be aware of the parenting norms or laws in the U.S. and may use parenting strategies consistent with how they were raised or parenting norms in their country of origin. Physical punishment, leaving children home with older siblings, and addressing illness and injury with home remedies are all examples of parenting beliefs that may have been valued in the refugees' country of origin, that would place them at risk for child abuse accusations (Lewig et al., 2010). Lewig, Arney, and Salveron's (2010) study showed that increasing numbers of refugee families were showing up in the child protection system in Australia. The top reasons for suspected child abuse were cited as being physical abuse, neglect, and exposure to domestic violence (Lewig, Arney, & Salveron, 2010). It is important that refugees get the information and support they need to raise their children in ways that are appropriate in their new country, while still maintaining values surrounding childrearing. Single stressors experienced by refugee families often lead to other problems, in turn affecting every aspect of their life. This idea exemplifies how cumulative risk is experienced in many refugee families' lives.

Caregiver Responsiveness

One of the most widely studied areas of family research is the child-caregiver relationship. Many researchers have focused their efforts on identifying the variables that impact this relationship (e.g., Cassidy & Shaver, 1999; Klebanov, Brooks-Gunn, & Duncan, 1994; Lamb, Bornstein, & Teti, 2002; Levine et al., 1994). Research has shown that a key component affecting child-caregiver interaction are levels of caregiver responsiveness (e.g. Brophy-Herb, Schiffman, Bocknek, et al., 2011; Davidov & Grusec, 2006; Evans, Boxhill, & Pinkava, 2008; Shaw & Vondra, 1995). Parental responsiveness is a general term that usually includes aspects of warmth, amount of interaction, quality of interaction, and caregiver response to child distress (Brophy-Herb et al., 2011; Davidov and Grusec's, 2006; Werner and Smith, 2001). Falling under the umbrella of responsiveness is sensitivity and warmth, which considers aspects of affectionate behaviors, and emotional synchrony between mother and child (Bakersman-Kranenburg, van IJzendoorn, Kroonenber, 2004; Klebanov, Brooks-Gunn, & Duncan, 1994). These constructs have been assessed using a wide variety of measures, and nonetheless have almost always been shown to be an important aspect in a child's social-emotional development (e.g., Brophy-Herb et al., 2011; Leerkes, Blankson, and O'Brien, 2009; Werner and Smith, 2001). The majority of research looking at caregiver responsiveness has linked this variable to different aspects of child behavior and social-emotional outcomes, including the attachment process quality (Bakermans-Kranenburg et al., 2004; Brophy-Herb et al., 2011; Davidov & Grusec, 2006; Leerkes, Blankson, and O'Brien, 2009; Shaw & Vondra, 1995). Many studies have shown that caregiver responsiveness is linked to social-emotional competence in toddlers; whereas less responsive caregiving often results in fewer pro-social behaviors in toddlerhood (Brophy-Herb et al., 2011; Davidov & Grusec, 2006; Leerkes, Blankson, and O'Brien, 2009). Although research has shown

strong links between caregiver responsiveness and child attachment behaviors, there is no research demonstrating this link in refugee populations.

Importance of caregiver responsiveness. Not only is quality and level of responsiveness important for children's social-emotional development, studies have also shown that there is a sensitive period in which social-emotional competence is formed (Lamb, Bornstein and Teti, 2002). The foundation for social development is formed during infancy and toddlerhood, with one of the most salient factors for development being the quality of the child-caregiver relationship and interactions (Brophy-Herb et al., 2011; Leerkes et al., 2009; Werner and Smith, 2001). If a secure bond with a caring adult is not formed early on, it becomes much more difficult for a child to form a secure relationship with any other person (Lamb et al., 2002; Werner & Smith, 2001). Werner and Smith (2001) suggested that a special bond with a responsive caregiver during this sensitive period may protect children in high risk environments from developing psychopathology later in life.

Both parental responsiveness and child social-emotional outcomes are concepts that encompass an array of behaviors, and have been defined and measured in a variety of different ways. Davidov and Grusec's (2006) study addressed this issue by attempting to identify the links between different aspects of parental responsiveness and how they are individually related to children's social-emotional outcomes. The study differentiated responsiveness to distress and parental warmth in 106 parent-child triads. Results linked both mother's and father's responsiveness to distress with the ability of negative affect regulation in children, however, warmth overall was not significantly linked to this construct. Maternal warmth, but not paternal, was shown to influence positive affect and greater peer acceptance in boys only (Davidov &

Grusec, 2006). While the results seem rather differentiated by gender, this is an important first step in linking a specific aspect of parental responsiveness behaviors to child outcomes.

Brophy-Herb et al. (2011) argued that the majority of social-emotional development occurs early in life, with the greatest influencing factor being the quality of caregiving. The study used a structured equation modeling technique to assess maternal responsiveness, maternal emotional socialization of toddlers, as well as the social-emotional competence of 119 toddlers living in a low-income context. The emotional socialization of toddlers was defined as emotional expressiveness in the home and emotion coaching, while the social-emotional competence of toddlers was measured as compliance, empathy, mastery and motivation, and imitation and play behaviors. The analysis indicated that while maternal responsiveness was related to both maternal emotional socialization of toddlers and toddler social-emotion competence, the strongest relationship was the direct link between maternal emotional socialization and toddlers' social-emotional competence (Brophy-Herb et al., 2011)

Recent intervention studies on the attachment process have suggested that a strong bond with a caregiver can act as a resiliency mechanism throughout life (Leckman, Rappoport, Carter, Hennessy, Hrdy, Keverne, Klann-Delius, Schradin, Todt, & von Holst, 2006). Bakersman-Kranenburg et al. (2003) conducted a meta-analysis on seventy studies assessing intervention effects on sensitive parenting and attachment behaviors. The analysis showed that the most effective interventions, in terms of increasing child attachment security, were those that focused on improving maternal responsiveness and warmth (Bakersman-Kranenburg, van IJzendoorn, & Juffer, 2003). This analysis supports the idea of a strong causal relationship between maternal responsiveness and quality of attachment.

Bakermans-Kranenburg et al.'s (2004) research also supports the notion that maternal sensitivity is the strongest predictor in child attachment security. The study examined differences in attachment security of African-American and white children. Findings showed that other variables such as ethnicity of parent did not affect the role of maternal sensitivity on attachment. Despite the differences in caregiving experiences of the two groups, the number one predictor of secure attachment was sensitive caregiving (Bakersman-Kranenburg, van IJzendoorn, & Kroonenber, 2004). These studies convey the findings of the majority of research on caregiver responsiveness and demonstrate the strong effect caregiving has on child social-emotional competency and building strong relationships early in life.

How less responsive caregiving affects children. Lower quality parenting, as defined by low levels warmth, delayed or harsh response to infant distress, and lessened amount of meaningful interaction with the child, has been shown to affect children in a number of ways. Lack of parent-child attachment, high incidence of behavioral problems, and inability to form positive social-emotional relationships later in life have all been shown to result from unresponsive parenting early in life (Shaw & Vondra, 1995; Sroufe et al., 1990). Many researchers have theorized that children of less responsive caregivers display more externalizing behaviors which often causes anger and mistrust (Greengerg & Spelz, 1988; Shaw & Bell, 1993; Shaw & Vondra, 1995). Children who receive less responsive or lower quality caregiving may also show an increase in non-compliant behaviors in order to elicit more responsive caregiving behaviors (Londerville & Main, 1981; Shaw & Vondra, 1995). On the other hand, infants with more responsive caregivers have consistently been shown to develop higher self-esteem, longer attention spans, and better social relationship at a very young age (Shaw & Vondra, 1995).

Shaw and Vondra's (1995) study assessed the relationship between early mother-child attachment and behavioral problems in the toddler years. The study measured maternal responsiveness, involvement, and depression in a sample of 100 low-income mothers, as well as their infant's quality of attachment. The results showed that insecurely attached infants displayed more behavioral problems at age 3 than did the infants who were securely attached (Shaw & Vondra, 1995).

Consistent with Shaw and Vondra's (1995) study, Sroufe, Egeland, & Kreutzer's (1990) study also showed children of less involved mothers showed higher rates of behavioral problems. The study assessed attachment insecurity at 18 months of age and parental involvement and warmth when the children were 30 and 42 months. The children who showed insecure attachment at 18 months showed higher rates of behavioral problems in preschool and at school-age, but also had parents who showed less involvement and support, likely facilitating the behavioral issues (Sroufe, Egeland, & Kreutzer, 1990). Both of these studies exhibit the relationship between caregiver responsiveness, and children's behavior, more specifically how less responsive or lower quality interactions during infancy precipitate children's behavioral problems later in life. This shows just how imperative quality caregiving is in the early stages of child development. The quality of early care affects all aspects of child development, especially the child's social-emotional growth.

Child Characteristics and responsiveness: Age and Gender. Little is known about how child characteristics such as gender or age influence early caregiving. Few studies have looked at differences in attachment or maternal responsiveness based on the gender of the infant (Schoppe-Sullivan, Diener, Mangelsdorf, Brown, McHale, & Frosch, 2006). In fact, the majority of studies looking at child characteristics and maternal responsiveness have focused on child

temperament (McElwain & Booth-LaForce, 2006; Seifer, Schiller, Sameroff, Resnick, & Riordan, 1996). However, Schoppe-Sullivan et al., (2006) addressed this gap. The authors examined the role of the infants gender on mothers' and father's sensitivity, and the parent-child attachment relationship in Caucasian, African-American, Asian-American and Indian-American families. Eighty-seven infants participated in the Strange Situation assessment with each of their parents. Results showed that mothers were more sensitive to daughters than to sons.

Feldman (2003) also assessed gender influences on parenting. The study consisted of 100 middle class families with a first born infant living in Jerusalem or Tel-Aviv. Family interactions were recorded to examine positive affect. Results showed that there was greater emotional synchrony between same-sex dyad (mother-daughter, father-son) than parent and infants of opposite gender. While these studies indicate differences in how parents interact with infants based on gender, some studies also indicate that gender influences infant behavior.

While most previous research has shown that boys do not actually fuss or cry more than girls (Alvarez & St James-Robers, 1996; van IJzendoorn & Hubbard, 2000), Kivijarvi, Raiha, Kaljonen, Virtanen, Lertola, and Piha (2004) examined how maternal sensitivity and mothers difficulties were related to infant's fussing and crying in fifty-seven low-risk Finnish families; low risk was defined as healthy, full term infants whose mother and father were married, and had at least one employed parent,. Results showed that infants of more sensitive mothers were more content and cried less than infants of less sensitive mothers. However, results also showed that mothers perceived boys to fuss more often than girls, and in fact at three months of age girls were observed as more content than boys.

Risk contexts and responsiveness. Exemplified in the earlier review, the level and quality of caregiver responsiveness decreases a child's ability to create a meaningful, trusting relationship with their caregivers, in turn hindering children's social-emotional development (Bakermans-Kranenburg et al., 2004; Brophy-Herb et al., 2011; Shaw & Vondra, 1995; Sroufe, Egeland, & Kreutzer, 1990). While the relationship between these two variables has been exemplified in numerous studies, questions still remain with respect to what factors or constellation of factors predict diminished or low quality caregiver responsiveness. Research has focused on an array of factors thought to affect levels of parental warmth or responsiveness; low-SES including poverty, undesirable neighborhoods due to violence and living conditions, and parent's mental health have all been shown to moderate the relationship between parental responsiveness and child attachment behaviors (Aviezer, Sagi-Schwartz, & Koren-Karie, 2003; Diener, Nievar, & Wright, 2003; Evans, Boshill, & Pinkava, 2008; Klebanov, Brooks-Gunn, & Duncan, 1994).

There is growing evidence that economic hardship, including poverty, is one of the main factors in affecting responsive caregiving (Diener, et al., 2003; Evans, Boshill, & Pinkava, 2008). Studies have shown that financial stress greatly hinders parental ability to provide their children with warm, supportive caregiving (Diener et al., 2003; Evans et al., 2008; Klebanov et al., 1994). The link between family poverty, maternal responsiveness, and children's social-emotional development has been exemplified in many studies, however, the question as to why poverty decreases parental responsiveness remains. Evans et al. (2008) addressed this question in their study of 223 mothers and their adolescent children living in rural New-York. The researchers interviewed the participants to determine levels of maternal stress, maternal social network, and maternal responsiveness as well as demographic information about income level.

The results showed that mothers with lower responsiveness, as reported by their adolescent children, also had low income-to-needs ratios as well as elevated psychological stress and diminished social networks (Evans et al. 2008).

Diener, Nievar, and Wright's (2003) study also provided evidence for the relationship between poverty and decreased social-emotional functioning in children. While they did use maternal responsiveness as the main mediating variable, their study also showed that other contextual issues and maternal depression influence the parent-child relationship. The study surveyed 101 mothers and their toddlers, 72 of which were participating in a home visitor program, the other 28 participants were on the waiting list. The survey gathered information on the families' demographics, maternal sensitivity, levels of parenting stress, parental efficacy and beliefs, and children's attachment security in terms of attachment related behaviors exhibited by children. The results showed maternal depression and perceptions of a difficult child were the factors linked with highest rates of insecure attachment behaviors exhibited by children. Maternal depression was associated with lower levels of sensitivity, perceptions of child difficulty, lower social support and less secure-mother child attachment relationships (Diener et al., 2003). This study suggests that maternal depression may be another pathway in which poverty contributes to reduced maternal responsiveness.

Environmental factors, such as which neighborhood a family lives in, have also been shown to impact the relationship between poverty and maternal warmth. Klebanovo et al.'s (1994) study gathered information from 895 toddlers and their mothers living in eight different neighborhoods. Measures of neighborhood conditions, family conditions (SES), maternal parenting behaviors, and maternal psychological characteristics were all collected. Analysis showed that while poverty had the greatest impact on maternal behavior (i.e. decreased warmth)

neighborhood did account for some of the variation in maternal behavior independent of the affect of poverty. Neighborhood was also associated with home environment, in that neighborhoods with the highest rates of poverty contained families with the poorer home environments (Klebanovo et al., 1994). These findings show how other factors may influence child social-emotional development regardless of caregiver behaviors.

Numerous studies have demonstrated the important role maternal responsiveness plays in child attachment (Bakermans-Kranenburg et al., 2004; Brophy-Herb et al., 2011; Shaw & Vondra, 1995; Sroufe, Egeland, & Kreutzer, 1990; Werner & Smith, 2001). Research has linked these variables in many groups, however research has also shown that maternal responsiveness alone cannot explain child attachment behaviors. Variables such as socioeconomic status, quality of non-parental caregiving, maternal depression, maternal social support, and other environmental factors have been shown to affect the relationship between maternal responsiveness and child attachment (Aviezer et al., 2003; Burchinal, Follmer, & Byant, 1996; Diener et al., 2003; Evans et al., 2008; Klebanovo et al., 1994). In other words, all of these factors may influence caregiver responsiveness by impacting available time to caregive, emotional resources, as well as cultural norms surrounding parenting behaviors, thus affecting child attachment behaviors. Many refugee families face a number of these challenges; therefore, these variables likely play a considerable role in refugee parent-child relationships.

Impact of social support on maternal responsiveness.

This review has noted the importance of contextual variables on the mother-child relationship. Numerous studies have shown that factors outside of the mother-child relationship such as neighborhood, family SES, and social support, may impact the quality of maternal responsiveness (Klebanov, Brooks-Gunn, & Duncan, 1994; Shaw & Vondra, 1995; Werner &

Smith, 2001). Social support is shown to be a strong moderating variable of the parent-child relationship (Burchinal et al., 1996; Chase-Lansdale, Brooks-Gunn, & Zamsky, 1994; Contreras, Mangelsdorf, Rhodes, Diener, & Brunson, 1999; Ensor & Hughes, 2010; Hashima & Amato, 1994) which is hypothesized to impact children's social development through two pathways; social support networks and kin support may educate and model quality parenting behaviors to encourage more responsive parenting, and social support may buffer the impact of parenting and environmental stress placed on the parent and improve parents' mental health (Burchinal, Follmer, & Bryant, 1996). Through either pathway, children's social-emotional development is positively impacted by parental social supports.

The relationship between extended family support and parenting may be affected by many variables; however, one of the most commonly studied is the impact that extended family support has on parenting quality (Burchinal et al., 1996; Chase-Lansdale, Brooks-Gunn, & Zamsky, 1994; Contreras, Mangelsdorf, Rhodes, Diener, & Brunson, 1999; Ensor & Hughes, 2010; Hashima & Amato, 1994). Ensor and Hughes (2010) examined the impact of maternal social support on children's prosocial behaviors. After observing 88 mother-child dyads (44 young mothers and 44 older mothers), the authors identified a link between social support and children's prosocial behaviors mediated by parenting practices. The results showed that higher reporting of social support was linked to fewer occurrences of negative parenting in young mothers (Ensor & Hughes, 2010).

Chase-Lansdale et al. (1994) examined the relationship between grandmother coresidence and support and mother's parenting. The study contained a sample of 99 low income, multigenerational families with 3 year old children. Both biological grandmothers and non-biological, as identified by mothers, grandmothers were included in the study. Parenting was

assessed by positive and negative effect, support, and disciplinary styles. Contrary to Chase-Lansdale et al.'s hypothesis, results showed a negative impact of grandmother coresidence on parenting quality (Chase-Lansdale et al., 1994).

Consistent with Chase-Lansdale et al.'s (1994) findings, Contreras, Mangelsdorf, Rhodes, Diener, and Brunson's (1999) also found negative effects of support on maternal sensitivity. The study utilized video recordings of mother-child interactions of 49 Latina adolescent mothers and their young children to assess maternal sensitivity. The mothers were also interviewed regarding family and social support. While mothers who expressed a greater sense of overall social support showed higher rates of sensitive parenting while interacting with their children, specific support variables such as higher support from grandmothers, and available child care support from partners and grandmothers were shown to have a negative relationship with maternal sensitivity (Contreras et al., 1999). Causes of the negative associations between parenting quality and certain types of family supports have not been identified, however Contreras et al. (1999) hypothesize that perhaps mothers who rely heavily on family support in caring for their children have less opportunity for positive interaction with their children, and less desire to become involved with their children.

Buchinal, Follmer, and Bryant (1996) noted the inconsistent findings and aimed to determine the extent to which family structure (father's or grandmother's coresidence) and mother's social support were related to maternal parenting behaviors and child outcomes. Their study assessed social support, family structure, maternal parenting style, and children's social and cognitive development in 62 low-income African American families. The results indicated that in fact, mothers with larger support systems showed more responsive parenting styles and tended to have more assistance in caregiving than mothers with less social support. However the

findings also showed that neither father or grandmother coresidence was associated with parenting style or child outcomes (Burchinal, Follmer, & Bryant, 1996).

While research has shown that mothers who have more social support overall tend to be more responsive and warm in their caregiving than mothers with a smaller support system, this review has shown some inconsistencies in particular measures of support such as grandmother's coresidence. Another interesting finding shows that family income may play a part in the extent to which social support affects parenting. Hashima and Amato (1994) used data from the National Survey of Families and Households to reveal an interesting association. The results showed that maternal perception of social support was negatively linked with punitive behavior such as slapping yelling and unsupportive behaviors such as lack of affection, mainly in low income families. For low-income families the higher the number of people reported in parents' social network, the fewer problematic parenting behaviors were reported by parents. However, with higher income families, social support was not associated with any type of parenting behavior (Hashima & Amato, 1994). The authors suggested that social support is more beneficial to parents who need more assistance.

Although some measures of social support provide confounding data (Burchinal et al., 1996; Chase-Lansdale et al., 1994; Contreras et al., 1999) overall social support has certainly been linked to more responsive parenting behaviors. Most research has identified social support as a moderator maternal responsiveness or sensitivity (Burchinal et al., 1996; Chase-Lansdale, Brooks-Gunn, & Zamsky, 1994; Contreras, Mangelsdorf, Rhodes, Diener, & Brunson, 1999; Ensor & Hughes, 2010; Hashima & Amato, 1994). The review has noted the impact of contextual variables, especially social support on mother-child relationships. However, the review has also shown that many refugees have difficulty forming social supports in their new

community due to language barriers (Price et al., 2010). Therefore, availability of extended kin may act as an important support system for many refugee families.

Refugee Parent-Child Relationships

The body of research on refugee populations is quickly expanding; however, research focusing on refugee parent-child relationships is greatly underdeveloped. Very little is known about this aspect of refugee family life. What we do know is that refugee parenting experiences are often impacted by the many changes families make when trying to assimilate to a new culture and environment (Daud, et al., 2005; Evans, 2006; Garmezy, 1987; Price et al., 2010; Van Hook, 2003). These families are often dealing with restructuring of family roles and organization, coping with grief or loss, isolation from support systems, navigating a new environment, and learning a new language, as well as trying to meet the needs of daily living (Price et al., 2010). Refugee parents are faced with the task of parenting their children in a country that is new to them as well as trying to balance the caregiving values of their culture with the cultural norms of the host country.

When discussing the topic of refugee parent-child relationships, culture must be a key consideration. A recent study considers how pre-migration stressors and challenges of parenting in a new culture may affect refugee parents. Lewig, Arney, and Salveron (2010) utilized survey, interview, and focus group methods to gain Sudanese, Burundian, Congolese, Liberian, Somali, Iraqi, Iranian, and Vietnamese refugees' perspectives on parenting in Australia . The study had 130 participants in the focus groups representing eight different ethnic groups with refugee status. The data showed that the main areas of concern for refugee parents were the changing dynamics and roles of the parents and their children, incongruence between the laws and their cultural practices and parenting beliefs, and lack of community support for parents (Lewig et al.,

2010). Lewig et al.'s study revealed that refugee parents felt powerless and frustrated with the changing parent-child roles. Many reported not knowing what their rights as parents were, and felt the government gave their children too much freedom. A Burundian mother participating in the study said, "my heart is being broken more than in the war zone-where we bring up children to respect us, grownups. Parents have power, in Australia it is a different story" (Lewig et al., 2010). The participants also expressed feeling frustrated by lack of information provided to them about parenting in the new culture. They did not know if physical punishment often used in their own culture was acceptable in the new culture. Participants also were troubled by the lack of community support for parents. They expressed views of leaving young children at home with older siblings with the expectation that neighbors would help if anything happened. The overall perspective of the parent's was a lack of cultural understanding, and growing frustration with the lack of information and services provided for parents (Lewig et al., 2010).

The Lewig et al. (2010) study illustrates how the majority of parenting issues faced by refugee families (alleged physical abuse, neglect, and exposure to domestic violence) can be explained through a lack of cultural understanding coupled with the pre and post migration stresses. While these issues are also experienced by immigrant families, refugees often experience a feeling of helplessness due to the lack of power or decision over their circumstances that most immigrants do not face. This feeling of helplessness over life decisions as well as possible traumatic events experienced by refugees often place them at a much higher risk of mental health issues than other types of immigrant families (Daud et al., 2008; Silove, Steel, McGorry, & Mohan, 1998).

Many studies have noted the detrimental impacts of refugee experiences on parent-child relationships. However, research has also reported that allowing for emotional expression,

supportive family relationships, and positive peer relationships can act as a buffer against negative impacts associated with refugee status (Daud, Klintonberg, & Rydelius, 2008; Werner and Smith, 1992). Werner and Smith suggested that one of the factors necessary for an individual to compensate for high levels of uncertainty and adversity is a strong family unit, defined by high levels of family cohesion, structure, emotional support, warm relationships, and a close bond to at least one caregiver (Werner and Smith, 1992).

A recent study by Daud, Klinteberg, and Rydelius's (2008) assessed the affects of parental trauma due to refugee experiences on a wide array of children's development. The sample consisted of 80 refugee children, 40 of whose parents had been tortured in Iraq before moving to Sweden and 40 from Egypt, Syria, and Morocco whose parents had not experienced any torture. Results indicated that children of parents suffering from PTSD/PTSS who had stronger family and peer relations were not as likely to developed PTSD themselves than children with parents suffering from PTSD/PTSS who did not have these supports (Daud, Klintonber, & Rydelius, 2008). This study shows that while parental trauma may put children at a higher risk for their own mental health problems, supportive family and peer relations may act as a protective factor. This has important implications for refugee parent-child relationships in that while external factors due to refugee status may have negative implications for their children, parents can lessen that negative impact by providing children with a strong sense of family cohesion.

Theoretical Perspective

Attachment Theory

Attachment is one of the most studied concepts in child development. Based on the groundbreaking work of John Bowlby, attachment theory is now one of the most well known

theories in the social sciences. A wide domain of disciplines from psychology to anthropology and even biology use attachment theory to guide research. The basis of attachment theory is rooted in an evolutionary perspective, in which the context and environment are the major factors influencing an individual's developmental trajectory. Attachment theorists predict that infants should seek to maintain proximity to a dependable caregiver as this is thought to be an adapted mechanism that would have promoted survival in the environment of evolutionary adaptation (EEA; Bowlby, 1969; Lamb, Bornstein & Teti, 2002). Since, in the early stages of life, infants have no ability for locomotion in order to move closer to their caregivers, they must use other cues such as crying to elicit their caregiver to approach them. Likewise, with this idea comes the basic assumption that, adults are predisposed to respond to infant signals of distress, a concept that attachment theory embraces. Therefore, one of the basic tenets of attachment theory is that, attachment behaviors (i.e., crying, smiling, reaching) act as a survival mechanism promoting mother-infant proximity (Lamb et al., 2002). Attachment behaviors are behaviors displayed by children in an effort to elicit caregiver proximity in order to gain comfort, nourishment, or security (Lamb et al., 2002). Attachment behaviors are often displayed due to some type of stress (usually hunger or anxiety due to unfamiliar surroundings or person) and the child searches for physical proximity to receive comfort (Bowlby, 1982).

Both universal stages and individual differences have been identified in the process of attachment. The universal stages of attachment are usually thought of as the processes that make up attachment whereas, the individual differences in attachment are usually due to differences in early infant-caregiver interactions and individual characteristics such as personality (i.e., infant temperament, caregiver warmth) (Lamb et al., 2002). Bowlby (1969) identified four stages in the infant-caregiver attachment process: newborn indiscriminate social responsiveness stage, 1-2

months; the phase of discriminating sociability, from 2-7 months; maintenance of proximity to a discriminate figure by means of locomotion as well as signals occurs from 7-24 months; and finally the goal-corrected partnership phase emerges from 3 years on (Bowlby, 1969).

The first stage identified as newborn discriminate social responsiveness phase is characterized by the development of social cues to motivate a caregiving response from adults. Crying is one of the most effective tools the infant has in this stage to elicit adult caregiving behavior, this is also thought to be the first attachment behavior to emerge in infants. The next attachment cue to form is usually the infant's use of smiling. This can elicit strong reactions from caregiver, just as crying does. Smiling typically acts as a way to keep adults in close proximity to the infant (Lamb et al., 2002). In this first stage of the attachment process, infants are able to elicit caregiving and control their proximity to adults without the use of locomotion. The key difference in defining the first stage of attachment is that infants are indiscriminate in terms of who there are eliciting with their cues; they seek proximity and care from anyone who is willing to provide it (Lamb et al., 2002). However, during this first stage, infants do come to learn who responds to their distress signals, and start to associate security with the most consistent caregiver. Attachment theory suggests that recognition of primary caregivers shows the infants transition to the second stage of the attachment process (Bowlby, 1969).

The second stage, discriminating sociability, is where infants can distinguish primary caregivers from other adults, and prefer to be in the presence of their familiar caregiver (Bowlby, 1969). During this phase infants start to associate positive feelings of security and comfort with the adults who most often respond to their cues. These familiar, responsive caregivers become the people with whom the infants prefer to interact with and come to seek proximity to. The key characteristic of this stage is the ability of the infant to distinguish primary caregivers, and direct

their proximity seeking behaviors towards the preferred caregivers (Bowlby, 1969). During this stage, the infants also start to connect their behavior with the responses of others. They learn that they can affect others' behavior with their own, and the degree to which they can predict the reliability of their caregivers affects their security in their relationship with their caregiver (Lamb et al., 2002).

The third stage of the attachment process is defined by the infant's emerging ability to move around and gain proximity to desired adults on their own. Infants also start to initiate social interaction. During this stage infants also start to display increased separation anxiety, and show signs of distress when an attachment figure leaves the infant (Bowlby, 1969). By the end of this stage infants can better tolerate separation from attachment figures and developed increasing social skills in interaction with less familiar adults and peers (Lamb et al., 2002).

The main ideas behind Attachment theory stem from the notion that a child must create a meaningful bond with a caregiver early in life. This bond paves the way for building meaningful relationships throughout life. In order to feel secure, an infant must trust that their caregiver will meet their basic needs (Bowlby, 1969). This is the basis for building a secure attachment. Once the child has formed a secure attachment with a caregiver, attachment theory predicts that the child will use the caregiver as a secure base in which to explore the world. Infants are more likely to explore their surroundings when a caregiver is present and close by. When the child feels threatened or uncomfortable, he will return to the secure base (i.e., caregiver). Not only is a secure base important for the child's learning through exploration, but Bowlby also uses the secure base concept as a way to determine whom the child is securely attached to across time and place (Bowlby, 1982).

Secure attachment early in life creates the foundation of social competence and building relationships later in life. Attachment theory suggests that securely attached children grow into socially competent adults. These adults are also more likely to have a higher sense of autonomy, better self esteem as well as more effective communication skill with their partner (Rothbaum et al., 2000). If a child does not form a secure attachment with a trusted adult, they often fall under the Insecure/Ambivalent categories of attachment. Insecurely or ambivalently attached children are theorized to grow up to be less independent, more clingy, and in need of social acceptance (Cassidy and Shaver, 1999).

Attachment theory postulates that forming a secure attachment with a trusted caregiver early in life is the basis for healthy social-emotional development throughout life. Without this strong foundation social-emotional development may be hindered and children may not have the necessary skills to build secure relationships later in life. Attachment theory suggests that early attachment is the key component for healthy social-emotional development. The previous sections discussed the universal process of attachment; however, there are also important differences in the attachment process based on infant-caregiver interactions that happen in the sensitive period which occurs during the first six months of life (Lamb et al., 2002). These discrepancies in infant's attachment processes will be discussed in the following section.

Attachment and Culture

It comes as no surprise that the vast majority of attachment research has been conducted with white, middle class families, and therefore much of attachment theory stems from and is used with this same cultural group (Cassidy & Shaver, 2008; Harwood, Miller, and Irizarry, 1995; Rothbaum, Weisz, Pott, Miyake, & Morelli, 2000; van Ijzendoorn & Sagi-Schwartz,

2008). Many scholars have debated the cultural generalizability of attachment theory, saying it is not applicable to cultures other than that around which it was formed.

Rothbaum and colleagues (2000) have made claims against the common over-generalizing of attachment theory. The authors identified and tested three main tenets of attachment theory: the role of caregiver sensitivity in secure attachment, the impact of secure attachment in later social competence, and the use of a primary caregiver as a secure base, across samples in America and Japan. The authors argued that the constructs used to measure attachment are based on western values and do not hold the same meanings for all cultures (Rothbaum et al., 2000). For instance, the article stated that while western cultures value independence, self-reliance, and place less emphasis on unions and others to meet needs, but collectivist cultures such as Japan value interdependence, commitment, and seeking acceptance from others. For these reasons the authors claimed that while collectivist cultures may have more insecurely attached infants than Western cultures, this is not seen as a negative attachment style and is not linked to negative outcomes later in life like it is in America (Rothbaum et al., 2000).

On the other hand, many scholars support the notion that attachment theory is based on universal tenets that can be applied and studied across all cultures. Research has indicated that across a wide range of cultures what experts define as secure attachment and mothers' definition of an ideal child do overlap (Harwood, Miller, & Irizarry, 1995). While mothers' descriptions of an ideal child and researchers' descriptions of a securely attached child are quite similar regardless of culture, their reasons for valuing securely attached children are often different which is consistent with Rothbaum et al.'s (2000) argument. Although some researchers think that attachment is conceptually similar across cultures; there is also variation in behaviors associated with attachment depending on culture (hug versus hand shake). Many attachment

scholars acknowledge the fact that although attachment processes may be universal, they may not look the same depending on culturally constructed social interactions (van Ijzendoorn & Sagi-Schwartz, 2008). For instance, Gusii infants may shake hands with a caregiver with who they are attached upon reunion, where an infant in America may expect a hug. In America, a handshake from an infant may put up a red flag for a lack of secure attachment, but with the Gusii this is a socially appropriate affectionate behavior towards a caregiver (Kermorian and Leiderman, 1986). The pattern and process of attachment remains the same (some sort of affectionate greeting), but the behaviors may be vastly different (handshake and hug) (van Ijzendoorn & Sagi-Schwartz, 2008).

The main debate is whether attachment theory is a universal perspective that can be accounted for across culturally diverse populations, or a process that is only truly represented in the middle-class, western cultures upon which it is based. As of now, there is no definitive evidence disputing the universality of attachment theory, however, there is no solid evidence supporting it either (van Ijzendoorn & Sagi-Schwartz, 2008). One aspect of attachment theory that is pretty much agreed upon is that culture specific language and social interaction styles used by caregivers must be understood and accounted for when assessing attachment (Harwood, Miller, & Irizarry, 1995).

Research Questions

As indicated in the literature review, refugee families experience many challenges such as relocation stressors, loss of family and friends, economic disadvantage, and mental health issues, that place strain on the family. Risk factors experienced by many refugee populations have also been show to negatively affect parental responsiveness or warmth. Many environmental and emotional factors often prevent parents from providing quality care (Daud,

Skoglund, & Rydelius; Diener, Nievar, & Wright, 2003, Evans, 2006; Garmezy, 1987). Less involved parenting may put children at risk for negative social-emotional outcomes. Decreases in parental interaction and warmth have been linked to inability to form a secure attachment with a caregiver, and difficulty forming social relationships later in life (Shaw & Bell, 1993; Shaw & Vondra, 1995). Therefore, these risk factors have the potential to affect the whole family. While the majority of risk factors associated with having refugee status have been shown to affect both maternal responsiveness, and child outcomes, these variables have never been assessed together in a refugee sample. First it is important to look at how maternal responsiveness varies in refugee families as well as if maternal responsiveness is associated with the attachment behaviors in refugee children.

Research has also shown that contextual factors such as neighborhood, family SES, and especially social support, may impact the quality of maternal responsiveness (Klebanov, Brooks-Gunn, & Duncan, 1994; Shaw & Vondra, 1995; Werner & Smith, 2001). Social support has been shown to have a strong relationship with both parenting quality and child outcomes (usually via maternal responsiveness) (Burchinal et al., 1996; Chase-Lansdale, Brooks-Gunn, & Zamsky, 1994; Contreras, Mangelsdorf, Rhodes, Diener, & Brunson, 1999; Ensor & Hughes, 2010; Hashima & Amato, 1994). Social support is thought to act as a buffer against certain risk factors such as poverty and mental illness (Price et al., 2010) and may be especially important in refugee families who may be facing a number of these risk factors.

Due to the cumulative risks experienced by many refugee families, examining maternal responsiveness in refugee families may provide a unique chance to look at how the culmination of risk affects parenting quality. The purpose of this research is to examine how caregiving quality predicts infant and young children's social-emotional behavior. More specifically, to

identify the role that maternal responsiveness plays in children's social-emotional and attachment behaviors, as well as consider the affect of social support from extended kin on maternal parenting behaviors in Knoxville's Burundian refugee population.

Research question 1. How and to what extent do child attachment behaviors vary according to maternal responsiveness/warmth behaviors among Burundian refugees?

It is predicted that while levels of maternal responsiveness and warmth may be lower among the Burundian refugees than other populations, these constructs will function the same as indicated in previous research. Therefore, it is predicted that both maternal responsiveness and maternal warmth will have a positive relationship with child attachment behaviors.

Does maternal responsiveness or maternal warmth more often predict child attachment behaviors?

Does maternal warmth and responsiveness vary according to the child's age and gender?

Research question 2. In a post-migration Burundian refugee community, how and to what extent does presence of social support affect maternal responsiveness/warmth?

It is predicted that the higher the amount of reported social supports by the mother, the higher the observed maternal responsiveness and warmth behaviors.

Is social support more highly correlated with maternal warmth or responsiveness?

Chapter 3.

Methods

Participants

The present study utilized existing data that was collected for a larger study of caregiver-child interactions among Burundian refugees living in Knoxville, TN. There were 21 participating households in the study. One child per household between the ages of 3 and 35

months, and their mothers were included in the study.

Burundian Refugee Community in Knoxville. Since gaining independence in the 1960's Burundi has experienced ongoing political conflict between the Hutu and the Tutsi forcing many Burundians to flee their country for safety. Termed the "1972 Burundians," most of Knoxville's Burundian community fled Burundi in 1972 and ended up in refugee camps in neighboring countries of Tanzania and Kenya, Congo, and Rwanda (Bates, Njororai, Ejike-King, Rufyuri, & Burman, n.p.). Most of the Knoxville Burundians lived in these camps for about 30 years until 2006 when Tanzania closed the camps (Bates et al., n.p.). At that time the UN stepped in and relocated the refugees with most ending up in the US, UK, and Australia (Williams, 2010).

Approximately 50 Burundian families ended up in Knoxville, TN. Most families were placed in subsidized government housing and have lived in the U.S. for around 5 years (Bates et al., n.p.). Most families in the current study have about 5 people living in their homes with the average number of children per family being close to 4. While families were placed in homes with nuclear family members, it is clear from the demographic interviews that many live within walking distance of extended family. Most of the families also have friends that live close by. Knoxville's Bridge organization has helped most of the families find jobs. More than half of the fathers in the current study had jobs, and about half of the mothers worked. Other organizations, such as Solidarity, Development, and Light Association (SODELA), a non-profit organization that was started and is run by Burundian refugees, aids the refugee community by providing ESL classes, and community events. Below is a table that provides specific family characteristics of the families in the current study.

Table 1. Family and Child Characteristics

Percent of male focal children	33%
Percent of female focal children	66%
Percent of focal children who were infants (0-12 mo)	48%
Percent of focal children who were toddlers (13-35 mo)	52%
Focal children's average number of siblings	2.83
Primary caregivers' average number of years in the U.S.	4.62
Primary caregivers' average number of years in camps	15.11
Countries of camps lived in by primary caregivers	Tanzania, Kenya, Congo
Average number of people living in participating homes	5.45
Percent of fathers employed	57%
Percent of mothers employed	52%
Percent of families with extended family living close by	57%
Percent of families with friends living close by	95%

Note: Close by is defined as living within the same housing community or a neighboring community within Knoxville.

Procedure

Access to participants was gained through Healthy Transitions, a UT research project directed by Dr. Denise Bates. Dr. Bates and the Healthy Transitions team have created trusting relationships with Knoxville's Burundi community through years of research and service work. All families who had a child of this age were invited to participate; there were no other exclusion criteria for participants. Incentives for the participating families were given. Each family received a \$10 grocery store gift card upon completion of every home visit. The families were

visited on 4 occasions: demographic interview, and 3 child observations. Thus each family received a total of \$40 worth of gift cards.

The study consisted of demographic interviews as well as child observations. Each family was visited a total of 4 times; once to complete the consent form and the demographic interview with the identified focal child's primary caregiver, and for 3 focal child observations. All interviews were conducted with a UT faculty or a trained student, and translated into Kirundi or Swahili by a hired translator. The primary translator, also a member of the Burundi community, initiated contact with participants and set up first visit with the family. The first visit to the home consisted of consent procedures and the structured interview. Upon arrival to the home, family was read the consent form by the translator and asked to sign if they agreed.

Demographic interview. The first portion of data collection was a demographic interview with the focal child's (child in household between 3 and 35 months) parent or primary caregiver. All interviews were recorded using a small handheld digital recorder. During the interview, the UT data collector asked each question in English, and then the translator restated the question in Kirundi—the translator then repeated the participants answer in English for the data collector to record on the interview form. The interview contained information on: family structure, number of people in the family, names, and ages of all family members; gender, place of birth, and age of relocation. The interview also covered caregiving and household duties, who helps care for the children, whether the parents and other adult family members work in or outside the home.

Observation of children's daily caregiving experiences. Observations were conducted using an on the mark method. The observer wore an earpiece with a recorded sequence to direct them to record behaviors. Observations were recorded in 30 second intervals with 20 seconds of

observation time followed by 10 seconds of recording time. All observers were trained in the method and required to pass reliability standards of 90% reliability on each code before beginning observations. During data collection 10% of observations in the field were double-coded to re-assess inter-rater reliability. Each child was observed for a total of 4.5 hours; 1.5 hours on three different days. Each child was observed in the morning (9am-11am), midday (12:30pm-2:30pm), and evening (4pm-6pm). The pre-determined behaviors were recorded on the codesheet at 30-second intervals. The behaviors on the codesheet focus on interactions with caregivers, both child and caregiver initiated, and social-emotional behaviors. Following the observations, observers took retrospective field notes which included descriptive, methodological, and interpretive notes.

Variables

Three new variables were created from the list of behavioral codes used in the previous research. Behavioral codes were combined to make-up each of the new variables used in this study. All codes were examined only during observations in which the mother was present.

Both maternal responsiveness and maternal sensitivity have been linked to child outcomes (Brophy-Herb et al., 2011; Davidov & Grusec, 2006; Evans, Boxhill, & Pinkava, 2008; Shaw & Vondra, 1995). Maternal responsiveness is often characterized by aspects of warmth, amount and quality of interaction between mother and child, or the nature of maternal reaction to child distress (Brophy-Herb, Schiffman, Bocknek, et al., 2011; Davidov and Grusec's, 2006; Werner and Smith, 2001). Maternal sensitivity and warmth often fall under the umbrella of responsiveness, but are more specific dimensions of maternal responsiveness. Maternal warmth is characterized by expression of positive affect or affection for the child both spontaneously and in response to the child's introduction of these behaviors (Davidov & Grusec, 2006). Past

research has shown that both responsivity and warmth are important when considering the mother-child relationship, however, there has been little research showing differentiating affects of each (Davidov and Grusec, 2006). Although the affects are not clearly understood, Davidov and Grusec (2006) argue that these aspects of maternal behavior do need to be differentiated since they require different skills from parents and serve different functions in children's development. Therefore, this study will consider both maternal responsiveness and warmth which are commonly linked to child attachment behaviors.

Maternal Responsiveness. Maternal responsiveness is characterized by caregiving behaviors that mothers use to respond to their child's behavior. This variable was created by examining instances in which mothers responded with soothing, care (such as grooming or changing diaper), or feeding to infant/toddler's negative emotions (i.e., fussing and crying). Maternal responsiveness was calculated by identifying every instance in which the child fussed or cried, and totaling the instances in which mothers responded with soothing, care, or feeding within 6 intervals (3 minutes), and then dividing the total responses by the number of observation point mothers were present. The time period of 6 intervals was chosen based off of the examination of the data. After reviewing the observation sheets, it was clear that most responsive behavior in this sample was initiated by mothers within 6 intervals. However, maternal responsiveness was also revised to identify whether group differences were due to amounts of fussing and crying, or differential treatment of the mother. The revised maternal responsiveness variable was created by calculating the proportion of fussing and crying in which the mother responded with soothing, care, or feeding. Because the soothing caregiving, and feeding codes were not mutually exclusive, when the codes occur simultaneously they were counted as 1 instance of responsiveness rather than 2. The responsiveness codes were tested for inter-rated reliability in

10% of the observations. Cohen's Kappas for soothing, caregiving, and feeding were calculated and each showed agreement of 1.00 between observers.

Maternal Warmth. Maternal warmth is a more specific dimension of maternal sensitivity representing aspects of warmth, affectionate behaviors, and emotional synchrony between mother and child. Behavioral codes maternal physical positive affect and maternal non-physical positive affect were used as indicators of maternal warmth. Rates of positive affect were calculated by combining the two codes and prorating them to the amount of observations points that the child was observed in the presence of their mother. Because these codes are not mutually exclusive, when the codes occurred simultaneously they were counted as 1 instance of warmth rather than 2. Codes for warmth variable were tested for inter-rater reliability. Cohen's Kappas for physical positive affect and non-physical positive affect were calculated and each showed agreement of 1.00 between coders.

Child attachment behaviors toward Mother. Child attachment behaviors represent a secure, trusting bond between the child and mother. Observational codes for child attachment behaviors include: infant/toddler vocalizes to mother, and infant/toddler smiles at mother, infant/toddler laughs at mother, infant/toddler fusses for mother, and infant/toddler cries for mother. Only these attachment behaviors were chosen from the codes since these were the only behaviors that both the infant and toddler groups could perform. Rates of child attachment behaviors were calculated by combining the codes and prorating them to the amount of time the child was observed when the mother was present. When codes occurred simultaneously they were counted as 1 instance of child attachment behaviors rather than 2 or more. Codes for the child attachment variable were also tested for inter-rater reliability. Cohen's Kappas showed that observers were in high

agreement on all codes: .89 for vocalize, .98 for smile, 1.00 for laugh, 1.00 for fuss, and 1.00 for cry.

Social support. Initially social support was determined from interview questions asking who lives in this house, and how they contribute. Any person living in the home identified and contributing to the household was coded as one source of social support. Thus, for each household a social support score was calculated by the number of adults (i.e. 18 or older) who live in the household. However, that measure produced little variation, so social support was reconceptualized to include any person who was reported as helping the mother in anyway including husband, children, family, friends, and community organizations. The new social support was called perceived social support. Although past research has shown social support to be a strong moderating variable of the parent-child relationship (Burchinal et al., 1996; Chase-Lansdale, Brooks-Gunn, & Zamsky, 1994; Contreras, Mangelsdorf, Rhodes, Diener, & Brunson, 1999; Ensor & Hughes, 2010; Hashima & Amato, 1994) this study was not building a model, but working under the assumption that social support is in some way related to maternal responsiveness and warmth. Due to the small sample size, it was beyond the scope of the study to investigate this relationship.

Analysis

Because of the small sample size descriptive statistics were the emphasis of the analysis. Regression analyses were conducted, but because of such a small sample, any significant effects ($p < .05$) were modestly interpreted. Multiple linear regressions were used to analyze the data using the statistical software program SPSS 19. A separate regression was conducted to evaluate each of three research questions. Before analyses were conducted linearity of the variables was tested by examining a bivariate scatterplot with each of the independent variables and the

dependent variable. A histogram of residuals was also produced through SPSS to test normality of the residuals. All tests that yielded significant ($p < .05$) and nearly significant ($p < .10$) p-values were presented since the focus of this study was primarily on describing rather than testing.

How and to what extent do child attachment behaviors vary according to maternal responsiveness and warmth behaviors?

For the first research question several aspects were examined using descriptive statistics. Before examining relationships between child attachment behaviors and maternal behaviors, overall trends of how often mothers were present with their child were examined. Individual rates of maternal responsiveness/warmth and child attachment behaviors, including mean scores and standard deviation, were examined for the overall group. Rates of maternal responsiveness compared to maternal warmth for the group were reviewed using repeated measures t-tests. Finally, relationships between maternal responsiveness and child behaviors, and maternal warmth and child behaviors were examined using Pearson correlations.

Does maternal responsiveness or maternal warmth better predict child attachment behaviors?

A regression analysis was used to examine the extent to which maternal responsiveness and maternal warmth predicted child attachment behaviors. Maternal warmth and maternal responsiveness were entered into the model simultaneously as the independent variables and child attachment behaviors were entered as the dependent variable. SPSS was used to run the regression with an alpha value of .05 to determine significance. The tolerance level was examined to determine if any multicollinearity issues were present. If a tolerance level lower than .1 was shown, the variables would have been collapsed into a single variable. Pearson

correlations were also conducted to assess the relationship between social support and maternal responsiveness and social support and maternal warmth.

How does maternal warmth and responsiveness vary according to the child's age and gender?

Variation in levels of maternal warmth and responsiveness as well as child attachment behaviors, aggregated by child age groupings (infants 3-12 months in one group, and toddlers 13-35 months as the second), and gender were assessed using t-tests.

How and to what extent does perceived social support predict maternal responsiveness and warmth and which is more highly correlated with social support?

Descriptive statistics were used to examine rates of maternal responsiveness, maternal warmth, and social support. Pearson correlations of the relationship between social support and both maternal responsiveness and warmth were conducted.

A regression analysis was conducted to examine the extent to which social support predicted maternal responsiveness and warmth, with these variables entered into the model as the dependent variables and social support was entered as the independent variable. For the social support variable, two separate scores were considered. Originally, I had intended to enter the number of adult caregivers living in the home into the multiple regression analysis. However, due to the limited variability of this measurement ($M = 1.95$, $SD = .50$), this was problematic. Thus, I constructed a second social support variable that represents the number of people the mother reported as helping her in any way. I refer to this new variable as “perceived social support.” After all the variables were entered, SPSS was used to run the multiple regression analysis with a preset alpha value of .05 to determine if the results were significant. Tolerance level was examined to determine if any multicollinearity issues were present, especially between

the maternal responsiveness and maternal warmth variables. If a tolerance level lower than .1 was shown, the variables would have been collapsed into a single variable.

How do maternal responsiveness, maternal warmth, and social support predict child attachment behaviors?

A regression analysis was used to determine the extent to which maternal responsiveness, maternal warmth, and perceived social support predicted child attachment behaviors. Linearity of the variables was also tested by examining a bivariate scatterplot with each of the independent variables and the dependent variable. A histogram of residuals was produced through SPSS to test normality of the residuals. For the regression analysis perceived social support, maternal responsiveness and maternal warmth were entered as the independent variables and child attachment behaviors as the dependent variables. SPSS was used to run the multiple regression analysis with a preset alpha value of .05 to determine if the results were significant. Tolerance level was again examined to determine if any multicollinearity issues occur. If there was a tolerance level lower than .1, the variables would have been collapsed into a single variable.

Chapter 4.

Results

Maternal Behaviors and Child Attachment Behaviors

It was predicted that both maternal responsiveness and maternal warmth would have a positive relationship with child attachment behaviors. Overall, mothers ($N = 21$) showed more warmth ($M = 1.95$, $SD = 2.86$) than responsiveness ($M = 1.26$, $SD = 1.49$), and results of a Pearson's correlation showed that responsiveness and warmth were not related. Therefore, mothers who showed more warmth were not necessarily more responsive, and mothers who were more responsive did not necessarily show more warmth. Results of a Pearson's correlation

indicated that maternal responsiveness ($M = 1.26, SD = 1.49$) and Child Attachment behaviors ($M = 6.49, SD = 3.35$) positively related in that mothers who were more responsive had children who showed more attachment behaviors towards their mother, Pearson's $r(21) = .41, p = .065$. However, maternal warmth ($M = 1.95, SD = 2.86$) and Child Attachment behaviors were not related.

Table 2. Descriptive Statistics for Study Variables

	<i>N</i>	<i>Mean</i>	<i>SD</i>
Mother Present	21	74.92	26.49
Maternal Responsiveness	21	1.26	1.49
Maternal Warmth	21	1.95	2.86
Child Attachment Behaviors	21	5.04	2.21
Social Support	21	4.10	1.51

Notes: The mean for Mother Present represents the percent of time the mother was present during the observations. The mean for Social Support represents the number of people the mother reported as helping her in any way. The means for the other variables represent the percent of time the behavior occurred when the mother was present.

A multiple linear regression was conducted to examine the extent to which maternal responsiveness and maternal warmth predicted child attachment behaviors. The independent variables were maternal responsiveness and maternal warmth. The dependent variable was child attachment behaviors.

It was predicted that children receiving higher levels of maternal responsiveness and warmth would show higher levels of attachment behaviors. However, a non-directional hypothesis was tested because a result in either direction would be important.

The regression indicated that maternal responsiveness was positively associated with child attachment behaviors, $\beta = .468$, $t(20) = 2.25$, $p = .037$. Higher maternal responsiveness was associated with higher child attachment behaviors. However, maternal warmth was not predictive of child attachment behaviors, therefore maternal responsiveness better predicted child attachment behaviors than did maternal warmth.

Maternal Behaviors and Child Characteristics

Although infants ($n = 10$, $M = 5.54$, $SD = 1.97$) and toddlers ($n = 11$, $M = 4.58$, $SD = 2.41$) showed similar amounts of attachment behaviors toward mothers, results of a t-test showed that infants ($M = 2.21$, $SD = 1.68$) received more responsiveness from mothers, $t(19) = 3.31$, $p = .008$, than toddlers ($M = .40$, $SD = .43$). An examination of the means shows that infants received more than four times more responsiveness from mothers than did toddlers. However, infants ($M = 3.08$, $SD = 3.56$) received only slightly more warmth from mothers than toddlers ($M = .94$, $SD = 1.61$) with the t-test showing only marginally significant differences in the means, $t(19) = 1.80$, $p = .087$. Mothers seemed to show more responsive behaviors to infants fussing and crying than to toddlers fussing and crying, however levels of maternal warmth were more consistent between the two groups. To further examine the differences of responsiveness between infants and toddlers, the responsiveness variable was disaggregated and t-tests were run to examine each type of responsiveness (soothing, caregiving, feeding) across groups. Results of the t-tests showed that infants received ($M = .61$, $SD = .69$; $M = .92$, $SD = .62$) significantly more soothing, $t(19) = 2.57$, $p = .029$, and feeding, $t(19) = 4.50$, $p = .001$, as a response to fussing and crying than toddlers ($M = .03$, $SD = .11$; $M = .03$, $SD = .07$), but there was little difference between the groups for levels of mother's responsive caregiving. To assess if these result may be due to variation in the rates of fussing and crying between infants and toddlers a t-test was conducted.

Results indicated that infants ($M = 4.71, SD = 2.42$) did fuss and cry more than toddlers ($M = 1.91, SD = 2.05$), $t(19) = 2.87, p = .01$.

While there were differences of maternal warmth and responsiveness depending on the child's age, the child's sex did not relate to differences in maternal behaviors. Although the t-tests did not indicate significant differences among these variables when accounting for sex, Table 2 shows some variation of mean scores between groups. Overall, boys seemed to receive more responsiveness and warmth from mothers than did girls, and boys also seemed to show more attachment behaviors than did girls. Therefore, a t-test was conducted to assess whether the individual types of responsiveness (soothing, caregiving, and feeding) may have differed by sex. No differences in responsive soothing and feeding were found between boys and girls, however boys ($M = .91, SD = .73$) received more responsive caregiving than girls ($M = .30, SD = .43$), $t(19) = 2.42, p = .026$. To examine whether the differences found could be a result of differences in rates of fussing and crying, a t-test was conducted to assess the variation of fussing and crying between boys and girls. Results of a t-test showed that boys did in fact ($M = 4.97, SD = 2.23$) fuss and cry more than girls ($M = 2.38, SD = 2.4$), $t(19) = 2.39, p = .027$.

Another set of t-tests were run to examine whether group differences in maternal responsiveness were potentially related to the different amounts of fussing and crying by age and gender or simply differential treatment by mothers. The revised maternal responsiveness variable was created by combining all instances of responsive soothing, caregiving, and feeding, and prorating it to levels of fussing and crying for each infant. The variable was disaggregated and each of the independent codes (soothing, caregiving, and feeding) were also prorated to fussing and crying to determine if any these responsive behaviors differed depending age or gender of the child. T-tests were conducted to compare group differences of age and sex with the

individual variables of responsive soothe, caregive, feed, and the combined maternal responsiveness variable. Results of the t-tests revealed that levels of maternal responsiveness did not appear different for boys and girls when accounting for variation in fussing and crying, however infants ($M = 12.80$, $SD = 15.06$) did receive more responsive soothing than toddlers ($M = .85$, $SD = 2.56$), $t(17) = 2.47$, $p = .034$. This finding suggests that something beyond levels of fussing and crying contributes to maternal soothing of infants.

Table 3. Maternal Responsiveness, Maternal Warmth, and Child Attachment Behaviors based on Child Age and Sex

	Maternal Responsiveness			Maternal Warmth		Child Attachment Behaviors	
	N	Mean	SD	Mean	SD	Mean	SD
Infant	10	2.21	1.68	3.08	3.56	5.54	1.97
Toddler	11	0.40	0.43	0.94	0.43	4.58	2.41
Male	7	1.99	1.84	2.79	3.78	5.51	2.45
Female	14	.90	1.12	1.54	2.34	4.81	2.14

Note: The means for the variables represent the percent of time the behavior occurred when the mother was present

Perceived Social Support and Maternal Behaviors

It was predicted that reported social supports by the mother would be positively associated with levels of maternal responsiveness and warmth behaviors. Although warmth ($M = 1.95$, $SD = 2.86$) was observed more frequently than responsiveness ($M = 1.26$, $SD = 1.49$), neither were associated with perceived social support. A linear regression with maternal responsiveness and warmth entered as the independent variables and social support as the dependent variable was conducted. Linearity and normality were confirmed before running the

test. The model was not significant. In this sample, neither warmth nor responsiveness was related to the mother's perceived social support.

Maternal behaviors, Social Support, and Child Attachment Behaviors

A linear regression with perceived social support, maternal responsiveness and maternal warmth as the independent variables and child attachment behaviors as the dependent variable was used to examine the associations between child attachment behaviors and the independent variables. Before running the analysis, linearity of the variables and normality of residuals were verified.

Results of a linear regression indicated that perceived social support, and maternal warmth did not predict child attachment behaviors, however, maternal responsiveness once again was predictive of child attachment behaviors, $\beta = .468$, $t(20) = 2.25$, $p = .037$. Results of this study show that perceived social support does not seem to have a relationship with maternal responsiveness or warmth in this sample, and the only variable that predicted child attachment behaviors was maternal responsiveness.

Chapter 5.

Discussion

The current study assessed the relationship of social support, maternal responsiveness, and maternal warmth on child attachment behaviors in a post migration Burundian community. Due to the descriptive nature of this study, and the small sample sized, both significant and marginal results are discussed.

It was predicted that both maternal responsiveness and maternal warmth would have a positive relationship with child attachment behaviors. Results indicated that maternal responsiveness predicted child attachment behaviors, but maternal warmth and child attachment

behaviors were not associated. Past research has shown maternal response to distress to be a better predictor of child attachment behaviors than warmth alone (Crandell, Fitzgerald, & Whipple, 1998; Del Carmen, Pederson, Huffman, & Bryan, 1993; Isabella & Belsky, 1991; Ispa, Fine, Halgunseth, Harper, Robinson, Boyce, Brooks-Gunn, & Brady-Smith, 2004; McElwain & Booth-LaForce, 2006). However, research has also shown both variables to be highly predictive of child attachment behaviors (Bakermans-Kranenburg et al., 2004; Brophy-Herb et al., 2011; Davidov & Grusec, 2006; Leerkes, Blankson, and O'Brien, 2009; Shaw & Vondra, 1995).

Inconsistencies with other research may be due to measurement issues. In the current study the responsiveness variable captured some responsive warmth with soothing, but the warmth variable did not capture responsiveness. Since sensitivity and warmth are only appropriate when the mother is able to recognize and interpret the infants signals correctly, and respond appropriately (Kivijarvi, Raiha, Virtanen, Lertola, & Piha, 2004), and the warmth variable measured all instances of physical affection without considering infant cues, the warmth variable may have not been a good indicator of appropriate or synchronous warmth. Instead the affectionate behaviors may have been unsolicited by the child, or displayed at an inappropriate time. For example, Crandell et al., (1998) found in a study of twenty –six mother-toddler dyads, that children of mothers who showed high levels of synchrony as well as positive maternal affect sought more interaction and were compliant than children whose mothers were intrusive and showed less positive affect. McElwain & Booth-LaForce (2006) also found that while maternal sensitivity in response to distress was associated with secure attachment in 357 mother-infant dyads, sensitivity to non-distress was not associated with secure attachment.

Results indicated that mothers did show more responsiveness and warmth to infants than to toddlers, and more specifically more responsive soothing and feeding. This could be due to the

fact that many of the toddlers in our sample had younger siblings (27%), and thus mothers were often caring for the younger sibling and either older siblings or other adults were often caregivers for the toddler. This pattern has been found among many Central and East African communities (Fouts & Brookshire, 2009; Hawkes, O'Connell, & Blurttton, 1997; LeVine et al., 1996). Fouts and Brookshire (2009) found that in a sample of Aka foragers living in Congo, toddlers who had younger siblings were cared for more often by alloparents while toddlers who did not have a younger sibling were fed more often by their mother.

The finding that mothers showed more responsiveness to infants than toddlers is also consistent with Attachment Theory in that infants who lack the ability to physically seek their caregivers, use fussing and crying to elicit their caregiver presumably more frequently than toddlers who can physically seek care (Bowlby, 1969; Lamb et al., 2002). Therefore, due to the measurement of the variable, responsiveness only happens after the child fusses or cries, infants may have used this technique to elicit care more than toddlers since toddlers are able to implore other strategies to receive care such as seeking to be held, approaching, crawling in lap, they do not need to use fussing and crying as much. This could partially explain why the data showed that infants were responded to more often than toddlers.

Results also showed differences in the amounts of responsive soothing and feeding between infants and toddlers. Therefore, it is likely that infants received more responsive feeding because they not only fussed and cried more, but many (90%) were also nursing. However, when accounting for variation in rates of fussing and crying, only the difference in soothing remained. Therefore, something beyond levels of fussing and crying appear to have contributed to the difference in rates of responsive soothing between infants and toddlers. Many studies have shown that mothers tend to be more sensitive to infants signals than to toddlers or older children

(Broom, 1998; McElwain & Booth-LaForce, 2006). McElwain & Booth-LaForce (2006) examined maternal sensitivity to distress and non distress in 230 mother-infant dyads at both 6 and 15 months. Results found that mothers showed higher rates of sensitivity to distress when infants were 6 months old compared to 15 month olds.

Although only significant differences in responsive caregiving were found for boys and girls, an examination of the means showed that mothers also appeared to exhibit less overall responsiveness and warmth toward girls than boys. These gender differences may be related to the fact that boys were observed fussing and crying more frequently than girls in this study. While most previous research has shown that boys do not actually fuss more than girls (Alvarez & St James-Robers, 1996; van IJzendoorn & Hubbard, 2000), Kivijarvi et al., (2004) showed that mothers perceived boys to fuss more often than girls, and at three months of age, girls were more content than boys. Lewis (1972) also stated that boys actually do cry more than girls, which he hypothesized could be due to the fact that boys often have a more traumatic birth experience than girls. In the present study, since boys did cry more frequently than girls, mothers had more opportunity to respond to boys than to girls. This is mostly likely the explanation for the differences in the maternal responsiveness by gender since results also showed that there were no differences in maternal responsiveness between the groups when the amount of time the infants and children actually fussed and cried was accounted for.

It was predicted that the higher the amount of reported social supports by the mother would relate to higher amounts of maternal responsiveness and warmth. However, results showed that neither was significantly associated with social support. Results also indicated that social support did not predict maternal responsiveness, maternal warmth, or child attachment behaviors.

These findings are not consistent with most literature (Burchinal et al., 1996; Ensor & Hughes, 2010; Hashima & Amato, 1994), but could be explained by the measurement variations in the present study compared to past research. Much of the research looking at the impact of social support on parenting has measured social support as a moderator that buffers the impact of parenting and environmental stress (Burchinal et al., 1996). The measures used in other studies are often more comprehensive than the measure of social support in the present study (Burchinal et al., 1996; Chase-Lansdale et al., 1994; Pianta, Sroufe, & Egeland, 1989). For example Pianta, Sroufe, & Egeland (1989) used a combination of life stress inventories, a six point emotional support survey, and relationship satisfaction surveys to assess maternal social support of 135 disadvantaged mothers. While most studies assessing maternal social support do include social support measures similar to the measure in the current study (mothers' self report), many also are able to evaluate the risk context of the individual families either by stress inventories, SES measures, or income level (Ensor & Hughes, 2010; Hashima & Amato, 1994; Pianta et al., 1989). Perhaps social support is better assessed in combination with risk. While the population in this study as a whole consists of high risk families, this concept has not been directly assessed. Perhaps the non-significant findings in the present study are due to the inability to compare individual family risk relative to social support. Hashima & Amato (1994) showed that families in need of more assistance benefited more from increased social support. However, in the current study, there is presumably relatively little variation in risk (although not directly measured) in that all families are living in government housing in similar neighborhood contexts, all families have experienced stresses due living in refugee camps, relocation, and acculturation. Participants in the present study were more similar than different compared to the Hashima & Amato (1994) study which compared low income and middle class families.

In line with that explanation, another explanation for the lack of prediction of social support on maternal responsiveness and warmth may be explained by the amount of stress the mother is experiencing. The presence of stressful events or environments may also reduce the positive effect often seen from social support. Pianta, Sroufe, & Egeland (1989) used a set of measures including maternal life stress survey, emotional support survey, and relationship satisfaction questions to measure the extent of maternal social support of disadvantaged mothers. While they found that social support did predict maternal sensitivity, they also found that stressful events such as lose or unemployment resulted in less sensitive mothering. The population in the currents study is thought to be at heightened risk for depression, mental illness, poverty, perpetual joblessness, and isolation from the community due to their refugee status (Daud et al., 2005; Van Hook, 2003).

While measurement issues and risk contexts could have contributed to the results, some previous research has also shown negative impacts of social support on maternal sensitivity in poverty level African-American families, and Latina adolescent mothers (Chase-Lansdale et al., 1994; Conteras et al., 1999). These studies found that social support as measured by grandmother co-residence, grandmother support and available child care support from family and friends was negatively correlated with maternal sensitivity. Many of the families participating in the current study have extended family including mothers or mother-in-laws that live in the home or within walking distance. Many of the families also rely on extended family and friends to provide childcare while they are working. The reason for the negative effects of family support on maternal warmth and sensitivity could be attributed to the fact that mothers who rely heavily on family supports to care for children may have less opportunity or need to positively interact with

their children. They may focus more of their time on other tasks while friends or relatives care for the children.

Implications

The current study contributes to the existing refugee literature. Until now, no research has looked at the relationship between parents and 3-35 month old children in refugee groups. Much of the refugee literature focuses on mental health and acculturation issues of adult refugees or mental health of older children (Daud et al., 2005; Van Hook, 2003). Very little refugee literature has explored parent-child relationships or other family dyad, and no research has looked at children as young as this sample. This is a major gap in the literature since much research with other populations has shown the extent to which social and emotional development is influenced by parent interactions in infancy and early childhood. This study extends the knowledge base on refugee children's social-emotional development as well as mother-child interactions.

The results showed that there was no significant relationship between mother responsiveness and warmth, and social support. This is an area that needs to be explored in more detail. Future studies should identify culture-specific types of support, multiple dimensions of support including who is providing support, how they are providing support, and if the mothers feel that they need more support, and compare levels of stress and support. Future research should also explore other factors that may impact the mother-child relationship in this population. Future direction should also include examining child relationships with caregivers other than the mother. Since the current study showed few significant relationships between mother behaviors and child attachment behaviors, it is important to examine how other caregivers such as grandparents, older siblings, or extended relatives may impact children's social-emotional development.

Limitations

One limitation to this study is that it only took into account mother's responsivity and warmth. Fathers, grandmothers, and older siblings may also play a big role in providing care for the infants and children in this study. Although the data was prorated to consider only times when mothers were home, the child's primary caregiver may be someone other than the mother.

Another limitation is the measure of social support. The measure was obtained by asking mothers who help them in any way. However, some mothers reported receiving no help from anyone even though a friend or family member may have been providing childcare or other help during the observation. Therefore, the measure used in this study may have not been appropriate to gain an adequate estimate of social support. In line with this limitation is the cultural appropriateness of the variables. The measures of warmth, responsiveness, child attachment, and social support may have not been adequate measures based on cultural differences of this population. While the time sampling methodology and the coding sheet used in the study have been used previously in many cultural and socioeconomic contexts (Fouts & Brookshire, 2009; Fouts, Hewlett & Lamb, 2005; Fouts, Roopnarine, & Lamb, 2007), codes combined to create this studies' variables may not necessarily have been culturally relevant measures. For example, positive physical and non-physical affect may not be a relevant measure of warmth in this Burundian refugee sample. Contextual factors such as post migration and life in refugee camps as well as potential mental health issues may influence how these concepts should be measured. However, since this is the first study looking at these concepts in post-migration refugee families, there has been no past research on cultural relevance of measures.

The use of secondary data analysis is also a limitation to this study. Since the data was collected for a larger study, the measures were not able to be designed to assess the constructs specific to the current study. The study was confined to what data had already been collected.

The process of translating the interview questions from English into Kirundi may have contributed to a misinterpretation of the questions, especially if specific words have different meaning in Kirundi than in English. In line with this limitation, some of the interviews were conducted in Swahili instead of Kirundi, which is not the primary language for any of the participants. However, participants that were interviewed in Swahili were fluent in Swahili.

Summary and Conclusion

This study adds to the literature base on both refugee populations and parent-child relationships by exploring social support, maternal warmth and responsiveness, and child attachment behaviors in a refugee population aged 3-35 months. While this study's purpose was to explain how maternal social support is associated with the relationship between maternal behaviors and child attachment behaviors, the most significant findings turned out to be the differences in levels of maternal responsiveness between groups when considering both age and gender. Other findings showed that the only variable that predicted child attachment behaviors was maternal responsiveness, but the lack of prediction of the other variables is important as well. The lack of significant prediction of variables that have been linked to child attachment in numerous studies could be due to measurement issues. Therefore, future studies should implore more comprehensive measures of each of the variables to determine if the lack of prediction was due to a measurement issue, or perhaps that these variables do not have the same impact on the current population as they do on previously studied groups.

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VITA

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