ACCEPTANCE

This dissertation, MATERNAL CONFIDENCE OF FIRST-TIME MOTHERS DURING THEIR CHILD'S INFANCY by Kendra Russell, was prepared under the direction of the candidate's dissertation committee. It is accepted by the committee in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Nursing in the Byrdine F. Lewis School of Nursing in the College of Health and Human Sciences, Georgia State University.

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2003 **Green, K.**, Ruchala, P.L., & Hall, G. (June 19, 2003). "Confidence in Mothers of Preterm Infants." Poster Presentation. *Regional Research Development Conference*, Atlanta, GA. (Abstract published in conference proceedings).

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ABSTRACT

MATERNAL CONFIDENCE OF FIRST-TIME MOTHERS

DURING THEIR CHILD'S INFANCY

by

Kendra Russell

Motherhood is a rewarding, but challenging experience. Mothers are expected to balance parenting with multiple roles including employment. How mothers adjust is influenced by their confidence in their role, their mental health, the social support from their partner, family, and friends, and their perceptions of their infants (Mercer, 1995). Maternal confidence has been identified in the literature as an essential variable in the adaptation to motherhood and to the maternal role (Mercer, 1986; Walker, Crain, & Thompson, 1986). Low maternal confidence delays the transitioning into the maternal role/identity as well as limits the satisfaction in the mothering role (Mercer, 1986). Having infants with difficult temperament further impedes this transition resulting in frustration with new mothers and possibly depression (Andrews, 1990).

This study used a descriptive correlational design to explore the relationship between infant temperament and selected maternal factors (education, prior childcare experience, social support, and depression) and maternal confidence. A convenience sample of 94 primiparous mothers with infants 6 weeks to 32 weeks participated in this study. SPSS statistical software version 10.0 was used to analyze data and answer the following research questions: 1) What is the relationship between infant temperament, and selected

maternal factors (education, prior childcare experience, social support, and depression), and maternal confidence of first-time mothers during their child's infancy?; 2) What are the differences in maternal confidence between first-time mothers with infants' age 6 weeks - 16 weeks and first-time mothers with infants' age 17 weeks – 32 weeks?

Results revealed statistical significant relationships between infant temperament, social support, and depression with maternal confidence. Social support also had statistically significant relationships with education and depression. Infant temperament, social support, and depression predicted 20.6% of the variance with maternal confidence. There was also a significant difference between groups with mothers' perception of their infants' temperament. Healthcare providers need to be aware that mothers who suffer from depression, have low social support, and perceive their infants to have difficult temperament are at risk for having low confidence in the care they provide for their infants. Further research is needed to explore intervention methods aimed at increasing maternal confidence with new mothers.

MATERNAL CONFIDENCE OF FIRST-TIME MOTHERS DURING THEIR CHILD'S INFANCY

by

KENDRA RUSSELL

A DISSERTATION

Presented in Partial Fulfillment of Requirements for the Degree of Doctor of Philosophy in Nursing in the Byrdine F. Lewis School of Nursing in the College of Health and Human Sciences
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Atlanta, Georgia

2006

ACKNOWLEDGEMENTS

"If I have seen further it is by standing on the shoulders of giants."

- Isaac Newton, letter to Robert Hooke, 1676

I would like to thank my committee: Dr. Cecelia Grindel (Chair) – *Thanks for your encouragement and support. I also want to thank you for your leadership during this process.* Dr. Carol Howell – *Thanks for stepping in when you did.* Dr. Patsy Ruchala – *Thanks for your support and advice. I would like to thank you also for mentoring me as a novice researcher. You came to GSU at the right time for me.*

I would like to thank my colleagues for your encouragement and support. I would especially like to thank Dr. Karen Frith and Dr. Deborah Clark – *Thank you both for your time, support, advice, and encouragement.*

I would like to thank my family. *Thanks you guys for your love and support!*

I would like to thank my participants and those who assisted me with recruitment.

I would like to thank Georgia College & State University Faculty Research committee who partially funded my dissertation.

I would like to thank my husband, Reginald, who has loved me, supported and encouraged me throughout this process. *Thank you for your strength and unconditional love.*

I can do all things through Christ who strengthens me.

Philippians 4:13

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LIST OF ABBREVIATIONS

APA	American Psychiatric Association
BDI	Beck Depression Inventory
BPD	Bronchopulmonary Dysplasia
CDC	Centers for Disease and Control
ICQ	Infant Characteristic Questionnaire
LBW	Low Birth Weight
MCQ	Maternal Confidence Questionnaire
MRA	Maternal Role Attainment
NICU	Neonatal Intensive Critical Care
PRQ - 2000	Personal Resource Questionnaire 2000
PPD	Postpartum Depression
PDSS	Postpartum Depression Scale
SGA	Small for Gestational Age

MATERNAL CONFIDENCE OF FIRST-TIME MOTHERS DURING THEIR CHILD'S INFANCY

CHAPTER I

INTRODUCTION

Giving birth and becoming a new mother can be a rewarding experience. However, we live in an American society where expectations of motherhood are high and where mothers are believed to be responsible for the outcomes of their infants (Eyer, 1992; Mercer, 1995; Rothman, 2000). For example, poor mother-infant relationships have been linked to negative physical and social outcomes such as delayed cognitive development, poor social interaction, delayed growth, and poor weight gain in infants (Mercer, 1995). In addition, mothers are expected to balance motherhood with multiple roles including employment with 68% of married mothers and 77% of single mothers with children under the age of 18 representing the U.S. workforce (U.S. Bureau of Labor Statistics, 2005). Even with high expectations and responsibilities, few interventions focus on the psychosocial and support needs of new mothers caring for their infants. Moreover, postpartum hospital stays are relatively short (24-72 hours), limiting the amount of education and support that healthcare providers may offer in the hospital setting.

How mothers adjust to their new role in face of the family responsibilities, employment demands, and other obligations varies among mothers according to their confidence in the care they provide, their mental health, the social support from their partner, family, and friends, and their perceptions of their infants (Mercer, 1995). Maternal confidence has been identified in the literature as an essential variable in the adaptation to motherhood and to the maternal role (Mercer, 1986; Walker, Crain, & Thompson, 1986). Low maternal confidence delays the transitioning into the maternal role/identity as well as limits the satisfaction in the mothering role (Mercer, 1986), whereas, high maternal confidence helps to achieve maternal role/identity and satisfaction in the mothering role.

Sociodemographic variables such as parity and age, infant temperament, social support, depression, and knowledge of infant development are a few of the variables that have been explored and have been shown to have a relationship to maternal confidence (Mercer & Ferketich, 1995; Golas & Parks, 1986; Ruchala & James, 1997; Zahr, 1991). Although infant temperament, social support, depression, and maternal confidence have been explored in the literature, inconsistencies in their relationships remain and need further investigation. This gap in knowledge needs to be investigated so that the development of maternal confidence can be predicted from antecedent factors in order for nurses to develop interventions that strengthen maternal confidence and improve infant outcomes.

Rubin (1977) defined MRA as both a process of "binding in," wherein a mother becomes attached to her infant and as a process of "maternal role identity," which is how the mother sees herself in the role and how comfortable she is in this role. Rubin's (1977) work focused on maternal role attainment during pregnancy and the first month after birth whereas Mercer (1986) focused her work on pregnancy including concepts from birth through the first year. Mercer (1986) expanded Rubin's definition of maternal role attainment to be defined as when a mother becomes attached to the infant, acquires competence in the care-taking tasks involved in the role, and expresses pleasure and gratification in the role.

Maternal Role Attainment occurs across four stages (Anticipatory, Formal, Informal, and Personal) and is usually acquired by four months postpartum (Mercer, 1991). However, this acquisition may vary among mothers depending on variables such as maternal and infant characteristics, maternal role identity, child outcomes, mother-father relationship, social support, stress, and other community supports (Mercer, 1991). Mercer (as cited in Meighan, 2006) redefines these four stages with Becoming a Mother as 1) commitment and preparation (pregnancy), 2) acquaintance, practice, and physical restoration (first 2 weeks postpartum), 3) approaching normalization (2 – 4 months postpartum) and, 4) integration of maternal identity (4months and beyond).

Maternal role identity in Becoming a Mother involves affective and behavioral components (Mercer, 1986). The affective component is related to the mother's subjective feelings about her ability to care for her infant and the

behavioral component involves her care-taking ability (Mercer, 1986; Rubin, 1984). Maternal confidence, an affective component of maternal role/identity, is defined as the mother's perception of her ability to care for and understand her children (Gross, Rocissano, & Roncoli, 1989). Mercer's model (1991, 2004, as cited in Meighan, 2006) on MRA: Becoming a Mother is placed within Brofenbrenner's (1979) nested circles of the microsystem, mesosystem, and macrosystem (Appendix B). Mercer (1995) contends that Becoming a Mother occurs within the most intimate subsystem, the microsystem, that includes the mother, her infant, maternal role/identity, infant's outcomes, social support, stress, family functioning and the mother-father relationship.

The relationship between a mother and her infant is reciprocal in that the mother often views herself in response to how the infant responds to her and the infant responds to the mother based on the infant's sense of the mother's behavior or mood (Mercer, 1995). The mother's perception of self may be further impacted by her mood and social support (Mercer, 1995). How this intricate relationship between a mother and her infant is fostered during the first year will have implications for how the mother views herself as a parent and the care she provides. Based on the knowledge that these relationships are salient and influence maternal role/identity, the current study was developed to explore the relationship of infant temperament and selected maternal factors (education, prior childcare experience, social support, and depression) with maternal confidence.

Assumptions

The assumptions for this study are based on the assumptions of Mercer's (1981, 1986, 1995) Maternal Role Attainment Model: Becoming a Mother and are as follows:

1. A relatively stable *core self,* acquired through life-long socialization, determines how a mother defines and perceives events; her perceptions of her infant's and others' responses to her mothering, with her life situation, are the real world to which she responds.
2. In addition to the mother's socialization, her developmental level and innate personality characteristics also influence her behavioral responses.
3. The infant is considered an active partner in the maternal role-taking process, affecting and being affected by the role enactment. (Mercer, 1981, 1986).
4. Maternal identity develops concurrently with maternal attachment and each depends on the other (Mercer, 1995; Rubin, 1977).

Summary

Since maternal confidence is essential to the transition of Becoming a Mother through establishing a positive self-identity and affecting maternal satisfaction (Mercer, 1995), it is necessary to continue an exploration of the variables that influence maternal confidence. When the primary variables that affect maternal confidence are known, supportive interventions can be developed. Furthermore, interventions that produce positive outcomes for mothers and their infants can be used as evidence to change public policy aimed

at meeting the needs of mothers in this country. This study begins the process of change and fosters knowledge development about maternal-child relationships as it identifies the primary variables influencing maternal confidence.

CHAPTER II

LITERATURE REVIEW

This review of literature will discuss the variables under study. The literature on infant temperament, social support, depression, and maternal confidence will be presented along with a summary of what is known and where the gaps in this body of literature remain.

Infant Temperament

Infant temperament is defined by the characteristics and behavior of the infant and infants are categorized as having either easy or difficult temperament (Bates, Freeland, & Lounsbury, 1979; Mercer, 1995). Infant temperament has been measured through observation and self-report. Instruments developed to measure infant temperament have evaluated activity level, rhythmicity, approach-withdrawal, adaptability, intensity, mood, persistence, distractibility, threshold, and level of difficulty (Houck, 1999; Seifer, Sameroff, Barret, & Krafehuk, 1994). The focus of research with infant temperament has been explored through instrument development and evaluation, infant development, and mother-infant interactions.

Seifer et al. (1994) compared mothers' self-report with researcher observation measurement methods in determining infant temperament in a descriptive, 8-week correlational study consisting of 50 mother-infant dyads

during the infants' first year of life. The sample consisted of primarily married, Caucasian, middle-class mother-infant dyads. Assessments included home visits for researcher observation, administration of self-report instruments to the mothers between 4-14 months, and laboratory assessments at 6, 9, and 12 months. Satisfactory interrater reliability was reported at the 6-week aggregate with the best reliability for the 8-week aggregate (ranges of reliability .60-.70). The researchers failed to find any significant correlations between mothers' self -report and researcher observed infant temperament. These findings suggest that mothers' perception of infant temperament may differ from observer's rating and warrants further investigation.

Similarly, Beck (1996) suggested that the reliance on maternal self-report for infant temperament may have influenced the findings in a meta-analysis to determine the magnitude of the relationship between postpartum depression and infant temperament during the infant's first year. Beck reported a significant moderate positive correlation between postpartum depression and infant temperament (r = .31) with a moderate effect size by calculating a 95% confidence interval. This meta-analysis contained a sample of 17 studies and a total sample size of 1,353 mother-infant dyads. This report indicated that mothers who suffered from postpartum depression perceived their infants as having difficult temperament. Beck suggested the use of multiple methods for measuring infant temperament to increase reliability rather than relying solely on self-report.

Researchers have investigated whether or not infant temperament is related to developmental competence and self-concept in infancy and toddlerhood. Houck (1999) conducted a longitudinal correlational study examining these relationships. The sample consisted of 126 mother-infant dyads in which the mothers were primarily employed, educated, Caucasian women. The infants' temperament and developmental competence were assessed through observation and mother's self-report questionnaires at the infants' age of 8, 12, 24, and 26 months. Developmental competence was defined as child competencies related to communication, adaptation, and fine and gross motor skills. The findings revealed that infants in the sample were perceived to be the *easiest* during infancy and the most *difficult* during toddlerhood. No significant relationships were reported for infant temperament and developmental competence. However, Houck did report significant differences between infant girls and boys related to developmental competence and self-concept (e.g. self-recognition, autonomy) with girls having the advantage. The results also revealed that the most amount of change in mean scores occurred during 12 to 24 months as compared to 24 to 36 months in developmental and social competence. These findings identify 12 to 24 months as salient times for development and social growth during infancy (Houck).

The literature supports that the mother-infant relationship is impacted by both the infant's temperament and the mother's perception of the infant's temperament (Andrews, 1990; Gorman, Lourie, & Chourdhury, 2001; Wilson, 2000; Zahr, 1991). Wilson (2000) explored the relationship between family

dynamics, paternal and maternal attachment, and infant temperament in a longitudinal study. A convenience sample of 84 (Time 1) and 72 (Time 2) mothers and their partners were included in this study. Data were collected during the third trimester of pregnancy and again when the infant was 8 months old. Wilson (2000) reported significant correlations with the mother's report of stability and infant rhythmicity at 8 months ($r = .32$, $p = .005$). Infant's activity was also significantly correlated with flexibility ($r = .47$, $p = .001$) and clearer communication ($r = .30$, $p = .001$) when the infant was 8 months old. This research suggests a positive link between a mother's interaction (stability and clearer communication) and her infant's temperament (Wilson).

In premature infants, Zahr (1991) examined the relationship among infant temperament, maternal background, social support, confidence, and mother-infant interaction with 49 lower socioeconomic mother-infant dyads in the Neonatal Intensive Care Unit (NICU) and at home when the infants were at 4 and 8 months corrected age. Mother-infant interaction was measured by an observer during feedings and play to document caretaking skills, mother's affective behavior (e.g. mother's response to her infant crying), and baby's social behavior (baby's response to interactions). Significant correlations were found at 4 months with mother-infant interaction and length of hospitalization, birthweight, temperament, and social support. Significant correlations at 8 months were reported with mother-infant interactions, temperament, and social support. Predictor variables for mother-infant interaction at four months were infant temperament and birth weight ($F = 3.45$, $p < .01$). Infant temperament was the

predictor variable of mother-infant interactions at 8 months. These findings suggest that infant temperament was the best predictor of mother-infant interaction at both 4 and 8 months (Zahr, 1991).

Andrews (1990) examined whether or not changes in the mother's perception of her infant temperament could be determined by maternal characteristics. In this sample of 202 mothers, infant difficulty was significantly correlated with maternal depression, stress, social support, and race ($p < .05$). The mothers were split into two groups, mothers' whose perceptions of infant temperament changed from non-difficult to difficult and mothers' whose perceptions of infant temperament remained the same (non-difficult). Findings supported that these variables (maternal psychological characteristics, parenting attitudes and child rearing practices, stress, and social support) correctly predicted 57% of the change in the mothers' perception of temperament from non-difficult to difficult and predicted 61% of the change overall in the mothers. This research indicates maternal characteristics such as psychosocial, parenting attitudes and child rearing practices, stress, and social support may be predictors of infant temperament as well as predictors of perception changes of infant temperament (Andrews).

To explore patterns of development with full-term small for gestational age (SGA) and normal birth weight infants, Gorman et al. (2001) used a convenience sample of 83 mother-infant dyads. Gorman et al. reported significant correlations for maternal behavior and the temperament negative reactivity at 3 months and 6 months ($r = -.44$, $p < .05$ and $r = -.28$, $p < .05$). Mothers who were rated by

nurses through observation as more positive in their interactions with their infants rated their infants as less reactive in negative emotions. Temperament (negative reactivity) at 3 months and birth weight predicted maternal behavior at 6 months accounting for 26% of the variance. Infants with higher negative reactivity at 3 months had mothers who were rated by nurses through observation as less positive at 6 months (Gorman, 2000 et al.). Temperament, birth weight, and home environment accounted for 27% of the variance with infant mental development at 6 months (Gorman et al.).

St. John-Seed and Weiss (2002) determined the degree to which maternal emotions expressed toward low birth weight (LBW) infants at six months predicted emotional and behavioral problems at two years of age. In this longitudinal correlational study, a sample of 83 mother-infant dyads was used to collect data at three points in time. Infants whose mothers expressed more negative emotions (critical comments or hostile behavior) toward them had significantly more internalizing problems (anxiety and withdrawal). Results revealed that infants who were less persistent with a task or activity ($F = 4.47$, $p < .04$) and less adaptable to their environment ($F = 7.24$, $p < .008$) were more vulnerable to the effects of negative emotions displayed by their mothers. Infants who were more persistent and adaptable had fewer problems with anxiety and aggressive behavior at two years of age than infants who were not. Findings indicated statistical significance with mothers who expressed positive emotions (positive remark, warmth) toward their infants with infant persistence ($F = 8.55$, $p < .005$).

In this model negative emotions/persistence, positive emotions/persistence, and negative emotions/adaptability explained 39% of the variance in internalizing problems (anxiety and withdrawal) with these infants as toddlers (St. John-Sneed & Weis, 2002).

In conclusion, infant temperament has been measured using both observation and self-report, with issues on what measurement methods (self-report or observation) are most reliable remaining. Infant temperament has been shown to have a significant relationship with maternal depression, maternal characteristics, mother-infant interactions, and infant cognitive and social development. Infant temperament has also been identified as a predictor variable in models that examined infant development, maternal behavior, and infant problem behaviors (emotional and aggressive). Research has shown that the home environment also influences infant temperament. Research reveals that infants respond more positively to mothers who provide flexibility and clearer communication.

However, infants whose mothers express critical or hostile emotions tend to have problems with withdrawal or aggressive behavior later in childhood. Mothers may perceive their infant as difficult when they are experiencing depression, low social support, or high levels of stress. In addition, infants with certain temperaments may also be more vulnerable to develop behavior and social problems when exposed to negative environments and negative maternal behaviors.

Social Support

Social support is a multifaceted concept that has been explored in the literature as a buffer to stress and a correlate to mental well-being (Mercer, 1986). Social support is defined as interactional transactions that include one or more of the following: emotional support, appraisal support, informational support, or instrumental support (Walker, 1992). Social support may be actual support received or perceived support. Social support has been shown to have a positive effect on mothering when the support is adequate and desired (Dobrzykowski & Stern, 2003; Knauth, 2000; Singer & Davillier,1996). Social support has been reported in the literature in relation to who gives the support, what types of support are needed, and if the support that exists is adequate.

Keating-Lefler & Wilson (2004) conducted a qualitative grounded theory research study to understand the experience of becoming a mother for single, unpartnered, Medicaid-eligible first-time mothers. Twenty mothers were interviewed at 1, 2, and 3 months postpartum. Keating-Lefler & Wilson reported that the mothers revealed the following themes of managing their losses "grieving multiple losses" to redefine their lives "reformulating life." Social support and personal resilience facilitated the process of "reformulating life" (Keating-Lefler & Wilson). Other themes identified with "reformulating life" were related to maternal role identity and future hopes and dreams of these mothers. This research supports the benefits of social support with an at risk population of single mothers.

McKim (1993) used a convenience sample of 56 mothers of high-risk premature infants to explore their support needs through self-report using a descriptive correlational design. Findings indicated that a majority of the mothers had at least one adequate source of support and that multiparous mothers received less support than primiparous mothers received. The two most reported sources of support were partner or spouse and the mother's mother. More than half of these mothers in this study received home visits from a community health nurse. Mothers' perceived support needs focused on infant care and having someone available at home during the early post discharge period (McKim).

Similarly, Mercer and Ferketick (1995) explored maternal competency among experienced and inexperienced mothers during infancy. In a sample of 136 multiparous mothers and 166 primiparous mothers, results revealed that multiparous mothers received significantly less social support than primiparous mothers received at early postpartum ($t = 3.14$, $p = .002$) and at 1 month postpartum ($t = 3.36$, $p = .001$). Research suggests that mothers who have other children do not receive as much help postpartum as first-time mothers receive.

Singer and Davillier (1996) investigated maternal psychological distress, perception of social support, and parenting strains after the birth of a very low birth weight (LBW) infant. This study included a sample of 193 mothers in three groups: 63 mothers of very LBW infants who had developed bronchopulmonary dysplasia (BPD); 32 mothers of very LBW infants without BPD; and 98 mothers of healthy term infants. Greater maternal competence and perception of positive

spousal support were significantly related to lower maternal psychological distress, and higher levels of general support were significantly related to lower distress for mothers of very LBW and BPD infants. There was no significant relationship between general support and distress with mothers of term infants. Mothers who felt more competent in parenting and who perceived better social or spousal supports reported feeling less restricted in their parenting role. Social support predicted only two percent of the variance in maternal distress (Singer & Davillier, 1996).

To determine predictors of parental competence for couples during the transition to parenthood, Knuath (2000) used a convenience sample of 114 couples. Knuath measured parental satisfaction, parental competence, and family functioning prenatal and at 4 and 8 months postpartum. Results revealed that satisfaction with family functioning was more significant for mothers in relation to parental competence than for fathers ($p < .05$). Mothers in this study consistently rated marital satisfaction and emotional spousal support as their top two needs over time (Knauth). This research suggests that mothers who are satisfied in their marriage and receive adequate emotional support have greater perceived parental competence than mothers who are not satisfied in their marriage and who do not receive adequate emotional support (Knauth).

The reciprocal relationships between perceived mastery, stress, and social support (tangible support, informational support, and belonging support) among low-income mothers were studied in a convenience sample of 260 predominantly unemployed, high-school educated African-American mothers

who were single and had at least one child under a year old (Green & Rodgers, 2001). The results indicated that higher levels of mastery and lower perceived stress were associated with higher levels of all types of support over time. Initial levels of mastery predicted higher levels of instrumental social supports such as advice and tangible support. The researchers found no statistically significant relationship between belonging support (feelings of belonging to a social group) and initial mastery. However, belonging support was the only support that led to an increase in advice and tangible support over time (Green & Rodgers).

Clemmons (2001) conducted a meta-analysis of 13 quantitative studies regarding the relationship between social support and adolescent mothers' interaction with their infants. The studies were coded for methodologic and substantive variables, including quality indicators. The combined studies contained a sample of 823 mothers and homogeneity tests were performed to eliminate outlier studies. Results revealed a significant moderate correlation between the relationship of social support and maternal interactions of adolescent mothers (r = .30) with a medium effect size at a 95% confidence interval. Clemmons also reported moderate correlation between social support by family and maternal interaction (r = .42) with a large effect size and a moderate correlation with social support by network and maternal interactions (r = .31 to .44) with a medium to large effect size (Clemmons).

In a descriptive qualitative study exploring the experiences of first-time mothers over the age of thirty, Dobrzykowski and Stern (2003) discussed many themes that emerged with the overlying theme of "out of sync." Dobrzykowski and Stern reported that mothers who became first-time mothers after the age of thirty struggled with issues surrounding societal expectations and their own identities as mothers that would fall in and out of sync at times. Dobrzykowoski and Stern suggested that the more confident the mothers felt about their ability to mother successfully, the less influence the social structure had on them. The women in this study identified their mate and their mothers as the most influential persons in regards to their mothering decisions. Dobryzkowski and Stern also suggested that if the mother identified her support persons as positive and helpful that it bolstered the mother's own sense of well-being.

Similarly, Schachman, Lee, and Lederman (2004) investigated a nursing intervention to foster maternal role adaptation. Schachman et al. compared a 4 week nursing intervention that identified stressors and support resources (Baby Boot Camp) to a traditional childbirth class with 91 primiparous military wives. Data were collected immediately after the intervention and at six weeks postpartum. Findings indicated that there were no group differences in internal and external resources at Time 1. However, the experimental group (baby boot camp participants) reported significantly greater maternal role adaptation than the control group mothers ($t = .034$, $p < .05$), with a medium effect size of .46 at Time 1 and at 6 weeks postpartum. The experimental group also reported significantly greater internal ($F = 28.0$; $p < .001$) and external resources ($F =$

4.229; $p = .043$) at Time 2 than the control group reported. The results also showed that these resources (internal and external) were statistically significant for the experimental group over time. The experimental group also reported significantly greater support from family/friends ($M = 17.9$, $SD = 4.7$) and maternal confidence ($M = 23.8$, $SD = 6.8$) than control group mothers reported ($M = 20.5$, $SD = 5.3$; $M = 27.6$, $SD = 7.8$), respectively. (Note: item means are reversed scored; the lower the mean the higher the support and confidence).

In conclusion, social support is a multifaceted construct that has been shown to buffer the negative affects of stress and distress of mothers (Green & Rodgers, 2001; Schachman et al., 2004; Singer & Davillier, 1996). Social support has contributed to maternal competence and influences mother-infant interactions among adolescents (Green & Rodgers; Clemmons, 2001). Research suggests that mothers need various types of support such as emotional, informational, and tangible support throughout the postpartum period. Mothers also report spousal and maternal mother support as the most common sources of support. Research suggests that maternal characteristics such as self-esteem and perceived mastery are associated with receiving various types of support. Mothers who have lower self-esteem and lower perceived mastery may have difficulty obtaining the support that they need. In addition, research suggests that first-time mothers receive more support than mothers who have other children.

Depression

It is not uncommon for mothers to experience a change in emotions and mood after giving birth. However, about 10-15% of mothers experience postpartum depression (PPD) (O'Hara & Swain, 1996). Postpartum depression is defined as having a lack of interest or pleasure in usual activities and having four or more of the following symptoms: sleep disturbance, guilt, fatigue, impaired concentration, appetite disturbance, psychomotor activation or retardation, low self-esteem, feelings of hopelessness and worthlessness, and suicidal ideation (American Psychiatric Association (APA), 2000). Postpartum depression affects the mothers' self-esteem, confidence, marital relationships, and mother-infant relationships (Beck, 1993, 1995; Fowles, 1998; Murray & Cooper, 1996). The mothers that are at the highest risk for PPD are those mothers who have experienced prenatal depression, postpartum fatigue, childcare and life stresses, low social support, maternity blues, difficult infant temperament, low socioeconomic status, prenatal anxiety, and poor marital relationship (Beck, 2001, 2003; Corwin, Brownstead, Barton, Heckerd, & Morin, 2005). Usually education about PPD occurs during hospitalization for childbirth with screening occurring during the early postpartum period (four weeks) (Garg, Morton, & Heneghan, 2005). However, mothers often experience symptoms of PPD months after childbirth (Amankwaa, 2003; Goodman, 2004; Ugarriza, 2002).

Mothers have described the experiences of PPD as feelings of losing control and feeling overwhelmed, which impact their confidence in caregiving (Amankwaa, 2003; Beck, 2003; Ugarriza, 2002). Ugarriza (2002) interviewed 30 mothers who were self-identified as having PPD. One mother stated, "I had confidence in myself in my career. I had no confidence as a mother" (p. 230). Other mothers reported feelings of failure at not being able to breastfeed and feelings of guilt and shame about wanting to harm their infants by shaking them (Ugarriza, 2002).

Amankwaa (2003) looked at cultural differences among African-American women by interviewing 12 mothers about their experiences with PPD and found similar themes such as feelings of being overwhelmed and losing control emotionally. The number of life stressors such as low social support, childcare problems, and illness seemed to trigger PPD in these mothers. The mothers relied on themselves, family, and spirituality as methods to cope with PPD (Amankwaa). Both Amankwaa and Ugarriza (2002) reported that women described their symptoms being more severe at different times and reoccurring throughout the first year after birth.

Beck and Indman (2005) conducted a secondary analysis of responses to the postpartum depression scale (PDSS) by a convenience sample of 133 women who were diagnosed with major postpartum depression to describe characteristics of women who experience PPD. Beck and Indman reported the top five items that mothers reported were feeling overwhelmed, emotions on a roller coaster, irritability, feeling all alone, and not feeling normal. The total mean

score for the PDSS for this sample was 120 which is above the cutoff score of 80. Beck and Indeman reported elevated scores on all seven dimensions for the PDSS. This research suggests that women who suffer from PPD may experience a variety of symptoms including emotional lability, anxiety, and irritability which may differ from the dimensions identified by the definition of PPD according to APA (2002).

To explore the impact of postpartum fatigue on PPD and to describe the relationship between these two variables, Corwin et al. (2005) conducted a correlational study with a convenience sample of 31 women. Postpartum fatigue, PPD, and stress were measured on days 7, 14, and 28 after childbirth. Corwin et al. reported that fatigued accounted for the variance respectively for Day 7 (29%), Day 14 (49%), and Day 28 (59%). There were statistical significant positive correlations with fatigue and depression at Day 7 ($r = .53$, $p < .004$), Day 14 ($r = .62$, $p < .000$), Day 28 ($r = .63$, $p < .000$). This research suggests that fatigue may be a significant factor with women who suffer from PPD.

Hall, Gurley, Sachs, & Kryscio (1991) explored maternal psychosocial characteristics as predictors of maternal depressive symptoms, parenting attitudes, and child behavior in single-parent families. A convenience sample of 225 single mothers living in poverty with a child or children between the ages of 1 and 4 were included in this study. Hall et al. revealed that about 60% of the mothers in this sample had high depressions scores.

Results also supported that mothers with higher depression scores were more likely to report a greater number of stressors, have fewer social supports, and have greater use of avoidance coping than mothers who had lower depression scores. The mothers with higher depression scores had less favorable parenting attitudes and reported more child behavior problems than those mothers who reported lower depression scores.

Hall et al. (1991) revealed that neither social support sources nor coping strategies buffered the effects of the relationship between stressors and depressive symptoms. Results reported that poor family functioning, less tangible support, higher number of reported stressors, and greater use of avoidance coping predicted 42% of the variance in depressive symptoms. Findings also indicated that maternal depressive symptoms and quality of primary intimate relationship predicted 24% of the variance in parenting attitudes. The research suggests that mothers with higher depressive symptoms and poorer quality of primary intimate relationship had poorer parenting attitudes (Hall et al.).

To examine the relationship between PPD and maternal role attainment Fowles (1998) used a convenience sample of 136 primiparas. Depression scores were measured between 9-14 weeks postpartum along with instruments measuring maternal competence, maternal role, and maternal perception of her infant. About 10% of the mothers in this sample scored depression scores in the range for potential diagnosis of postpartum depression. Fowles reported a significant negative correlation between PPD and all measures for maternal role attainment.

Mothers with PPD had more negative perceptions of their infants (r = -.35), themselves as mothers (r = -.22), and in their caretaking ability (r = -.20 to -.27) (Fowles, 1998).

Mothers who suffer from PPD often hesitate to seek assistance because of the stigma of having a mental problem or belief that the depression symptoms are normal for the postpartum period and will resolve on their own (Amankwaa, 2003; Beck, 2003; Ugarriza, 2002). These barriers to seeking help may contribute to the low incidence of PPD (10-15%) reported in the literature. Coates, Schaefer, & Alexander (2004) explored the incidence of PPD and anxiety in the computerized medical record of a sample of 26,296 women who were members of large health plan. Findings indicated that the incidence of PPD occurred at a higher rate (23%) than what was reported in the literature. Results also revealed that PPD was diagnosed throughout the first year postpartum with about 50% of the diagnosis occurring at 4-12 months postpartum. Findings supported that PPD was best detected by a screening tool or practitioner observation during the first year postpartum with approximately a 37% detection rate with these methods (Coates et al.).

Additionally, Goodman (2004) explored a sample of 23 research articles to review the literature on PPD. Goodman reported that a significant number of women experienced symptoms of PPD for months to years after childbirth. Factors associated with depressive symptoms six months or more after childbirth are lower socioeconomic status, maternal health problems, partner relationship

difficulties, low social support, and higher depression scores during the early postpartum period, life stress, and depression during pregnancy (Goodman). This research suggests that PPD can continue to occur past the early postpartum period and that there are women who are at higher risk for this occurrence.

Garg et al. (2005) assessed health education regarding postpartum depression from a sample of 90 nurse managers using a survey questionnaire. Garg et al. reported that 89.7% of hospitals educate women about PPD. However, passive methods are the most commonly reported means of education (Garg et al.). Most of the education occurred after delivery and only 14% of the hospitals offered specific education programs for PPD (Garg et al.). This research warrants further investigation for the most effective methods of educating new mothers about PPD.

Treatment of PPD has consisted of medications, psychotherapy, and group therapy (Beck, 2003), creating a need for continued intervention research to explore methods that will improve postpartum outcomes for mothers. Horowitz et al. (2001) explored a behavioral intervention to determine whether or not mother-infant interactions would improve over time. Using a randomized sample of 117 mother-infant dyads with an experimental and control group, mother-infant interactions were measured between 4-8 weeks, 10-14 weeks, and 14-18 weeks postpartum. The experimental group intervention consisted of coaching to improve maternal responsiveness to her infant. Depression scores were also measured with both groups over time. Results revealed that the experimental group significantly improved in maternal interactions over time as compared to

the control group: Time 2 (t = -3.15, df = 116, p = .02) and at Time 3 (t = -2.22, df = 115, p = .029). However, the depression scores in both groups did not reveal any significant changes over time (Horowitz et al.).

Ugarriza (2004) conducted an experimental pilot test with a convenience sample of 16 women who had been diagnosed with PPD by their primary providers to explore group therapy to treat PPD. The women in this study had given birth within a year of treatment and had no previous diagnosis of depression. In this pre-post test study, depression scores were measured with the experimental and control group prior to the 10-week intervention and after the intervention. The group therapy focused on activities such as providing information, reducing stress, developing a support system, grief work, and rebuilding self-esteem. Pretest scores revealed mild to no depression scores with no differences reported between mean group scores, (M = 14.3, SD = 0.81) treatment group and (M = 15.6, SD = 1.41) control group, t = 1.76, p = .10). Although no significant differences were found with posttest scores between groups, there was a significant difference in pre-post test scores in depression in the experimental group, t = 2.70, p = .04. The findings support that the experimental group went from mild depression to minimal or no depression after participating in group therapy (Ugarizza).

The influence of PPD impacts marital relationships as well as mother-infant interactions (Beck, 2003; Campbell, Cohn, & Meyers, 1995). Mothers suffering from PPD display less affectionate behavior, are less responsive to infant cues, and are more withdrawn with a flat affect and/or were hostile and

intrusive with their infants than mothers not suffering from PPD (Beck, 1995). Infants with mothers who suffer from PPD may have delays in cognitive development and problems in forming secure attachments, which leads to future behavior problems (Beck, 1998). In addition, PPD is a clinical condition with many symptoms that vary with length and severity. Research suggests that PPD may occur at a higher rate than 10-15%. Mothers may not recognize the severity of their symptoms and delay seeking help. Mothers who are most at risk are those mothers who have low self-esteem and low social support; who are dealing with other life stressors (marital problems and childcare concerns); and who have infants with a difficult temperament. PPD influences the mother's confidence to care for her infant as well as decreases positive mother-infant interactions.

Maternal Confidence

Maternal confidence has been explored in the literature for over 40 years and is one of the pearls of motherhood. Maternal confidence is the mother's perception of her ability to provide infant care, recognize and respond to infant cues, and feel satisfied in the mothering role (Gross et al., 1989; Mercer, 1995; Zahr, 1993). A reflection of the maternal competence (Mercer & Ferketich, 1994), maternal confidence is influenced by variables other than knowledge and acquiring of skills. Maternal psychosocial variables and characteristics, social support, and infant characteristics and temperament are a few of the variables that have been associated with maternal confidence.

Warren (2005) conducted a descriptive correlational study to explore social support and confidence in infant care of first-time mothers. A convenience sample of 99 mothers completed survey questionnaires that measured social support and confidence in infant care. Warren reported statistically significant moderate correlations with appraisal and informational support with confidence in infant care ($r = .40$, $p < .01$ and $r = .20$, $p < .05$). Warren also reported that 93% of the mothers reported high confidence in infant care with husband/partner and maternal mother being identified as the primary support. This research supports the positive relationship between social support and confidence in infant care.

To compare the differences of maternal competence between first-time married and single mothers, Copeland and Harbaugh (2004) used a convenience sample of 80 first-time mothers. Results revealed that there was no statistical significant difference in maternal competence scores between married and single first-time mothers. However, the overall total scores of maternal competence were lower in the single first-time mothers group as compared to the married mother group. The researchers did report statistically significant difference between the total score on value/comfort with the single moms reporting lower scores than the married mothers ($t = 2.128$, $df = 30.713$, $p < .05$).

To investigate mothers' and nurses' perceptions of infant care skills, Froman & Owen (1990) used a sample of 200 mothers and their nurses. Data were collected at the time of discharge. Confidence scores were significantly correlated with mother's age ($r = .28$), number of children ($r = .35$), and nurse rating of skills ($r = .27$). Froman and Owen reported that 28% of the variance in

maternal confidence was predicted by demographic variables such as age, sex of child, education, and income. Older mothers with more experience who received a positive rating from nurses had higher confidence scores than younger mothers without experience (Froman & Owen, 1990).

Zahr (1993) examined differences between Latino mothers of premature and full-term infants in relation to maternal confidence. A convenience sample of 79 mother-infant dyads (54 premature and 25 full-term) participated in this study. Results indicated no significant differences between mothers in perceived confidence scores. Maternal behaviors (sensitivity and response to infant) did not correlate with maternal confidence scores. However, a significant low correlation was reported for maternal confidence and infant medical complications (e.g. inventricular bleeds), $r = -.25$, $p<.05$. The more medical complications an infant had the less confident the mother. A significant correlation was also reported for maternal behaviors and infant's weight indicating that mothers with larger infants were more sensitive and comfortable in caring for them. Further analysis revealed parity and medical complications of the infant explained 25% of the variance for perceived maternal confidence (Zahr).

Ruchala and James (1997) explored the influence of social support and knowledge of infant development on maternal confidence in performing infant care tasks in 101 adolescents and 116 adult women who were primarily African-American. Data were collected within 24 hours of giving birth. No significant differences were found between mothers for perceived social support or

confidence in caretaking. Adult mothers scored significantly higher in knowledge of infant development (t = -2.29, p = .003) than adolescent mothers scored. Social support (r = .29, p < .001), knowledge of infant development (r = .34, p < .001), parity (r = .22, p < .001) and confidence were significantly correlated in the sample of adult mothers indicating that experienced mothers with social support and knowledge of infant development reported higher levels of confidence (Ruchala & James, 1997).

To explore maternal self-efficacy in low-income mothers, Raver and Leadbeater (1999) used a sample of 44 mothers who had toddler aged children. They measured social support, stress, child temperament, and maternal self-efficacy. The mothers in this sample were young (M = 25.14, SD = 5.27 years) with a high school education and an average of two children. This sample of mothers consisted of half married or living with a partner and half single. Findings indicated that 29% of the variance of maternal self-efficacy was explained by environmental risk (higher reported stress, age, education, and low social support) and difficult child temperament. Environmental risk was significantly correlated with maternal efficacy (r = -.46, p < .05). Mothers with higher levels of stress who had infants with difficult temperament had lower efficacy scores (Raver & Leadbeater).

Kapp (1998) explored mothers' perception of confidence with self-care and infant care with a convenience sample of 104 postpartum women. Data were collected on these mothers at discharge and two weeks postpartum. Kapp (1998) reported high mean scores for confidence for both multiparas and primiparas that

increased at 2 weeks postpartum. Primiparous mothers were less confident than multipara mothers in recognizing signs of infection (X^2 = 77.5, *SD* = 20.3, X^2 = 86.9, *SD* = 15.5 respectively) and temperature taking (X^2 = 75.9, *SD* = 24.5, X^2 = 89.7, *SD* = 12.9, respectively) at two weeks. Overall, this sample was less confident in understanding and managing postpartum blues. No significant differences in confidence were reported between groups at two weeks. Regardless of parity or age, mother's confidence in self-care and infant care improved within two weeks of discharge (Kapp, 1998).

Hudson, Elek, and Fleck (2001) investigated the differences between first time mothers and fathers and the relationship between infant care self-efficacy and parenting satisfaction. A convenience sample of 44 educated married Caucasian couples participated in this study. Data were collected through self-report through formal written instruments in the parents' home with mothers and fathers separately when the infants were 4, 8, 12, and 16 weeks old. Both mothers' and fathers' infant care scores (ICS) and parental satisfaction increased significantly over time. Mothers' scores on the ICS were consistently higher than fathers were for each time ((T1) t = 4.70, $p < .001$, (T2) t = 3.64, $p < .001$, (T3) t = 3.48, $p < .001$, (T4) t = 2.32, $p < .05$) and mothers' scores improved significantly between 4 and 8 weeks and between 8 and 12 weeks. Interestingly, fathers scores on the ICS improved significantly between 4 and 8 weeks, between 8 and 12 weeks, and between 12 and 16 weeks. Fathers' report of parenting satisfaction increased significantly between 8 and 12 weeks (Hudson et al.).

To investigate first-time mothers' perception of efficacy during transition to motherhood, Porter and Hsu (2003) used a sample of 61 mothers and measured maternal efficacy, depression, anxiety, and marital quality during the last trimester of pregnancy and when the infant was 1 month and 3 months of age. Infant temperament was also measured during the postpartum period. Results did not reveal any significant findings among demographic variables (age, education, household income, employment status, or sex of the child). Significant correlations reported at 1 month revealed relationships between maternal self-efficacy and anxiety ($r = -.42$, $p < .01$), marital positivity ($r = .31$, $p < .05$), infant temperament ($r = -.32$, $p < .05$). These findings suggest that mothers who experienced less anxiety and had a positive marital relationship reported less negativity in their infants and had higher self-efficacy scores than mothers who had anxiety and a negative marital relationship. At three months, the only significant correlation with maternal self-efficacy was infant temperament ($r = -.37$, $p < .05$). Porter and Hsu also reported that the depression, anxiety, marital negativity, prenatal efficacy, and infant temperament model proved to be statistically significant with maternal self-efficacy (F 4, 47) = 19.61, $p < .0001$) accounting for 62% of the variance. No significant relationships were found with prior childcare experience and depression for maternal efficacy (Porter & Hsu).

In conclusion, maternal confidence has been explored among first-time mothers, postpartum mothers, adolescent mothers, mothers of toddlers, mothers of preschoolers, and mothers of infants born prematurely. Maternal confidence has been primarily measured in the literature through maternal self-report with a

variety of instruments. Generally, mothers' confidence increases over time with mothers who have had other children reporting more confidence than first-time mothers. Maternal characteristics, maternal demographic variables, infant health and temperament, parity, social support, and knowledge of infant development have been shown to influence maternal confidence (Froman & Owen, 1990; Hudson et al., 2001; Porter & Hsu, 2003; Raver & Leadbeater, 1999; Ruchala & James, 1997; Warren, 2005; Zahr, 1993). In addition, the relationships among these variables, although significant, yielded low to moderate correlations. In samples where mothers were less vulnerable (e.g., adequate social support, educated, experienced) the correlations between the variables mentioned above were low. However, in samples where the mothers were more at risk (e.g. high stress, depressed, poor, single, young, had infants with difficult temperament, or low birth weight infants), the same variables had moderate correlations and predicted a higher percentage of the variance than in samples that were not at risk. This research suggests that correlates of maternal confidence vary according to the risk factors of the sample studied and warrants further investigation with an ethnically diverse sample.

Gaps in the Literature

Mother-infant relationships are influenced by internal and external factors such as, environment, maternal and infant characteristics, mate relationships, and social support. Research has identified links between infant temperament, social support, maternal depression and maternal confidence. Yet, these links vary depending upon the sample examined. There continues to be inconsistent

reports about the demographic variables that influence maternal confidence such as age, education, household income, and parity. There are also inconsistencies in the literature about how much influence infant temperament, social support, and depression have on maternal confidence. Studies have explored group differences by gender, developmental stage (adolescent versus adult), parity, and full-term and pre-term infants. The samples reported in this review have either been predominantly married, Caucasian middle class mothers or poor single young minority mothers. More research is needed with ethnically diverse samples representing low to high-income levels.

Furthermore, more research is needed to explore the types of support (tangible, advice, and belonging), who gives the support (partner, family, or healthcare provider), and the influences of negative support (support that is not desired or helpful). In addition, more interventional research is needed to assist mothers who are suffering from PPD. Since many mothers who suffer from PPD suffer in silence, further exploration is needed for interventions with education and treatment. Currently little is known about postpartum group differences regarding maternal confidence based on infants' age during infancy. The variables infant temperament, social support, depression, and maternal confidence have been described and presented. Each of these variables has been shown to have significant influences on mother-infant relationships.

However, the relationships between these variables and maternal confidence need further exploration. Once the primary variables that influence maternal confidence are known, nursing interventions can be developed to support mothers and increase their maternal confidence.

CHAPTER III

METHODS

The methods and procedures for this study are described in this chapter. The major sections included are the research design, sample, instrumentation, procedures, and data analysis.

Research Design

This study used a descriptive correlational design to explore the relationship of infant temperament and selected maternal factors (education, prior childcare experience, social support, and depression) and maternal confidence. The sample consisted of a convenience sample of 94 primiparous mothers with infants who were 6 weeks to 32 weeks in age. The sample was accessed through churches, daycare centers, and obstetricians' and pediatricians' offices in the Southeastern U.S. Data were collected one time using a booklet (five-part questionnaire) that was distributed to the recruitment sites by the principal investigator.

Operational Definitions

The following terms were operationally defined for use in this study: age, education, prior childcare experience, infant temperament, social support, depression, and maternal confidence.

1. Age was defined as the number of years a person has existed and was measured in whole years for the mother and in weeks for the infant.

2. Education was defined as training or schooling and was measured on a scale from below 12th grade to masters degree or higher.
3. Prior childcare experience was defined as any experience of caring for infants or small children prior to the birth of their infant. Prior childcare experience was measured on a scale from a great deal of prior childcare experience to no prior childcare experience.
4. Infant Temperament was defined as an easy versus a difficult temperament and is related to whether the infant sends hard-to-read cues to the mother that lead to feelings of incompetence and frustration (Mercer, 1986). Infant temperament was measured using the Infant Characteristic Questionnaire (ICQ) subscale, fussy/difficult (Bates et al., 1979).
5. Social Support was defined as the amount of help received as well as the satisfaction with that help and the persons providing that help and resources available. The support was based on four categories: emotional, informational, physical, and appraisal support (Mercer, 1986). Social support was measured by using the Personal Resource Questionnaire (2000) (PRQ-2000) (Weinert, 2001).
6. Depression was defined as having a group of depressive symptoms, and in particular the affective component of the depressed mood (Mercer, 1986). Depression was measured by using the Beck Depression Inventory (BDI) (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961).

7. Maternal Confidence was defined as the mother's perception of her ability to provide infant care, recognize and respond to cues, and feel satisfied in her mothering role (Mercer,1995; Zahr, 1991; Zahr, 1993). Maternal confidence was measured using the Maternal Confidence Questionnaire (MCQ) (Parker & Zahr, 1985).

Sample

The target population for this study was primiparous mothers ages 18 - 40, in the Southeastern U.S., who consented to participate in the study. Inclusion criteria for participation were: 1) being able to speak and read English; and, 2) having delivered a singleton full-term infant without anomalies, whose age was 6 weeks to 32 weeks. Power analysis for multiple regression with 5 independent variables yielded a sample requirement of 93 with a power = .80, an alpha = .05, and a medium effect size .50 (Cohen & Cohen, 1975) (Appendix C). Approximately, 180 mothers were recruited for the study and 101 participants completed the questionnaires with a response rate of 56%. Mothers were lost after recruitment for failure to return completed questionnaires. Seven questionnaires were excluded because mothers did not meet the sample inclusion criteria. A total of 94 mothers were included in this study.

Sample Recruitment

Several methods were used to recruit the target population. Recruitment flyers were posted in a selection of large churches, daycare centers, pediatricians' and obstetricians' offices in a moderately-sized southeastern city in the U.S (Appendix D). In selected locations, a point of contact within the agency

was identified to assist in recruitment on site. In addition, the snowball technique was used beginning with primiparas known to the researcher from prior contacts. Participants were also recruited from a breastfeeding and parenting class from a moderate-sized private hospital. An ad was also placed in the local paper that advertised over a period of four days in the *Local & State* Section (Appendix E). Participants were given a $5.00 gift card from Wal-Mart as an incentive for completing the booklet questionnaire.

Selection of Large Churches and Daycare Centers. A selection of 4 large churches and 20 daycare centers in the southeastern U.S. was used for recruitment of participants. A phone call or visit was made by the principal investigator to the church leader or the owner/manager of the daycare to explain the research study and solicit support. After initial contact, the researcher mailed a letter to the recruitment sites with information about the study and the principal investigator, along with the plans for the study (Appendix F). After approval by the church leader, recruitment flyers were placed in a prominent location. After approval by the owner/manager of the daycare, recruitment flyers were distributed to mothers who met the criteria at the daycare. Mothers who volunteered from the selected churches and daycare centers were directed to contact the principal investigator by phone for more information and directions on how to participate in the study.

Selection of Pediatricians' and Obstetricians' Offices. A selection of three pediatricians' and two obstetricians' offices in the southeastern U.S. was used as recruitment sites. A phone call or visit was made to solicit support for the study

with the lead physician. After initial contact, the principal investigator mailed a letter to the recruitment sites with information about the study and the principal investigator, along with the plans for the study. Statements of support were signed by the lead physician of the two obstetrician's offices where a point of contact was designated and flyers were distributed to mothers or were placed in a prominent location with approval from the lead physician where no point of contact was designated (Appendix G). The points of contact were provided with a 30-minute inservice about the protocol of the study and the protection of human subjects by the principal investigator. The points of contact approached mothers for participation for the study. The points of contact were paid $5.00 for each mother they recruited who completed the booklet questionnaire.

Snowball technique with known primiparas. The researcher was aware of many primiparas through social organizations, family, and friends. The snowball technique was used by asking participants to refer other mothers as possible participants. The primiparas referred were directed to contact the principal investigator by phone for more information for participating in the study.

Breastfeeding and Parenting class. After receiving approval from the Institutional Review Board (IRB) of the hospital, the principal investigator contacted the educator for the breastfeeding and parenting class to provide information about the principal investigator and about the research study. The principal investigator attended the breastfeeding and parenting class of expectant moms and spoke briefly at the beginning of the class to the mothers about the principal investigator and the research study.

Mothers who were interested in participating provided their contact information to the principal investigator for follow-up six weeks after childbirth.

Although, some mothers were recruited from churches and daycare centers, the snowball technique and the two obstetricians' offices where points of contact were designated were the most effective recruitment sites. Mothers who were referred by their peers were more likely to participate in the research study than mothers who were approached by the points of contact. The ad and the pediatrician offices were the least effective for recruitment. The pediatrician offices were not as effective because no points of contact were designated. Surprisingly, the ad was not an effective method of recruitment. However, the ad may have been more effective if it could have run for more than four days.

Instrumentation

After receiving permission, five instruments were used in this study (Appendix H). The first was a demographic questionnaire used to collect data on age, race, income, marital status, and other demographic information. The second was the Infant Characteristic Questionnaire (ICQ) (Bates et al., 1979) that was a measure of infant temperament. The Personal Resource Questionnaire (PRQ-2000) (Weinert, 2001) was a measure of social support and the Beck Depression Inventory (BDI) (Beck et al., 1961) was a measure of depression. The final instrument was the Maternal Confidence Questionnaire (MCQ) (Parker & Zahr, 1985) that was a measure of maternal confidence.

Demographic Questionnaire

This form assessed age, race, education, income, marital status, prior childcare experience and other demographic information (Appendix I). Participants were asked to either fill in the blank or circle their selected answer.

Infant Characteristic Questionnaire (ICQ)

The ICQ was a 24-item, seven-point, Likert scale that measured the mother's perception in regarding her infant's fussiness-difficult, unadaptability, dullness, and unpredictability (Bates et al., 1979) (Appendix J). The 24-item ICQ was the 6-month form and had been used with infants up to 8 months of age. The instrument contained statements such as, "How easy or difficult is it for you to calm or soothe your baby when he/she is upset?" Test-retest reliability and convergent validity have been established by measuring the coefficients between mothers' and fathers' scores on the ICQ, $r = .61$ (Bates et al., 1979). Alpha coefficients reported for the ICQ subscales from a sample of 196 infants were .79 (fussy), .75 (unadaptable), .39 (dullness), and .50 (unpredictable) (Bates et al, 1979).

Personal Resource Questionnaire (PRQ-2000)

The PRQ-2000 (Weinert, 2001) was a 15-item Likert scale that measured the participant's level of perceived social support (Appendix K). The tool was measured on a scale of 1 (strongly disagree) to 7 (strongly agree) and contained statements such as, "There is someone who loves me and cares about me."

The PRQ-2000, a revision of the PRQ-85 (Weinert & Brandt, 1987), has established construct validity and alpha internal consistency (0.87-0.93) (Weinert, 2001).

Beck Depression Inventory (BDI)

The BDI was a 21-item self-report questionnaire measuring characteristic attitudes and symptoms of depression (Beck et al., 1961) (Appendix L). Each item was scored from 0-3 making the highest score possible a 63 and the lowest score a 0. The total score was evaluated based on the ranges of: (05-09) normal; (10-18) mild to moderate depression; (19-29) moderate to severe depression; (30-63) severe depression. Each item of the inventory represented a participant's characteristic. For example, item 1 statements measured sadness, e.g., "I do not feel sad; I feel sad; I am sad all the time and can't snap out of it; I am so sad or unhappy that I can't stand it." Internal consistency to support reliability for the BDI ranged from .73 to .92 with a mean of .86. (Beck, Steer, & Garbin, 1988). Alpha coefficients of .86 and .81 have been reported for psychiatric and non-psychiatric populations (Beck et al., 1988). Groth-Marnat (1990) reported moderate correlations between BDI and other scales measuring depression such as the Hamilton Psychiatric Rating scale for depression (.73) and the Zung Self Reported Depression Scale (.76) and the MMPI Depression Scale (.76).

Maternal Confidence Questionnaire (MCQ)

The MCQ (Parker & Zahr, 1985) consisted of 14 items, answered on a 5-point Likert scale (1 = never and 5 = great deal) (Appendix M). The scale measured maternal confidence in parenting skills and the ability to recognize her

infant's needs, e.g., "I can tell when my baby is tired and needs a nap." Cronbach's alphas (0.82-0.91) have been reported for the MCQ (Badr, 2005; Zahr, 1991; 1993). Zahr (1991) reported convergent validity by significant correlations with the Parenting Sense of Competence Scale ($r = .53$, $p < .05$) (Gibaud-Wallston & Wandersman, 1977). The instrument has been divided into the following subscales: knowledge (6 items), tasks (3 items), and feelings (5 items) with reported Cronbach's alphas of .51-.81 (Badr, 2005).

Procedures

This study was approved by Georgia State University's Institutional Review Board (IRB). IRB approval was also obtained from the IRB of a mid-sized private hospital in a moderately-sized southeastern city in the U.S. A statement of support was signed by the lead physician from the two recruitment sites where a point of contact was designated and was included in the booklet questionnaire. Mothers contacted the principal investigator or points of contact for participation. Mothers were also approached by the principal investigator or points of contact for participation in this study. Mothers who agreed to participate in the study and who met the inclusion criteria were provided or mailed a five-part booklet questionnaire to complete that contained a cover letter, statements of support, and two identical consent forms by the point of contact or the principal investigator (Appendix N, O, P). After reading the cover letter and the consent form, the participants consented by signing both consent forms and returning the completed booklet questionnaire to the principal investigator or the point of contact. All participants were given a consent form to keep for their records.

Data were collected at one point in time during participant recruitment with an estimate of 35 minutes to complete the questionnaire. Participants were asked to return the questionnaires directly to the point of contact or the principal investigator or to mail the questionnaires to the principal investigator in a stamped, self-addressed envelope that was provided. Points of contact who received a completed booklet questionnaire sealed the questionnaire and mailed it to the principal investigator in a stamped, self-addressed envelope that was provided. For participation in this study, participants were mailed a $5.00 Wal-Mart gift card once the principal investigator received the booklet questionnaire. The points of contact were paid $5.00 for each participant that they recruited who completed a booklet questionnaire. Mothers who scored a 17 or above on the BDI were contacted by phone if contact information was provided and mailed a follow-up letter recommending that they make an appointment with their obstetrician for follow-up along with a brochure on PPD (Appendix Q & R).

Confidentiality was maintained by having points of contact seal completed questionnaires and mail them to the principal investigator. Each recruitment site was assigned an identification code for follow-up purposes only. Only the principal investigator had access to the booklet questionnaires and identification codes. All points of contact were provided a 30-minute inservice by the principal investigator to ensure compliance with the protocol of this study prior to data collection. All written materials and code assignments were kept in a locked combination file box in the principal investigator's home to be stored for a period of seven years.

Data Analysis

Data Analysis Plan

Using SPSS statistical software version 10.0, the data were analyzed using multiple regression, t- tests, and descriptive statistics. Demographic information was analyzed with means, standard deviations, and percentages. Group differences between mothers with infants' age 6 weeks - 16 weeks and mothers with infants' age 17 weeks - 32 weeks were evaluated using t-tests and chi square.

Research Question #1: "What is the relationship between infant temperament and selected maternal factors (education, prior childcare experience, social support, and depression) and maternal confidence of first-time mothers during their child's infancy?" This question was statistically evaluated using bivariate correlations between the dependent variable and the independent variables and entering significant variables into a stepwise multiple regression analysis to determine those variables that might best predict maternal confidence. Dummy coding was used for education and prior childcare experience. The dependent variable was maternal confidence, and there were five independent variables: 1) selected demographic variables (education and prior infant care experience); 2) social support; 3) infant temperament; and 4) depression.

Research Question #2: What are the differences in maternal confidence between first-time mothers with infants' age 6 weeks - 16 weeks and first-time mothers with infants' age 17 weeks – 32 weeks? This question was statistically evaluated using a two-tailed t- test.

Summary

This research study used a descriptive, correlational research design with a convenience sample of 94 primiparous mothers ages 18-40 whose infants were 6 weeks to 32 weeks. After IRB approval, recruitment came from multiple sites and participants completed the five-part booklet questionnaires at time of recruitment. The five-part booklet questionnaire contained a cover letter, statements of support, two identical consent forms, demographic questionnaire, the ICQ (Bates et al., 1979), the BDI (Beck et al., 1961), the PRQ-2000 (Weinert, 2001), and MCQ (Parker & Zahr, 1985). Completed questionnaires were either mailed to the principal investigator or collected at time of recruitment and mailed by points of contact. Participants received a $5.00 gift card from Wal-Mart for participating in the research study. Points of contacts received $5.00 for every participant that they recruited who completed a booklet questionnaire. Points of contact received an inservice on the protocols of the study and the protection of human subjects by the principal investigator prior to participant recruitment.

The booklet questionnaire contained contact information for the participants as well as codes for participants and recruitment sites. Only the principal investigator had access to the contact information and codes. All questionnaires were stored in a combination locked file box in the investigator's

home. Data were analyzed using SPSS statistical software version 10.0 with multiple regression, t-tests, and descriptive statistics.

CHAPTER IV

RESULTS

This chapter contains a description of the participants who comprised the sample, descriptive statistics of responses to the five-part booklet questionnaire for the entire sample, and a statistical analysis of the research questions. In particular, the relationship between infant temperament and maternal factors (education, prior childcare experience, social support, and depression) and maternal confidence is explored. Furthermore, differences in maternal confidence between mothers with infants' age (6 weeks – 16 weeks) and (17 weeks – 32 weeks) are discussed.

Sample

Demographic Characteristics of Sample

Mothers and Infants

There were 94 mothers who participated in this study and each completed a five-part booklet questionnaire. The mean age of the mothers was 27 (*SD* = 4.67) with a range of 18 – 40 and the mean infants' age was 16 weeks (*SD* = 8.9) with a range of 6 – 32 weeks. The infants of the mothers were predominantly male (*n* = 50; 53.2%) with females representing 46.8% (*n* = 44). The ethnicity of the mothers was mixed with a majority Caucasian (*n* = 52; 55.3%); African-American women represented 41.5% (*n* = 39) and other minority groups comprised about 3.2% (*n* = 3).

The mothers were predominantly married (n = 76; 80.9%) and educated with 84.1% (n = 79) completing some college or technical school or earning a bachelor's degree or higher.

A majority of the mothers also reported having some to a great deal of prior child care experience (n = 53; 56%) while about 43.7% (n = 41) had little to no prior childcare experience. The baby's father (n = 75; 79.8%) and the mother's mother (n = 16; 17%) were reported as the persons who helped most with the baby's care. It is interesting to note that 17% (n = 16) of the mothers had been told by a physician that they were depressed. However, only 8.5% (n = 8) were currently being treated for depression. Additionally, only 6% (n = 6) of this sample had scores 17 or above on the BDI that required follow up information to be mailed.

The participants were recruited from several sites. About 28% (n = 27) of the sample was recruited from two obstetricians' offices, 1% (n = 1) from the breastfeeding and parenting class, 6% (n = 6) from daycare centers, and 65% (n = 61) from the snowball technique. Table 1 summarizes demographic characteristics of the mothers and their infants from the questionnaires completed.

Chi square analysis was used to identify group differences between education and prior childcare experience. There were no statistically significant group differences between education (X^2 = 3.08, df = 6, p = .799) and prior childcare experience (X^2 = 1.268, df = 3, p = .737).

Table 1

Demographic Characteristics of Mothers & Infants ($N = 94$)

Characteristics	*n*	%
Infant's sex		
Boy	50	53.2
Girl	44	46.8
Race		
African-American	39	41.5
Hispanic	2	2.1
Caucasian	52	55.3
Other	1	1.1
Marital Status		
Single	10	10.6
Married	76	80.9
Divorced	2	2.1
Living with significant other	6	6.4
Number of People Living in Household		
Three	77	81.9
Four	11	11.7
Five	4	4.3
Six	1	1.1
Persons who Help Most with the Care of the Baby		
Baby's Father	75	79.8
Your Mother	16	17
Your Grandmother	2	2.1
Other	1	1.1
Prior Child Care Experience		
A great deal of	22	23.4
Some	31	33
Very Little	26	27.7
No	15	16
Told They were Depressed by Physician		
Yes	16	17
No	78	83
Currently Being Treated for Depression		
Yes	8	8.5
No	86	91.5

Descriptives

Infant Temperament

The mothers completed the ICQ as part two of the five part questionnaire. A total score for the subscale fussiness-difficult which includes six items was used to calculate infant temperament. The Cronbach's alpha for the ICQ subscale in this sample was .67. Table 2 summarizes the means scores of infant temperament with standard deviations. These mothers perceived their infants' temperament to be more difficult (M = 19.33, SD = 4.64) as compared to the average mean reported in the literature (M = 17.77, SD = 5.88) (Bates et al., 1979).

Social Support

The mothers completed the PRQ-2000 (Weinert, 2001) as part three of the five part questionnaire. A total score for the PRQ-2000 was used to calculate social support. The Cronbach's alpha for this sample was .90. Table 2 summarizes the mean scores of social support and standard deviations. These mothers reported strong social support.

Depression

The mothers completed the BDI as part four of the five part questionnaire and the total score was used to calculate depression. The Cronbach's alpha was .79 for this sample. Table 2 summarizes the means scores of depression with standard deviations. These mothers suffered from little to no depression.

Maternal Confidence

The mothers completed the MCQ (Parker & Zahr, 1985) as part five of the five part questionnaire and the total score was used to calculate maternal confidence. The Cronbach's alpha was .85 for this sample. The Cronbach's alphas for the subscales for this sample were knowledge .81 (6 items), tasks .79 (3 items), and feelings .79 (5 items). Table 2 summarizes the means scores of maternal confidence with standard deviations. These mothers were highly confident overall and were also confident in the areas of knowledge and tasks. However, these mothers were not as confident in the subscale of feelings as compared to the other subscales knowledge and tasks. The feelings subscale included items concerning satisfaction in the mothering role, frustration in the mothering role, being a role model for other mothers, and feelings of competence in the mothering role.

Table 2

Infant Temperament, Social Support, Depression and Maternal Confidence Booklet Questionnaire (*N* = 94)

Scale	Minimum	Maximum	Mean	*SD*
ICQ (possible scores 6-43)	9	33	19.33	4.64
PRQ-2000 (possible scores 15-105)	48	105	90.39	11.15
BDI (possible scores 0-63)	0	27	7.37	5.36
MCQ (possible scores 14-70)	44	70	61.62	5.70
Knowledge	17	30	26.12	2.97
Tasks	12	15	14.80	.632
Feelings	8	25	20.70	3.25

Results

Research Question One

What is the relationship between infant temperament and maternal factors (education, prior childcare experience, social support, and depression) and maternal confidence of first-time mothers during their child's infancy?

Table 3 presents the bivariate correlations between infant temperament and maternal factors (education, prior childcare experience, social support, and depression) and maternal confidence. Three of the five variables under study (infant temperament, $r = -.289$, social support, $r = .343$, and depression, $r = -.378$)

had statistically significant moderate relationships with maternal confidence. Mothers who perceived their infants to have a difficult temperament and mothers who were depressed reported lower confidence scores than mothers who perceived their infants to be more pleasant and who were not depressed. Likewise, the more pleasant the infants' temperament was, the greater the mothers' confidence. Mothers who had high social support also reported higher confidence scores than mothers who did not have high social support. Likewise, the greater the support that the mother had, the greater the mother's confidence.

There were also weak to moderate statistically significant relationships between social support and two of the variables (education (r = .233) and depression (r = -.532), p < .01). Mothers who had more education and who were not depressed reported more social support than mothers who had less education and were depressed. Likewise, the more support and education the mother had the less likely the mother was to be depressed. One explanation may be that mothers with more education have the potential to earn higher incomes and are more likely to have access to more resources for support than mothers with less education.

Table 3

Intercorrelations for scores for Infant Temperament, Education, Prior Childcare Experience, Social Support, Depression, and Maternal Confidence (N = 94)

Variables	1	2	3	4	5	6
1. Infant Temperament	-	.060	.036	.016	.196	-.289**
2. Education	-	-	.063	.233*	.025	-.187
3. Prior Child Care Experience	-	-	-	-.068	-.013	.002
4. Social Support	-	-	-	-	-.532**	.343**
5. Depression	-	-	-	-	-	-.378**
6. Maternal Confidence	-	-	-	-	-	-

* Correlations significant at the ≤ .05 (2-tailed).
** Correlations significant at the ≤ .01 (2-tailed).

The best stepwise multiple regression model for predicting variables for maternal confidence included the following variables: depression, social support, and infant temperament. This model accounted for 20.6% of the variance in maternal confidence (F = 9.037, p < .01) as summarized in Table 4.

Table 4

Predictor Variables of Maternal Confidence with Infant Temperament and Maternal Factors (Education, Prior Childcare Experience, Social Support, Depression) as Independent Variables

Model	Beta	*t*	*p*	Adjusted R Square
1. Depression	-.378	-3.916	.000	.134
2. Depression & Infant Temperament	-.224	-2.329	.022	.173
3. Depression, Infant Temperament & Social Support	.240	2.176	.032	.206

Research Question Two

What are the differences in maternal confidence between first-time mothers with infants' age 6 weeks - 16 weeks and first-time mothers with infants' age 17 weeks – 32 weeks?

There was no statistically significant difference between maternal confidence of mothers with infants' age (6 weeks – 16 weeks) and (17 weeks – 32 weeks) ($t(90) = -1.077$, $p = .285$). The reported means for maternal confidence were high and similar for both groups of mothers. However, there was a statistically significant difference between mothers' perceptions of their infants' temperament with infants' age (6 weeks – 16 weeks) and (17 weeks – 32 weeks) ($t(89) = 2.117$, $p = .037$) [effect size of .45]. Table 5 summarizes group

differences for infant temperament. Mothers of the younger infants perceived their infants to be more difficult than the mothers with the older infants. One explanation may be that the infants between the ages of 6 weeks and 16 weeks may have been suffering from colic, whereas, the older infants (17 weeks – 32 weeks) may have progressed from this stage as colic occurs less frequently as the infant ages.

Table 5

Group Differences for Infant Temperament with Infants' Age

Independent t-tests

Variable	Infant Temperament		
	M	*SD*	*t*(89)
Group 1 (*n* = 56) (6 weeks -16 weeks)	20.05	4.38	.037*
Group 2 (*n* = 38) (17 weeks – 32 weeks)	18.26	5.50	

*$p < .05$.

There were no statistically significant differences between groups in regards to infants' age on social support ($t(90) = 1.451$, $p = .150$) and depression ($t(89) = -.711$, $p = .479$). However, there was a small difference in the group means with social support (Group 1, $M = 91.75$, $SD = 9.81$; Group 2, $M = 88.39$, $SD = 12.75$). Mothers of the younger infants reported more social support than mothers of the older infants. One explanation may be that the amount of support had decreased with time with the mothers with the older infants so that they were not receiving as much support, as they were initially postpartum.

Summary

The sample for this study consisted of 94 mothers who completed a five-part questionnaire that measured demographic characteristics, infant temperament, social support, depression, and maternal confidence. The mean age of the mothers was 27 (*SD* = 4.67) with a range of 18 – 40 and the mean infants' age was 16 weeks (*SD* = 8.9) with a range of 6 – 32 weeks. Male infants represented 53.2% (*n* = 50) of the infant sample. The sample was ethnically diverse with minorities representing 44.7% (*n* = 42) of the mothers. The mothers were predominantly married (*n* = 76; 80.9%) and educated with 84.1% (*n* = 79) completing some college or technical school or earning a bachelor's degree or higher. A majority of the mothers also reported having some to a great deal of prior child care experience (*n* = 53; 56%) and listed the baby's father as the primary support person. Although 17% (*n* = 16) of mothers had been diagnosed with depression, only a small percentage (*n* = 6; 6%) was being treated.

Results revealed statistically significant relationships between infant temperament (*r* = -.289), social support (*r* = .343), depression (*r* = -.378), and maternal confidence. The more pleasant the infant's temperament was, the greater the mother's confidence. Likewise, mothers who were confident had more social support and were less likely to be depressed. Social support was also found to have statistically significant relationships with education (*r* = .233) and depression (*r* = -.53). Mothers with education who have more social support are less likely to be depressed. Infant temperament, social support, and depression predicted 20.6% of the variance with maternal confidence.

There were no statistically significant group differences between maternal confidence and mothers of infants' age 6 weeks -16 weeks and mothers with infants' age 17 weeks – 32 weeks. However, there was a significant difference between groups for infant temperament ($t(89) = 2.117$, $p = .037$) [effect size of .45]. Mothers with younger infants perceived their child to be more difficult than the mothers of older infants. No statistically significant group differences were reported with social support, depression, education, and prior childcare experience.

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The mothers completed the BDI as part four of the five part questionnaire and the total score was used to calculate depression. The Cronbach's alpha was .79 for this sample. Table 2 summarizes the means scores of depression with standard deviations. These mothers suffered from little to no depression.

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5. Depression	-	-	-	-	-	-.378**
6. Maternal Confidence	-	-	-	-	-	-

* Correlations significant at the ≤ .05 (2-tailed).
** Correlations significant at the ≤ .01 (2-tailed).

The best stepwise multiple regression model for predicting variables for maternal confidence included the following variables: depression, social support, and infant temperament. This model accounted for 20.6% of the variance in maternal confidence (F = 9.037, p < .01) as summarized in Table 4.

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Research Question Two

What are the differences in maternal confidence between first-time mothers with infants' age 6 weeks - 16 weeks and first-time mothers with infants' age 17 weeks – 32 weeks?

There was no statistically significant difference between maternal confidence of mothers with infants' age (6 weeks – 16 weeks) and (17 weeks – 32 weeks) ($t(90) = -1.077$, $p = .285$). The reported means for maternal confidence were high and similar for both groups of mothers. However, there was a statistically significant difference between mothers' perceptions of their infants' temperament with infants' age (6 weeks – 16 weeks) and (17 weeks – 32 weeks) ($t(89) = 2.117$, $p = .037$) [effect size of .45]. Table 5 summarizes group

differences for infant temperament. Mothers of the younger infants perceived their infants to be more difficult than the mothers with the older infants. One explanation may be that the infants between the ages of 6 weeks and 16 weeks may have been suffering from colic, whereas, the older infants (17 weeks – 32 weeks) may have progressed from this stage as colic occurs less frequently as the infant ages.

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*$p < .05$.

There were no statistically significant differences between groups in regards to infants' age on social support ($t(90) = 1.451$, $p = .150$) and depression ($t(89) = -.711$, $p = .479$). However, there was a small difference in the group means with social support (Group 1, $M = 91.75$, $SD = 9.81$; Group 2, $M = 88.39$, $SD = 12.75$). Mothers of the younger infants reported more social support than mothers of the older infants. One explanation may be that the amount of support had decreased with time with the mothers with the older infants so that they were not receiving as much support, as they were initially postpartum.

Summary

The sample for this study consisted of 94 mothers who completed a five-part questionnaire that measured demographic characteristics, infant temperament, social support, depression, and maternal confidence. The mean age of the mothers was 27 (*SD* = 4.67) with a range of 18 – 40 and the mean infants' age was 16 weeks (*SD* = 8.9) with a range of 6 – 32 weeks. Male infants represented 53.2% (*n* = 50) of the infant sample. The sample was ethnically diverse with minorities representing 44.7% (*n* = 42) of the mothers. The mothers were predominantly married (*n* = 76; 80.9%) and educated with 84.1% (*n* = 79) completing some college or technical school or earning a bachelor's degree or higher. A majority of the mothers also reported having some to a great deal of prior child care experience (*n* = 53; 56%) and listed the baby's father as the primary support person. Although 17% (*n* = 16) of mothers had been diagnosed with depression, only a small percentage (*n* = 6; 6%) was being treated.

Results revealed statistically significant relationships between infant temperament (*r* = -.289), social support (*r* = .343), depression (*r* = -.378), and maternal confidence. The more pleasant the infant's temperament was, the greater the mother's confidence. Likewise, mothers who were confident had more social support and were less likely to be depressed. Social support was also found to have statistically significant relationships with education (*r* = .233) and depression (*r* = -.53). Mothers with education who have more social support are less likely to be depressed. Infant temperament, social support, and depression predicted 20.6% of the variance with maternal confidence.

There were no statistically significant group differences between maternal confidence and mothers of infants' age 6 weeks -16 weeks and mothers with infants' age 17 weeks – 32 weeks. However, there was a significant difference between groups for infant temperament ($t(89) = 2.117$, $p = .037$) [effect size of .45]. Mothers with younger infants perceived their child to be more difficult than the mothers of older infants. No statistically significant group differences were reported with social support, depression, education, and prior childcare experience.

CHAPTER V

DISCUSSION AND CONCLUSIONS

In this chapter, the sample is described and the findings from the research questions are discussed. The findings are discussed in relation to the conceptual model and the limitations of this study are presented. The implications for nursing practice and future research are also discussed.

Discussion of the Findings

This study was designed to explore the relationship between infant temperament and selected maternal factors (education, prior childcare experience, social support, and depression) and maternal confidence. Maternal confidence has been identified in the literature as salient to maternal role/identity (Mercer, 1995) and impacts the most intimate subsystem (the mother, infant, and father/partner) in Becoming a Mother. It is within this subsystem that Becoming a Mother occurs (Mercer as cited in Meighan, 2006).

The mothers in this study were predominantly married and educated and reported having more male babies than females. This is supported by Sutton and Mathews (2004) who reported a higher male to female ratio for infant births. The average age of the mothers in this sample was 27 years which was within the range of the highest reported national age of 25-29 years for first-time mothers (Sutton & Mathews). Although employment status was not assessed, the mothers appeared to be professional women based on their educational status

and reported household income, with 48% reporting household incomes of $60,000 or higher with three members in the household including the infant. This is higher than the national average household income which is a little over $43,000 (U.S. Census Bureau, 2004). African-American and other minorities represented about 44% of this sample which is a more diverse sample than in many studies. In addition, this proportion of African-Americans and other minorities was consistent with proportions of minorities in the Southeastern area of the United States (55% African-American) from which most of the sample was drawn (U.S. Census Bureau, 2003). This sample was also mixed in relationship to prior child care experience with about 43% (n = 41) having little to no prior childcare experience. The mothers in this study also reported the baby's father and their mother to be the primary source of help for caring for the baby. Similar findings have been reported in the literature (McKim, 1993; Warren, 2005).

The mothers in this sample were confident and reported high social support scores with 100% of the mothers scoring 44 or higher with a range of possible scores from 14 –70. This is similar to findings that Warren (2005) reported in which 93% of the sample scored in the moderate to high range for maternal confidence. Kapp (1998) also reported high confidence mean scores for multiparas and primiparas in the study's sample.

The mean score reported for depression in first-time mothers was low in this sample. Only 6% (n = 6) of the mothers scored 17 or higher on the BDI requiring follow-up; this percentage is smaller than the 10-15% reported in the literature (O'Hara & Swain, 1996). However, 17% (n = 16) of the mothers had

been told by a physician that they were depressed. It should be noted that 75% (n = 12) of those mothers who had been told by a physician that they were depressed did not score 17 or greater on the BDI. One explanation for this finding is that 42% (n = 5) of these mothers were under treatment at the time the questionnaire was completed. Since some mothers were receiving treatment for depression, this may have also contributed to the low percentage of mothers who required follow up for high depression scores. Another reason may be that the mothers may have under reported their symptoms of depression. The later may explain why 33% (n = 7) of the mothers who were told by a physician that they were depressed and who were not receiving treatment scored below 17 on the BDI. However, another explanation for this finding may be that the mothers were not experiencing depressive symptoms at the time the questionnaire was completed. This would be supported by Amankwaa's (2003) and Ugarriza's (2002) findings where mothers described PPD as occurring at different times and varying in severity over the postpartum period.

The mean score for infant temperament was above average in this sample (M = 19.33, SD = 4.64) as compared to what has been reported in the literature (M = 17.77, SD = 5.88) (Bates et al., 1979). However, the mean score for infant temperament "fussy-difficult" subscale (possible range of scores 6 - 43) for this sample is interpreted to mean that these mothers view their infants' temperament as average as compared to other infants. Mothers in this study viewed their infants' temperament as typical versus easy or difficult. These findings are not surprising, since the confidence scores were high and the depression scores

were low. Furthermore, the results revealed a moderate negative correlation with infant temperament and maternal confidence, which has been supported in the literature (Porter & Hsu, 2003). Since only one measure of infant temperament was used, the results may not be used to label an infant as easy or difficult.

Findings from this study suggest that mothers who have low social support, are depressed, and perceive their infant to have a difficult temperament have lower maternal confidence than mothers who have high social support, no depression, and perceive their infant to have an easy temperament. The results reveal that infant temperament, social support, and depression had statistically significant moderate relationships with maternal confidence (r = -.289, r = .343, r = -.378, $p < .01$, respectively). The literature also supports the relationship of maternal confidence between social support and infant temperament. Ruchala & James (1997) reported that social support had a significant positive relationship with maternal confidence (r = .29, $p < .001$). Warren (2005) reported significant positive correlations between maternal confidence and appraisal support and informational support (r = .40, $p < .01$ and r = .20, $p < .05$, respectively). Similarly, Porter and Hsu (2003) found a significant correlation between infant temperament and maternal self-efficacy (r = - .37, $p < .05$). However, Porter and Hsu did not report a significant relationship between depression and maternal self-efficacy. One reason for this difference may have been the small sample size used and the lack of variability in the depression scores reported in the Porter and Hsu study.

In this study, no statistically significant correlations were found between maternal confidence and selected demographic variables (education or prior childcare experience). Similarly, Porter & Hsu (2003) reported no significant correlations between demographic variables (age, education, household income, employment status, prior childcare experience, or sex of the child) and maternal self-efficacy. However, the lack of variability in the levels of education in this study may have contributed to this finding.

Depression, social support, and infant temperament accounted for 20.6% of the variance with maternal confidence. However, Froman & Owen (1990) reported that demographic variables such as age, sex of the child, education, and income accounted for 28% of the variance in maternal confidence. Similarly, Raver & Leadbeater (1999) reported that 29% of the variance for maternal self-efficacy was explained by higher reported stress, age, education, and low social support. However, Porter and Hsu reported that depression, anxiety, marital negativity, prenatal efficacy, and infant temperament accounted for 62% of the variance. One explanation for the differences in these findings relates to the variety of instruments used to measure the same variables in these research studies. Another explanation may be related to the timing of data collection, which ranged from the prenatal period through the postpartum period including early toddlerhood. Lastly, the samples varied in relation to size and the mother's demographic characteristics such as age and education.

Interestingly, there was a significant difference between mothers' perceptions of their infants' temperament in relation to the infants' age (6 weeks-16 weeks) and (17 weeks -32 weeks). Mothers with younger infants perceived their infants to be more difficult than the mothers with older infants. One explanation for this may be that the younger infants may have experienced colic during this time, whereas the older infants would have been past this stage. There was a small difference reported in the means for groups with social support in this study. The mothers with the older infants reported less social support than mothers with the younger infants. Mothers may receive more support after childbirth and early postpartum with this support tapering off over time.

There were no statistically significant group differences found between maternal confidence of mothers with infants' age 6 weeks -16 weeks and mothers with infants' age 17 weeks - 32 weeks. Similarly, researchers have found no group differences in maternal confidence of mothers with premature and full-term infants (Zahr, 1993) and first-time married and single mothers (Copeland and Harbaugh, 2004). A possible reason for the finding in this study is that the mothers were homogeneous in relation to their confidence and social support. Another explanation may be that the sample size was not large enough to distinguish between the group differences with social support (.30), depression (.15), and maternal confidence (.23) with small effect sizes reported.

Maternal confidence has been explored in the literature for four decades and is essential for the transitioning of Becoming a Mother. Findings from this

study support the conceptual model: Maternal Role Attainment: Becoming a Mother as evidenced by the statistically significant relationships between depression, social support, infant temperament, and maternal confidence. These variables are identified in the model in relation to maternal and infant characteristics and maternal/role identity which is at the center of the model. The mothers in this study were predominantly in the stages of approaching normalization (2-4 months) and integration of maternal identity (4 months - beyond) based on the definitions of Becoming a Mother (Mercer as cited in Meighan, 2006). However with this sample of mothers (2-4 months) postpartum, the mothers seemed to have already reached integration of identity, which brings to question how early maternal identity, might occur.

Conclusions

Limitations of the Study

The limitations of this study will be presented in relation to the design and internal and external validity. One limitation of this study was that it was a non-experimental design in which a convenience sample was used. This study may have been strengthened with an intervention for maternal confidence, the addition of a control group, and randomization of the sample. The sample was also homogeneous in regards to marital status, education, and income, which limit the generalizibility of the findings to mothers beyond this sample. However, efforts were made to select recruitment sites that offered services to mothers of all income levels.

Another limitation was the small effect sizes for social support, depression, and maternal confidence, which support the need for a larger sample to distinguish between groups.

In addition, the infant temperament instrument only reported a moderate Cronbach's alpha of .67 for the subscale "fussy-difficult" which is lower than what has been reported in the literature (Cronbach's alpha .79) (Bates et al., 1979). One explanation for this score is that there was not enough variability in temperament scores, therefore the scores were skewed more in one direction. Another limitation was that only one measure for each construct, infant temperament, social support, depression, and maternal confidence was used. Since self-report was the only measure used for the variables under study, the accuracy of the self-report may be called to question. Including other measures for the constructs such as observation would have strengthened this study.

Implications for Nursing Practice

Infant Temperament. Healthcare providers need to be aware that mothers who perceive their infant to have a difficult temperament may have lower confidence in caring for their infants than mothers who perceive their infant to have a more pleasant temperament. Nurses need to be attuned to a mother's complaints about her infant's behavior. Education or other resources may be needed to assist mothers who may have infants with a difficult temperament.

Depression. Education and screening for PPD needs to occur more often during the first year postpartum. Healthcare providers need to be aware of primary sources of social support so that these persons may be included in the

education for PPD as well. Healthcare providers need to be aware that depression may be underreported with mothers and may occur beyond the early postpartum period. Education needs to be provided to mothers prenatally through postpartum. Active or proactive methods for ongoing education would be more effective than passive methods. Nurses need to screen for PPD and be aware that reports of fatigue from new mothers may mean more than tiredness caused by sleep deprivation.

Social Support. Healthcare providers should be aware of the types of social support a new mother has. Education or sources of support may need to be provided for new mothers especially during the early months postpartum when Becoming a Mother occurs. Healthcare providers should assess social support with first-time mothers beyond early postpartum (birth – 6 weeks) because these mothers may receive less support over time during their infant's first year.

Maternal Confidence. Healthcare providers should be aware that mothers who suffer from depression, have low social support, and perceive their infants to have difficult temperament are at risk for having low confidence in the care they provide for their infants. Although 20.6% of the variance of maternal confidence was predicted by depression, social support, and infant temperament, other variables continue to influence maternal confidence. This study focused on the postpartum period, however there is support that similar variables impact maternal confidence throughout the childbirth period, prenatally as well as postpartum (Porter & Hsu, 2003). Exploring Becoming a Mother along a

continuum is supported by Mercer's change in her model on MRA, where MRA was viewed as a permanent state (Mercer as cited in Meighan, 2006). Since postpartum stays are short, healthcare providers should explore better methods of providing education and interventions with mothers and their support persons across the continuum of childbirth. Furthermore, nurses are in the best position to manage the care of expectant mothers prenatally to postpartum. If education and support are coordinated throughout this period, maternal confidence of first-time mothers may be increased.

Mothers in the U.S. are held accountable for their infant outcomes and need interventions that improve their confidence in the care that they provide. Infant temperament, social support, and depression are a few variables that have been identified in this study as having a statistically significant relationship with maternal confidence. When maternal confidence is increased in mothers, satisfaction in the mothering role occurs and maternal role/identity is achieved. Most education and care for women are provided prenatally and early postpartum (6 weeks). However, mothers may suffer from depression beyond the early postpartum or may have less social support than in early postpartum. This may lead to lower maternal confidence, dissatisfaction in the mothering role, and delayed maternal/role identity. Healthcare providers need to be aware of these possible barriers to increasing maternal confidence.

Recommendations for Future Research

This study needs to be replicated to gain support for the conceptual framework and generalizibility of the findings. One problem with the knowledge

development of maternal confidence is the use of a variety of instruments to measure this construct. This makes it difficult to come to conclusive decisions about what impacts maternal confidence. One method to strengthen this study would be to increase the number of participants therefore increasing the statistical power. Another method would be to use more than one measure for infant temperament, depression, and maternal confidence. In addition, looking at the variables over time with one sample may also strengthen the design of this study.

Summary

The sample in this study consisted of predominantly married and educated mothers who had household incomes well above the reported national mean in the U.S. The mothers were confident in the care that they provided for their infants and there were no statistically significant differences between groups in relation to infants' age (6 weeks -16 weeks) and (17 weeks - 32 weeks) for maternal confidence, social support, and depression. However, there was a significant difference between mothers' perception of their infants' temperament, where mothers of younger infants reported their infants to be more difficult than the mothers with older infants. The sample reported a low incidence (n = 6; 6%) of depression, although a higher percentage (n = 16; 17%) had been told by a physician that they were depressed. The variables infant temperament, social support, and depression were reported to have a statistically significant relationship with maternal confidence with support for this finding present in the literature. Mothers who have low social support, are depressed, and view their

infants to have difficult temperament have lower confidence than mothers who have high social support, no depression, and have infants with easy temperaments. Likewise, mothers with high social support and who view their infants to be more pleasant have greater confidence and are less likely to be depressed. The predictor model accounted for 20.6% of the variance with maternal confidence. Therefore, other contributing variables need to be identified.

The findings from this study can only be generalized to this sample. Limitations of this study included non-experimental design, a convenience sample, low statistical power for t-tests, and lack of variation in testing measures. Implications from this study included increased awareness about the impact of infant temperament in relation to maternal confidence, education about PPD with a variety of methods prenatally and postpartum, screening for PPD during early postpartum and beyond, and assessing for sources of support for new mothers. There is also an implication for the coordination of care for mothers prenatally through postpartum during the first year. Research is also needed to explore these concepts over time with one sample. Furthermore, additional research is needed with consistency of construct measurement. Once additional research with consistency of construct measurement is implemented; more knowledge about maternal confidence will be discovered.

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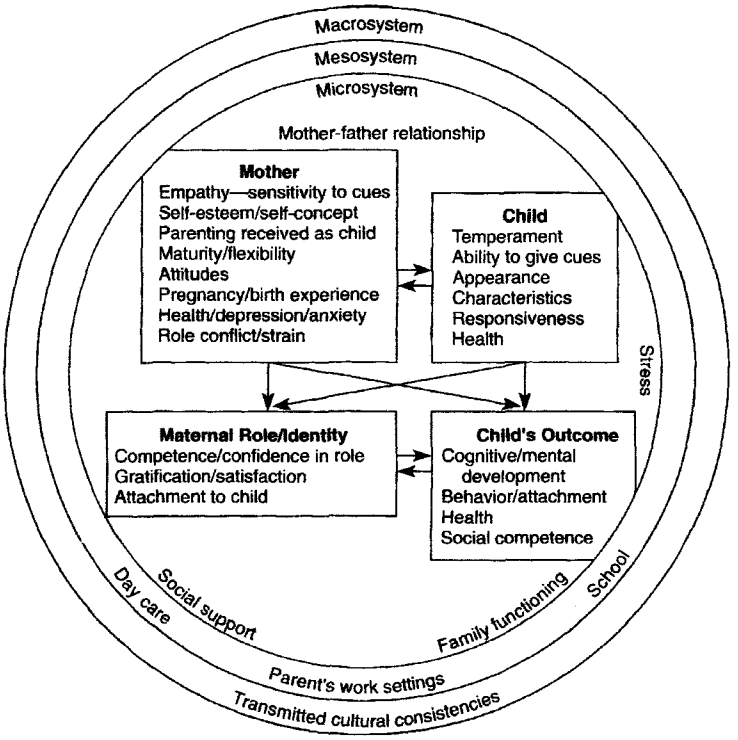
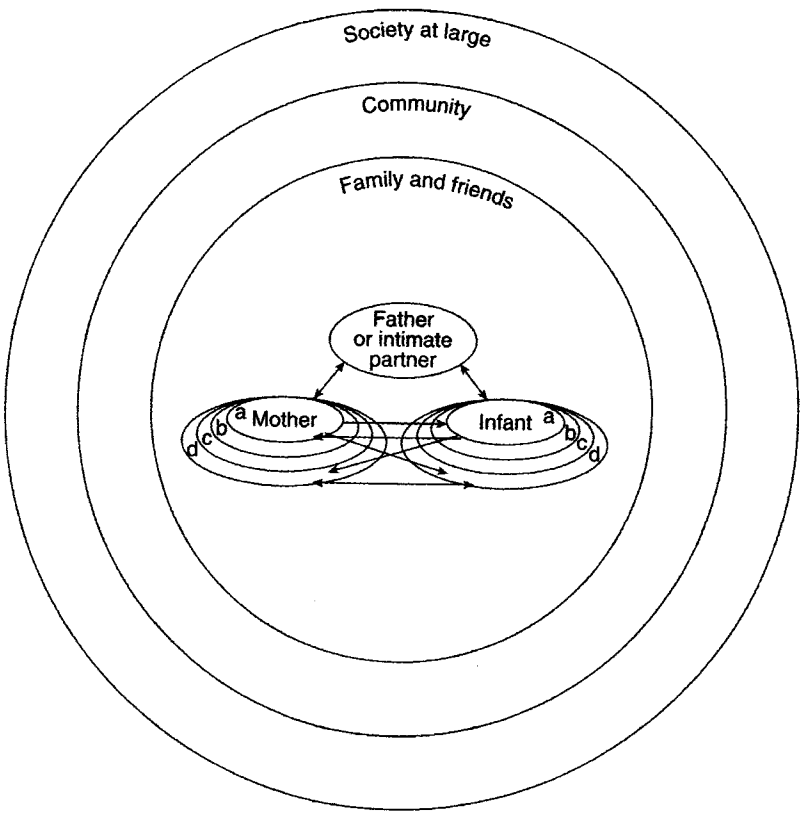
Appendix A: Mercer's Maternal Role Attainment Model

(Mercer, 1991)



Appendix B: Mercer's Nested Circles

(Mercer, 2003)



Note: Reprinted with permission from Ramona T. Mercer.

Appendix C: Power Analysis

Power Analysis

Sample analysis using multiple regression with five independent variables.

(Cohen & Cohen, 1975)

Power = .80

Alpha = .05

Medium effect = .50

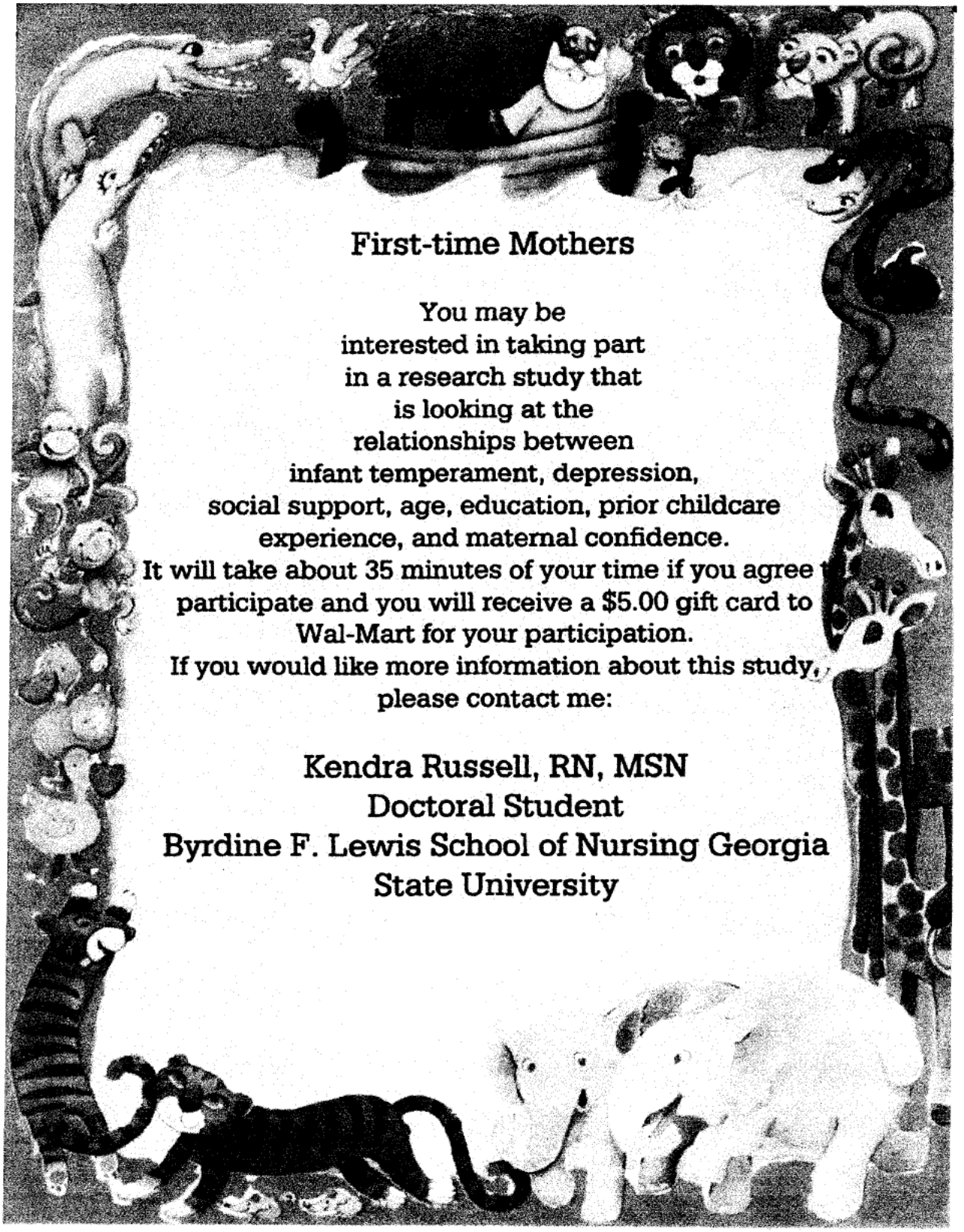
$L = 12.83$

$$N = \frac{(1 - 0.13)}{0.13} + 5 + 1$$

$N = 93$

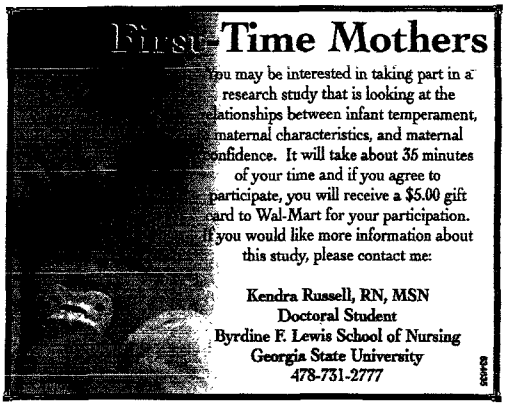
Appendix D: Recruitment Flyer

Recruitment Flyer



Appendix E: Ad

Ad



FRI TN

ACCOUNT: Kendra Russell, RN, MSN
AD: 634635 STARTS: 08/05/05

DUE: Wednesday, 08/04/05, by 4:30pm

AD TYPE: RETAIL
SIZE: 2x3
COLOR: B/W
REP: Sandra Abram (108,109)
1 PROOF TO REP
ARTIST: Marina
CREATED: Quark

Appendix F: Letter Explaining the Study

Letter Explaining the Study

BYRDINE F. LEWIS SCHOOL OF NURSING
College of Health and Human and Sciences

P.O. Box 4019
Atlanta GA 30302-4019
Phone: 404/651-3040
Fax: 404/651-3095

Georgia State University

January 4, 2004

Dear Pastor,

My name is Kendra Russell and I'm a doctoral student at Georgia State University and have a background in maternal child health. I'm interested in learning about how new mothers are adjusting to caring for their infant.

Currently, I'm working on my dissertation research study entitled, "Maternal Confidence of First-time Mothers During Their Child's Infancy." This study will help determine the primary factors that influence maternal confidence in first-time mothers. Mothers will complete a questionnaire with 5 parts that asks questions about their confidence as a mother, their infant's temperament, social support, depression, and background information such as their age and their infant's date of birth. It will take approximately 35 minutes to complete the questionnaires and participants will receive a Wal-Mart gift card in the amount of $5.00. This information may help other new mothers.

I'm recruiting from obstetric and pediatric physicians' offices as well as churches and daycare centers. I've enclosed a flyer advertising my study and I'm asking that you place a flyer on a bulletin board that may be visible to new mothers. If you have any questions about this study or want more information about becoming a recruitment site, please contact me at .

Thank you for your assistance with this project.

Sincerely,

Kendra Russell, RN, MSN
Doctoral Student

Appendix G: Statement of Support

Statement of Support

BYRDINE F. LEWIS SCHOOL OF NURSING
College of Health and Human and Sciences

P.O. Box 4019
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Phone 404/651-3046
Fax 404/651 3096

Georgia State University

August 10, 2004

Ms. Kendra Russell, MSN, RN

Dear Ms. Russell:

Our signatures are to confirm our support of you in the conduct of your doctoral study, "Maternal Confidence of First-Time Mothers During Their Child's Infancy." Studies that assist in identifying needs of first-time mothers and ways to support them are greatly needed. Therefore, we support, Kendra Russell, MSN, RN, in the recruitment of mothers from our facility as participants for your doctoral study sponsored through the Byrdine F. Lewis School of Nursing at Georgia State University.

Sincerely,

Appendix H: Permission to Use Instruments

Permission to Use Instruments

Kendra Russell

From: "John E. Bates" <batesj@indiana.edu>
To: "Kendra Russell" <RUSSELL1004@peoplepc.com>
Sent: Thursday, June 03, 2004 10:03 AM
Attach: Information on the Infant Characteristics Questionnaire1.doc
Subject: Re: Infant Characteristic Questionnaire

Dear Kendra,
You're quite welcome to use the ICQ in your research. I will attach a copy.
Please send me a summary of your findings, if you would. Sounds like an interesting project.
Best of luck.
Jack

At 01:50 PM 5/28/2004 -0400, you wrote:
>Hi Dr. Bates,
>
>I'm requesting permission to use the Infant Characteristic Questionnaire
>in my dissertation research entitled, Maternal Confidence of First-Time
>Mothers During Their Infants' First Year of Life.
>
>I will be measuring the variables maternal confidence, social support, and
>infant temperament with first-time mothers whose infants are a year or less.
>
>I'm also requesting a copy of this instrument. My home mailing address is
>

>
>
>Thank you for your time,
>
>Kendra Russell, RN MSN
>Doctoral Student
>Georgia State University
><mailto:reken_us@yahoo.com>reken_us@yahoo.com
>

From: legalaffairs@harcourt.com
Subject: Re: Beck Depression Inventory
To: "Kendra Green" <reken_us@yahoo.com>
CC: legalaffairs@harcourt.com
Date: Tue, 3 Aug 2004 12:43:12 -0500

Kendra,

We have evaluated your request and determined that permission is not necessary
for you to use the BDI in your study. Based on the information provided,
you are able
to use the published version in your reserach study. Please contact our
Customer Service
Department at (800) 211-8378 to place your order; students may qualify to
receive upto
a 50% discount of the purchase of materials.

Permission to use the scale would only be needed if you were adapting the
scale from its original format or translating the scale for use in your study.

Good Luck on your reserach!

Cathy Baker
Contract Specialist, Legal Affairs
Harcourt Assessment, Inc.
19500 Bulverde Road
San Antonio, TX 78259
(210) 339-5580 (Phone)
(210) 339-5059 (Fax)

Kendra Green
<reken_us@yaho o.com>

To:
cc:
Subject: Re: Beck Depression Inventory

08/03/2004
09:29 AM

Permission granted through access of web site.

if I can't pay them back.....	1	2	3	4	5	6	7
Q-11. When I am upset, there is someone I can be with who lets me be myself.....	1	2	3	4	5	6	7
Q-12. I know that others appreciate me as a person.....	1	2	3	4	5	6	7
Q-13. There is someone who loves and cares about me.....	1	2	3	4	5	6	7
Q-14. I have people to share social events and fun activities with.....	1	2	3	4	5	6	7
Q-15. I have a sense of being needed by another person.....	1	2	3	4	5	6	7

This web site is maintained by Kerri Anderson
E-mail web development comments to
Page last updated 31 January 2002

Lina Badr, 10:52 AM 2/18/02 , Re: Instrument

X-Originating-IP: [63.198.86.46]
From: "Lina Badr" <linakbadr@hotmail.com>
To: kgreen@mail.gcsu.edu
Subject: Re: Instrument
Date: Mon, 18 Feb 2002 10:52:13 -0800
X-OriginalArrivalTime: 18 Feb 2002 18:52:14.0165 (UTC) FILETIME=[61237050:01C1B8AD]

You are welcome and good luck with your study. I would appreciate knowing
your final results.

Appendix I: Demographic Questionnaire

Demographic Questionnaire

Code _____
Site Code _____
Date _____

Please specify.

Your Age: _____ Infant's Date of Birth: _ _ / _ _ / _ _

mo day yr.

Infant's Sex (Circle one):

1. Boy
2. Girl

Race (Circle one):

1. African-American
2. Asian
3. Hispanic
4. Caucasian
5. Other, please specify _____

Marital Status (Circle one):

1. Single
2. Married
3. Divorced
4. Separated
5. Living with significant other

Highest Level of Education completed (Circle one):

1. Below 12th grade
2. 12th grade
3. Completed GED
4. Technical School
5. Some college or technical school
6. Bachelors Degree
7. Masters Degree or higher

Household Income (Circle one):

1. Less than $9, 999
2. $10, 000 - $29, 999
3. $30, 000 - $49, 999
4. $50, 000 - $69, 999
5. $60, 000 - $79, 999
6. $80,000 - $99,000
7. Over $100,000

How many people live in your household? _____.

Who helps you with your baby? Mark all that apply and rank in order the top three people who help you the most (1 = who helps you the most; 2 = your second support person; 3 = your third support person).

_____ Baby's father

_____ Your mother

_____ Your grandmother

_____ Your grandfather

_____ Your relatives other than above (Specify)_____

_____ Relatives of the baby's father (Specify) _____

_____ Friend

_____ Other (Specify) _____

Please circle the statement that best describes your childcare experience prior to having your baby. (e.g. babysat for infants and small children often)

Before my baby was born, I had _____ childcare experience.

1. a great deal of
2. some
3. very little
4. no

Have you ever been told by a physician that you were depressed? Circle one.

1. Yes
2. No

Are you currently being treated for depression? Circle one.

1. Yes
2. No

Appendix J: *Infant Characteristic Questionnaire (ICQ)*

Bates, Freeland, & Lounsbury, 1979

6 Month Infant Questionnaire

Bates Lab

Dept. of Psychology

Indiana University

Bloomington, IN 47405

INFANT QUESTIONNAIRE

Part I.

Your baby's name _____ Your name _____

Your baby's birth date _____ Address _____

Your baby's sex _____ Birth weight _____

Phone No. _____ Length at birth _____

Today's date _____ Present weight (if known) _____

Part II. On the following questions please circle the number that is most typical of your baby. "About average" means how you think the typical baby would be scored.

1. How easy or difficult is it for you to calm or soothe your baby when he/she is upset?

   1 2 3 4 5 6 7

   very easy about average difficult

2. How easy or difficult is it for you to predict when your baby will go to sleep and wake up?

   1 2 3 4 5 6 7

   very easy about average difficult

3. How easy or difficult is it for you to predict when your baby will become hungry?

1	2	3	4	5	6	7
very easy			about average			difficult

4. How easy or difficult is it for you to know what's bothering your baby when he/she cries or fusses?

1	2	3	4	5	6	7
very easy			about average			difficult

5. How many times per day, on the average, does your baby get fussy and irritable—for either short or long periods of time?

1	2	3	4	5	6	7
never	1-2 times per day	3-4 times per day	5-6 times per day	7-9 times per day	10-14 times per day	more than 15

6. How much does your baby cry and fuss in general?

1	2	3	4	5	6	7
very little; much less than the average baby			average amount; about as much as the average baby			a lot; much more than the average baby

7. How did your baby respond to his/her first bath?

1	2	3	4	5	6	7
very well-- baby loved it			neither liked nor disliked it			terribly-- didn't like it

8. How did your baby respond to his/her first solid food?

1	2	3	4	5	6	7
very favorably-- like it immediately			neither liked nor disliked it			very negatively— did not like it at all

9. How does your baby typically respond to a new person?

1	2	3	4	5	6	7
almost always responds favorably		responds favorably about half the time				almost always responds negatively at first

10. How does your baby typically respond to being in a new place?

1	2	3	4	5	6	7
almost always responds favorably		responds favorably about half the time				almost always negatively at first

11. How well does your baby adapt to things (such as in items 7-10) eventually?

1	2	3	4	5	6	7
very well, always likes it eventually		ends up liking it about half the time				almost always dislikes it in the end

12. How easily does your infant get upset?

1	2	3	4	5	6	7
very hard to upset--even by things that upset most babies		about average				very easily upset by things that wouldn't bother other babies

13. When your baby gets upset (e.g., before feeding, during diapering, etc.), how vigorously or loudly does he/she cry and fuss?

1	2	3	4	5	6	7
very mild intensity or loudness		moderate intensity or loudness				very loud or intense, really cuts loose

14. How does your baby react when you are dressing him/her?

1	2	3	4	5	6	7
very well--likes it		about average—doesn't mind it				doesn't like it at all

15. How active is your baby in general?

1	2	3	4	5	6	7
very calm and quiet			average			very active and vigorous

16. How much does your baby smile and make happy sounds?

1	2	3	4	5	6	7
a great deal, much more than most infants			an average amount			very little, much less than most infants

17. What kind of mood is your baby generally in?

1	2	3	4	5	6	7
very happy and cheerful			neither serious nor cheerful			serious

18. How much does your baby enjoy playing little games with you?

1	2	3	4	5	6	7
a great deal, really loves it			about average			very little, doesn't like it very much

19. How much does your baby want to be held?

1	2	3	4	5	6	7
wants to be free most of the time			sometimes wants to be held, sometimes not			a great deal-- wants to be held almost all the time

20. How does your baby respond to disruptions and changes in everyday routine, such as when you go to church or a meeting, on trips, etc.?

1	2	3	4	5	6	7
very favorably, doesn't get upset			about average			very unfavorably, gets quite upset

21. How easy is it for you to predict when your baby will need a diaper change?

1	2	3	4	5	6	7
very easy			about average			very difficult

22. How changeable is your baby's mood?

1	2	3	4	5	6	7
changes seldom, and changes slowly when he/she does change			about average			changes often and rapidly

23. How excited does your baby become when people play with or talk to him/her?

1	2	3	4	5	6	7
very excited			about average			not at all

Please rate the overall degree of difficulty your baby would present for the average mother.

1	2	3	4	5	6	7
super easy			ordinary, some problems			highly difficult to deal with

Appendix K: *Personal Resource Questionnaire (PRQ-2000)*

Weinert, 2001

Code _____
Site Code _____
Date _____

Below are some statements with which some people agree and others disagree. Please read each statement and place an **(X)** under the response most appropriate for you. There is no right or wrong answer.

Question	Strongly Disagree 1	Disagree 2	Somewhat Disagree 3	Neutral 4	Somewhat Agree 5	Agree 6	Strongly Agree 7
1. There is someone I feel close to who makes me feel secure.							
2. I belong to a group in which I feel important.							
3. People let me know that I do well at my work (job, homemaking).							
4. I have enough contact with the person who makes me feel special.							
5. I spend time with others who have the same interests that I do.							
6. Others let me know that they enjoy working with me (job, committees, projects).							
7. There are people who are available if I need help over an extended period of time.							
8. Among my group of friends we do favors for each other.							
9. I have the opportunity to encourage others to develop their interests and skills.							
10. I have relatives or friends that will help me out even if I can't pay them back.							

Appendix L: *Beck Depression Inventory*

Beck, Ward, Mendelson, Mock, & Erbaugh, 1961

Please circle the statement that describes your mood the best.

1.	0	I do not feel sad.
	1	I feel sad.
	2	I am sad all the time and can't snap out of it.
	3	I am so sad or unhappy that I can't stand it.
2.	0	I am not particularly discouraged about the future.
	1	I feel discouraged about the future.
	2	I feel I have nothing to look forward to.
	3	I feel that the future is hopeless and that things cannot improve.
3.	0	I do not feel like a failure.
	1	I feel I have failed more than the average person.
	2	As I look back on my life, all I can see is a lot of failures.
	3	I feel I am a complete failure as a person.
4.	0	I get as much satisfaction out of things as I used to.
	1	I don't enjoy things the way I used to.
	2	I don't get real satisfaction out of anything anymore.
	3	I am dissatisfied or bored with everything.
5.	0	I don't feel particularly guilty.
	1	I feel guilty a good part of the time.
	2	I feel quite guilty most of the time.
	3	I feel guilty all of the time.
6.	0	I don't feel I am being punished.
	1	I feel I may be punished.
	2	I expect to be punished.
	3	I feel I am being punished.
7.	0	I don't feel disappointed in myself.
	1	I am disappointed in myself.
	2	I am disgusted with myself.
	3	I hate myself.
8.	0	I don't feel I am worse than anybody else.
	1	I am critical of myself for my weaknesses or mistakes.
	2	I blame myself all the time for my faults.
	3	I blame myself for everything bad that happens.
9.	0	I don't have any thoughts of killing myself.
	1	I have thoughts of killing myself, but I would not carry them out.
	2	I would like to kill myself.
	3	I would kill myself if I had the chance.

10.	0	I don't cry any more than usual.
	1	I cry more now than I used to.
	2	I cry all the time now.
	3	I used to be able to cry, but now I can't even cry even though I want to.
11.	0	I am no more irritated by things than I ever am.
	1	I am slightly more irritated now than usual.
	2	I am quite annoyed or irritated a good deal of the time.
	3	I feel irritated all the time now.
12.	0	I have not lost interest in other people.
	1	I am less interested in other people than I used to be.
	2	I have lost most of my interest in other people.
	3	I have lost all of my interest in other people.
13.	0	I make decisions about as well as I ever could.
	1	I put off making decisions more than I used to.
	2	I have greater difficulty in making decisions than before.
	3	I can't make decisions at all anymore.
14.	0	I don't feel that I look any worse than I used to.
	1	I am worried that I am looking old or unattractive.
	2	I feel that there are permanent changes in my appearance that make me look unattractive.
	3	I believe that I look ugly.
15.	0	I can work about as well as before.
	1	It takes an extra effort to get started at doing something.
	2	I have to push myself very hard to do anything.
	3	I can't do any work at all.
16.	0	I can sleep as well as usual
	1	I don't sleep as well as I used to.
	2	I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
	3	I wake up several hours earlier than I used to and cannot get back to sleep.
17.	0	I don't get tired more than usual.
	1	I get tired more easily than I used to.
	2	I get tired from doing almost anything.
	3	I am too tired to do anything.
18.	0	My appetite is no worse than usual.
	1	My appetite is not as good as it used to be.
	2	My appetite is much worse now.
	3	I have not appetite at all anymore.
19.	0	I haven't lost much weight, if any, lately.
	1	I have lost more than five pounds.
	2	I have lost more than ten pounds.
	3	I have lost more than fifteen pounds.

20.	0	I am no more worried about my health than usual.
	1	I am worried about physical problems such as aches or pains, or upset stomach, or constipation.
	2	I am very worried about physical problems and it's hard to think of much else.
	3	I am so worried about my physical problems that I cannot think about anything else.
21.	0	I have not noticed any recent change in my interest in sex.
	1	I am less interested in sex than I used to be.
	2	I am much less interested in sex now.
	3	I have lost interest in sex completely.

Appendix M: *Maternal Confidence Questionnaire*

Parker & Zahr, 1985

How confident do you feel in your parenting role? (Mark an **(X)** in the appropriate box.)

Question	Never 1	Seldom 2	Some 3	Often 4	A great deal 5
1. I know when my baby wants me to play with him/her.					
2. I know how to take care of my baby better than anyone else.					
3. When my baby is cranky, I know the reason.					
4. I can tell when my baby is tired and needs to sleep.					
5. I know what makes my baby happy.					
6. I can give my baby a bath.					
7. I can feed my baby adequately.					
8. I can hold my baby properly.					
9. I can tell when my baby is sick.					
10. I feel frustrated taking care of my baby.					
11. I would be good at helping other mothers learn how to take care of their infants.					
12. Being a parent is demanding and unrewarding.					
13. I have all the skills needed to be a good parent.					
14. I am satisfied with my role as a parent.					

Appendix N: Cover Letter

Cover Letter

BYRDINE F. LEWIS SCHOOL OF NURSING
College of Health and Human and Sciences

P.O. Box 4019
Atlanta GA 30302-4019
Phone: 404/651-3040
Fax: 404/651-3096

Georgia State University

August 10, 2004

Dear New Mom,

Congratulations on the birth of your first baby! I'm a doctoral student at Georgia State University and have a background in maternal child health. I know that being a new mom is wonderful, but also challenging. As you and your child get to know each other, I'm interested in learning about how new mothers are adjusting to caring for their infant.

Therefore, I would like you to participate in a research study entitled, "Maternal Confidence of First-time Mothers During Their Child's Infancy." This study will help determine the primary factors that influence maternal confidence in first-time mothers. Your participation in this study is by choice only. If you agree to participate in this study, you will sign the following consent forms. You will keep one consent form for you records and I will keep one consent form on file for my records. You will complete a questionnaire with 5 parts that asks you questions about your confidence as a mother, your infant's temperament, social support, depression, and background information such as your age and your infant's date of birth. It will take approximately 35 minutes to complete the questionnaires. The information that you provide may help other new mothers like yourself.

If you participate in the study, you will receive a Wal-Mart gift card in the amount of $5.00 when you return your completed questionnaire to me, Kendra Russell, or to the person who contacted you about participating in this study. If you have any questions about this study or want more information about participating in this study, please contact me at . If you have no other questions, please sign the attached consent forms. Please return a signed consent form and your questionnaire booklet to me, Kendra Russell, or to the person who contacted you about participating in this study or mail the booklet in the enclosed stamp self-addressed envelope.

Thank you for your assistance with this project.

Sincerely,

Kendra Russell, RN, MSN
Doctoral Student

Appendix O: Informed Consent

Informed Consent

BYRDINE F. LEWIS SCHOOL OF NURSING
College of Health and Human and Sciences
P.O. Box 4019
Atlanta GA 30302-4019
Phone: 404/651-3040
Fax: 404/651-3096

Georgia State University

Informed Consent
Maternal Confidence of First-time Mothers During Their Child's Infancy
Georgia State University
Byrdine F. Lewis
School of Nursing

You are invited to take part in a research study entitled, Maternal Confidence of First-time Mothers During Their Child's Infancy. The purpose of this research study is to look at the relationships between age, education, prior childcare experience, infant temperament, social support, depression, and maternal confidence of first-time mothers during the first year of their baby's life. If you agree to take part, you will be asked to fill out a questionnaire with 5 parts. It will take about 35 minutes to fill out these forms. You will also be asked to give a mailing or email address and telephone number should I need to follow up with you about your results. If you score a 17 or above on the depression part of the questionnaire, I will contact you by telephone to discuss your results. I will also mail you a follow-up letter with a brochure discussing postpartum depression. You will receive a $5.00 gift card to Wal-Mart after you fill out the surveys for taking part in the study.

This study may not help you directly, but it will add to our understanding of the factors that influence maternal confidence and help us develop methods to support new mothers in their new roles. This study may help some new mothers by detecting signs of depression that may not have been known.

The information you provide will be kept confidential. Your name will not appear on the surveys. Reports of any findings will be summarized and reported in group form and you will not be identified personally.

You may ask, Kendra Russell, RN, MSN (principal investigator), any questions that you have about this study. Mrs. Russell can be reached at or you can contact Dr. Cecelia Grindel, Ph.D., Professor and Director of the Graduate Programs at the Byrdine F. Lewis School of Nursing at Georgia State University, her advisor, at (404) 651-3212. The Georgia State University Research Office (404) 651-4350 can give you general information about the rights of people who take part in research.

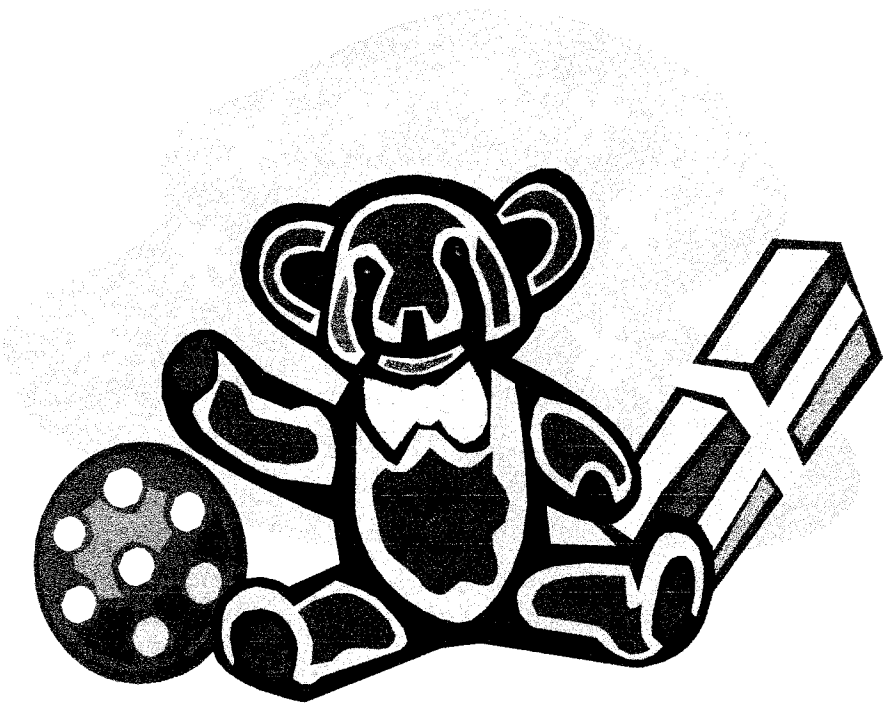
Participation in research is voluntary. You have the right to refuse to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or discontinue participation at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.
If you are willing to participate, please sign below. Please keep one copy of the consent form for your records.

Printed Name	Signature	Date

Researcher's Signature 8/1/05 Date

Appendix P: Formatted Booklet

Maternal Confidence of First-time Mothers During Their Child's Infancy



Kendra Russell, RN, MSN
Doctoral Student
Byrdine F. Lewis School of Nursing
Georgia State University
Atlanta, GA

Part I. Demographic Questionnaire

Code _____
Site Code _____
Date _____

Please fill in the blanks or check your response.

1. Your Age: _____

2. Infant's Date of Birth: __ __ / __ __ /__ __
month day year

3. Is this your first baby?
   ____ Yes
   ____ No

4. Infant's Sex:
   ____ Boy
   ____Girl

5. Race:
   ____ African-American
   ____ Asian
   ____ Hispanic
   ____ Caucasian
   ____ Other, please specify _____

6. Marital Status:
   ____ Single
   ____ Separated
   ____ Married
   ____ Living with significant other
   ____ Divorced

7. Highest Level of Education completed:
   ____ Below 12th grade
   ____ 12th grade
   ____ Completed GED
   ____ Technical School
   ____ Some college or technical school
   ____ Bachelors Degree
   ____ Masters Degree or higher

8. Household Income:
   ____ Less than $9, 999
   ____ $10, 000 - $29, 999
   ____ $30, 000 - $49, 999
   ____ $50, 000 - $69, 999
   ____ $60, 000 - $79, 999
   ____ $80,000 - $99,000
   ____ Over $100,000

9. How many people live in your household? _____.

10. Who helps you with your baby?

Rank in order all the people who help you the most with your baby, (e.g. 1 = who helps you the most; 2 = your second support person; 3 = your third support person).

——— Baby's father

——— Your mother

——— Your grandmother

——— Your grandfather

_____ Your relatives other than above

(Specify)_____

_____ Relatives of the baby's father

(Specify)_____

——— Friend

_____ Other (Specify)

_____

——— No one. I'm pretty much alone.

Please check the statement that best describes your childcare experience prior to having your baby, (e.g. babysat for infants and small children often).

12. Before my baby was born, I had _____ childcare experience.

_____ 1. a great deal of

_____ 2. some

_____ 3. very little

_____ 4. no

13. Have you ever been told by a physician that you were depressed? Check one.

_____ 1. Yes

_____ 2. No

14. Are you currently being treated for depression? Check one.

_____ 1. Yes

_____ 2. No

Part II. Infant Characteristic Questionnaire

On the following questions please circle the number that is most typical of your baby.

Question	*Very Easy*		*About Average*				*Difficult*
1. How easy or difficult is it for you to calm or soothe your baby when he/she is upset?	1	2	3	4	5	6	7
2. How easy or difficult is it for you to predict when your baby will go to sleep and wake up?	1	2	3	4	5	6	7
3. How easy or difficult is it for you to predict when your baby will become hungry?	1	2	3	4	5	6	7
4. How easy or difficult is it for you to know what's bothering your baby when he/she cries or fusses?	1	2	3	4	5	6	7
5. How many times per day, on the average, does your baby get fussy and irritable---for either short or long periods of time?	1	2	3	4	5	6	7
6. How much does your baby cry and fuss in general?	1	2	3	4	5	6	7
7. How did your baby respond to his/her first bath?	1	2	3	4	5	6	7
8. How did your baby respond to his/her first solid food?	1	2	3	4	5	6	7
9. How does your baby typically respond to a new person?	1	2	3	4	5	6	7
10. How does your baby typically respond to being in a new place?	1	2	3	4	5	6	7

Question							
11. How well does your baby adapt to things (such as in items 7-10) eventually?	1	2	3	4	5	6	7
12. How easily does your infant get upset?	1	2	3	4	5	6	7
13. When your baby gets upset (e.g., before feeding, during diapering, etc.), how vigorously or loudly does he/she cry and fuss?	1	2	3	4	5	6	7
14. How does your baby react when you are dressing him/her?	1	2	3	4	5	6	7

Question	***Very Easy***		***About Average***				***Difficult***
15. How active is your baby in general?	1	2	3	4	5	6	7
16. How much does your baby smile and make happy sounds?	1	2	3	4	5	6	7
17. What kind of mood is your baby generally in?	1	2	3	4	5	6	7
18. How much does your baby enjoy playing little games with you?	1	2	3	4	5	6	7
19. How much does your baby want to be held?	1	2	3	4	5	6	7
20. How does your baby respond to disruptions and changes in everyday routine, such as when you go to church or a meeting, on trips, etc?	1	2	3	4	5	6	7

21. How easy is it for you to predict when your baby will need a diaper change?	1	2	3	4	5	6	7
22. How changeable is your baby's mood?	1	2	3	4	5	6	7
23. How excited does your baby become when people play with or talk to him/her?	1	2	3	4	5	6	7
24. Please rate the overall degree of difficulty your baby would present for the average mother.	1	2	3	4	5	6	7

Part III. Personal Resource Questionnaire

Below are some statements with which some people agree and others disagree. Please read each statement and circle the number that best corresponds to the degree that you agree or disagree with the statement. There is no right or wrong answer.

Question	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1. There is someone I feel close to who makes me feel secure.	1	2	3	4	5	6	7
2. I belong to a group in which I feel important.	1	2	3	4	5	6	7
3. People let me know that I do well at my work (job, homemaking).	1	2	3	4	5	6	7
4. I have enough contact with the person who makes me feel special.	1	2	3	4	5	6	7
5. I spend time with others who have the same interests that I do.	1	2	3	4	5	6	7
6. Others let me know that they enjoy working with me (job, committees, projects).	1	2	3	4	5	6	7
7. There are people who are available if I need help over an extended period of time.	1	2	3	4	5	6	7
8. Among my group of friends we do favors for each other.	1	2	3	4	5	6	7

9. I have the opportunity to encourage others to develop their interests and skills.	1	2	3	4	5	6	7
10. I have relatives or friends that will help me out even if I can't pay them back.	1	2	3	4	5	6	7
11. When I am upset, there is someone I can be with who lets me be myself.	1	2	3	4	5	6	7
12. I know that others appreciate me as a person.	1	2	3	4	5	6	7
13. There is someone who loves and cares about me.	1	2	3	4	5	6	7
14. I have people to share social events and fun activities with.	1	2	3	4	5	6	7
15. I have a sense of being needed by another person.	1	2	3	4	5	6	7

Part IV. Beck Depression Inventory

Please check the statement that describes your mood the best.

1.	___ 0	I do not feel sad.
	___ 1	I feel sad.
	___ 2	I am sad all the time and can't snap out of it.
	___ 3	I am so sad or unhappy that I can't stand it.
2.	___ 0	I am not particularly discouraged about the future.
	___ 1	I feel discouraged about the future.
	___ 2	I feel I have nothing to look forward to.
	___ 3	I feel that the future is hopeless and that things cannot improve.
3.	___ 0	I do not feel like a failure.
	___ 1	I feel I have failed more than the average person.
	___ 2	As I look back on my life, all I can see is a lot of failures.
	___ 3	I feel I am a complete failure as a person.

4.	___	0	I get as much satisfaction out of things as I used to.
	___	1	I don't enjoy things the way I used to.
	___	2	I don't get real satisfaction out of anything anymore.
	___	3	I am dissatisfied or bored with everything.
5.	___	0	I don't feel particularly guilty.
	___	1	I feel guilty a good part of the time.
	___	2	I feel quite guilty most of the time.
	___	3	I feel guilty all of the time.
6.	___	0	I don't feel I am being punished.
	___	1	I feel I may be punished.
	___	2	I expect to be punished.
	___	3	I feel I am being punished.
7.	___	0	I don't feel disappointed in myself.
	___	1	I am disappointed in myself.
	___	2	I am disgusted with myself.
	___	3	I hate myself.
8.	___	0	I don't feel I am worse than anybody else.
	___	1	I am critical of myself for my weaknesses or mistakes.
	___	2	I blame myself all the time for my faults.
	___	3	I blame myself for everything bad that happens.
9.	___	0	I don't have any thoughts of killing myself.
	___	1	I have thoughts of killing myself, but I would not carry them out.
	___	2	I would like to kill myself.
	___	3	I would kill myself if I had the chance.
10.	___	0	I don't cry any more than usual.
	___	1	I cry more now than I used to.
	___	2	I cry all the time now.
	___	3	I used to be able to cry, but now I can't even cry even though I want to.

11.	___	0	I am no more irritated by things than I ever am.
	___	1	I am slightly more irritated now than usual.
	___	2	I am quite annoyed or irritated a good deal of the time.
	___	3	I feel irritated all the time now.
12.	___	0	I have not lost interest in other people.
	___	1	I am less interested in other people than I used to be.
	___	2	I have lost most of my interest in other people.
	___	3	I have lost all of my interest in other people.
13.	___	0	I make decisions about as well as I ever could.
	___	1	I put off making decisions more than I used to.
	___	2	I have greater difficulty in making decisions than before.
	___	3	I can't make decisions at all anymore.
14.	___	0	I don't feel that I look any worse than I used to.
	___	1	I am worried that I am looking old or unattractive.
	___	2	I feel that there are permanent changes in my appearance that make me look unattractive.
	___	3	I believe that I look ugly.
15.	___	0	I can work about as well as before.
	___	1	It takes an extra effort to get started at doing something.
	___	2	I have to push myself very hard to do anything.
	___	3	I can't do any work at all.
16.	___	0	I can sleep as well as usual
	___	1	I don't sleep as well as I used to.
	___	2	I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
	___	3	I wake up several hours earlier than I used to and cannot get back to sleep.

17.	___ 0	I don't get tired more than usual.
	___ 1	I get tired more easily than I used to.
	___ 2	I get tired from doing almost anything.
	___ 3	I am too tired to do anything.
18.	___ 0	My appetite is no worse than usual.
	___ 1	My appetite is not as good as it used to be.
	___ 2	My appetite is much worse now.
	___ 3	I have not appetite at all anymore.
19.	___ 0	I haven't lost much weight, if any, lately.
	___ 1	I have lost more than five pounds.
	___ 2	I have lost more than ten pounds.
	___ 3	I have lost more than fifteen pounds.
20.	___ 0	I am no more worried about my health than usual.
	___ 1	I am worried about physical problems such as aches or pains, or upset stomach, or constipation.
	___ 2	I am very worried about physical problems and it's hard to think of much else.
	___ 3	I am so worried about my physical problems that I cannot think about anything else.
21.	___ 0	I have not noticed any recent change in my interest in sex.
	___ 1	I am less interested in sex than I used to be.
	___ 2	I am much less interested in sex now.
	___ 3	I have lost interest in sex completely.

Part V. Maternal Confidence Questionnaire

How confident do you feel in your parenting role? (Circle in the appropriate box.)

Question	Never	Seldom	Some	Often	A great deal
1. I know when my baby wants me to play with him/her.	1	2	3	4	5

2. I know how to take care of my baby better than anyone else.	1	2	3	4	5
3. When my baby is cranky, I know the reason.	1	2	3	4	5
4. I can tell when my baby is tired and needs to sleep.	1	2	3	4	5
5. I know what makes my baby happy.	1	2	3	4	5
6. I can give my baby a bath.	1	2	3	4	5
7. I can feed my baby adequately.	1	2	3	4	5
8. I can hold my baby properly.	1	2	3	4	5
9. I can tell when my baby is sick.	1	2	3	4	5
10. I feel frustrated taking care of my baby.	1	2	3	4	5
11. I would be good at helping other mothers learn how to take care of their infants.	1	2	3	4	5
12. Being a parent is demanding and unrewarding.	1	2	3	4	5
13. I have all the skills needed to be a good parent.	1	2	3	4	5
14. I am satisfied with my role as a parent.	1	2	3	4	5

Contact Information

Name: _____

Address: _____

_____

Phone Number (Home): _____

Phone Number (Cell): _____

Email: _____

Appendix Q: Follow-up Letter

Follow-up Letter

BYRDINE F. LEWIS SCHOOL OF NURSING
College of Health and Human and Sciences

P.O. Box 4019
Atlanta GA 30302-4019
Phone: 404/651-3040
Fax: 404/651-3096

Georgia State University

August 24, 2004

Dear New Mom,

Thank you for participating in the study, Maternal Confidence of First-time Mothers During Their Child's Infancy. After reviewing your scores on the Beck Depression Inventory, there is some indication that you may be experiencing some signs of depression that are above normal. I recommend that you follow-up with your healthcare provider. I am also enclosing some information on postpartum depression. This is not a medical diagnosis of depression or postpartum depression. I'm only providing a recommendation based on your results from a depression screening tool and providing some information that may or may not be helpful for you. If you have any questions or concerns about your score, please contact me at 478-731-2777.

Sincerely

Kendra Russell, RN, MSN
Doctoral Student

Appendix R: Brochure

Resources

www.depressionafterdelivery.com

Note: This brochure is not a substitute for professional medical advice. See your healthcare provider for advice about your condition.

POSTPARTUM MOODS & ADJUSTMENTS

Postpartum Depression

What you should know:

- Many new mothers feel sad, afraid, angry, or nervous after their baby is born. These feelings, called postpartum or "baby" blues, are very common. Signs of postpartum blues start a few days after the baby is born and usually go away in 1 or 2 weeks. Don't feel guilty about feeling sad or worried after your baby is born. These are normal feelings. Having these feelings doesn't mean you are a bad mother. It is normal to have mixed feelings about motherhood as your body adjusts to the changes that follow childbirth.
- It is called post partum depression (duh-presh-un) if your "blues" don't go away or get worse. When depressed, you may not be able to care for your baby or yourself. Severe depression usually goes away with treatment. But without treatment, it can get worse and may lead to thoughts of hurting yourself or your baby.

Instructions:

- Rest is important. Don't try to do everything. Do only what is needed and let other things wait until later. Ask your partner, family, or friends for help.
- Try to nap when the baby naps. Ask your partner to help with night feedings or other baby care if possible.
- Share your feelings with your partner, a friend, or another mother. Often just talking things out with someone you trust is a big help.
- Take good care of yourself. Shower and dress each day. Don't forget to eat. Try to get out of the house a little each day. Go for a walk or meet with a friend. Get a baby-sitter or take the baby with you. Be sure to spend time with your partner. It is also important to have some time to yourself each day.

Call your doctor if:

- **You feel more depressed or your depression does not go away.**

Remember if you need to talk about your problems, you may call a caregiver, a hospital emergency department, or a mental health center. They can help you sort through your feelings and may help you find a support group of other women who have felt this way.

Seek Care Immediately (Call 911 or 0 (operator) IF:

- You feel like hurting yourself, your baby, or others.