ABSTRACT

DIFFERENCE IN POSTPARTUM DEPRESSION BETWEEN PRIMIPAROUS MOTHERS OF SINGLETONS VERSUS PRIMIPAROUS MOTHERS OF MULTIPLES

By Angela M. Parmentier

Postpartum depression is a medical condition that affects 13% of mothers at some point during the first year following childbirth. This illness can be devastating and may lead to a loss of one's self identity. The purpose of this study was to investigate the difference in postpartum depression between primiparous mothers of singletons versus primiparous mothers of multiples.

The theoretical framework for this study was Cheryl Beck's Postpartum Depression Theory (2000). A descriptive comparative design was used to determine the differences in PPD between the two groups of mothers. The target population for this study was primiparous women of childbearing age. The sample was a convenience sample of twenty-five mothers who were between two weeks and two years of delivery of their first child. Two instruments were used for data collection: a demographic survey developed by the researcher, and Beck's Postpartum Depression Screening Scale (PDSS).

Descriptive and inferential statistics were used. These included the Mann-Whitney U test, correlations, and frequencies. The mean and mode were used to describe the correlations in demographic factors between mothers of multiples and singletons. Frequencies were used to evaluate total household income between mothers of single and multiple births. A Mann-Whitney U test was used to look for difference in the seven categories (sleeping/eating disturbances, anxiety/insecurity, emotional lability, mental confusion, loss of self, guilt/shame, and suicidal thoughts) classified by the PDSS between mothers. A Chi-Square test was used to analyze the relationship between the PDSS classification and demographic factors such as educational level, marital status, income, employment outside the home, history of depression, and gestation at delivery.

Results indicated that there was a significant difference in loss of self between the two groups of primiparous mothers. A Mann-Whitney U test was significant at 0.02. Mothers of multiples scored a 25.08 on the PDSS for the subcategory loss of self versus mothers of singletons who scored 12.15.

Awareness of the differences in postpartum depression between mothers of singletons and mothers of multiples can aid family nurse practitioners in providing a more focused assessment on the loss of self. Advanced practice nurses need to be screening and assessing for postpartum depression in both mothers of multiples and mothers of singletons.

DIFFERENCE IN POSPARTUM DEPRESSION BETWEEN PRIMIPAROUS WOMEN WHO HAVE SINGLE BIRTHS VERSUS MULTIPLE BIRTHS

by

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Chapter I

Introduction

"The birth of a baby is an occasion for joy…but for some women, joy is not an option" (Beck, 2001). Thirteen percent of new mothers will experience postpartum depression (PPD) at some point during the first year after delivery (Ohara & Swain, 1996). The cause of PPD remains unclear (Gold, 2002), although several factors have been identified to increase the risk of PPD.

A review of literature related to postpartum depression indicates that research on PPD has focused on: 1) PPD and parity (Choi, Bishai, and Minkovitz, 2009); (Gold, 2002); (Skari et al., 2002); 2) PPD and history of mental illness (Inandi, Bugdayci, Dundar, Sumer, and Sasmaz, 2005); (Gold, 2002); (Choi et al., 2009) 3) PPD and complications/stress (Glazebrook, Sheard, Oates, Cox, Sunch, and Ndukwe, 1999); (Choi et al., 2009); (Chen, 2008) 4) PPD and sleep (Haddon , 2005); (Flaherty and Damato, 2009) 5) PPD and marital/social support (Skari et al., 2002); (Inandi et al., 2005) and 6) PPD and socioeconomic status and ethnicity (Abrams and Curran, 2009); (Choi et al., 2009); (Inandi, et al., 2005); (Beeghly, Olson, Weinberg, Pierre, and Downey, 2003).

Bowers (2001) states that the incidence of postpartum depression and anxiety disorders in mothers with multiple births is estimated at 25%. The average woman with a single birth has a 13% chance of experiencing PPD (Ohara & Swain, 1996). According to Choi, et al. (2009), high parental stress, fatigue, social isolation, and financial drain are reasons for the increase in PPD in mothers who have multiple births. Their research

shows depressive symptoms were 43% greater for mothers of multiple births, compared with mothers of singletons.

Primiparous women have a difficult time discussing and identifying symptoms that differentiate between realistic expectations of being a first time mom and the feelings of postpartum depression, making them a vulnerable population (Gold, 2002). According to Skari et al. (2002), increased psychological stress is associated with having previous children, because of the increased demand on mothers to care for a newborn and the family at home. In the 2009 study by Choi et al., multiparous women had a 1% increased risk for PPD than primiparous women. The results show conflicting views on parity and its effects on PPD.

Women with histories of mood disorders appear to be more vulnerable to relapse during the postpartum period. Gold (2002) states women with a history of postpartum depression are at a 50% higher risk for recurrent episodes following subsequent pregnancies. The risk of postpartum depression in women with a history of depression is as high as 25% to 30% (Gold, 2002). According to Choi et al. (2009), woman with a history of depressive symptoms are nearly twice as likely to need counseling for depressive symptoms postpartum. Inandi et al. (2005) also confirmed that women with past psychiatric history had an increase in depressive symptoms. Furthermore, studies have shown that having a history of mental illness increases the odds of postpartum depression. In the current study, participants with a history of mental illness including depression were excluded from participation.

According to Chen (2008), mothers of multiple births are at an increased risk for numerous complications. A study was conducted by Sheard, Cox, Oates, Ndukwe, and Glazebrook (2007) which compared psychological outcomes in first time parents conceiving one or more children through in-vitro fertilization (IVF). Using the Edinburgh postnatal depression scale (EPDS), their study showed higher levels of stress and anxiety during the second and third trimester. Stress during pregnancy is a risk factor for postpartum depression (Choi et al., 2009).

Glazebrook, et al. (1999) conducted an ongoing study on physiological adjustment during pregnancy and postpartum in in-vitro fertilization births. The results suggested that couples with multiple births (as a result of IVF treatment) experience higher levels of anxiety during the second and third trimesters of pregnancy. According to Choi et al., (2009), there is an increased risk for complications with multiple gestations which leads to higher parental stress. According to Choi et al., parental stress is a risk factor for postpartum depression.

Flaherty & Damato (2009) found that mothers of twins sleep an average of 5.4 hours in a 24 hour period, compared to the recommended 7-8 hours of sleep per night. According to Haddon (2005), 76 % of mothers of multiples felt constantly exhausted as compared to 8% of mothers of singletons. Haddon's findings showed poor sleep quality and quantity leads to increased risk for postpartum depression.

According to Inandi, et al., (2005) women who have a supportive family or a significant other are less likely to suffer from postpartum depression. Their study involved 1,350 women during their first postnatal year, and aimed to identify risk factors

for depression. Higher EPDS scores were identified in women who were married and younger than twenty-five, who had poor family support or lack a close friend, and insufficient support during pregnancy. Risks were associated with poor relationships both in childhood and with their current family and relationships.

Skari et al. (2002) conducted a prospective, population based cohort study comparing levels of psychological stress after childbirth. Childbirth itself was not found to be a psychological distress to most parents. Maternal distress was predicted by being a single parent. The author concluded that less social support increased the likelihood of increased acute stress response, and thereby PPD.

Abrams & Curran's (2009) research showed there is a relationship between low income status and postpartum depression. The average annual cost of housing, food, transportation, clothing, healthcare, and childcare per child (in a two child, husband and wife home) is between $8,330 and $9,450 (Lino, 2010). Inandi et al. (2005) found that high income protected women against depressive symptoms. The meta-analysis by Beck (2001) showed a depression rate of 24.35% for incomes under $10,000. The rate for PPD decreased as the income increased. Beck's study showed that maternal or paternal lack of employment or lack of money was a main risk factor for depression.

Beeghly, et al., (2003) focused on PPD and African American mothers of healthy full term infants. Using the Center for Epidemiological Studies-Depression Scale (CES-D), three socio-demographic risk factors were found to be closely associated with depressive symptoms. These included, single marital status, low-income status, and negative maternal perception of the adequacy of income for meeting familial needs.

The study from Choi et al. (2009) documented that African American women are at an increased risk for PPD, with African American mothers having a 27% greater risk of PPD than Caucasian mothers. Gao, Chan, You, and Li (2009) studied Chinese culture and the incidence of PPD. Their results indicated a strong correlation between increased stress, unhappiness, and depressive symptoms solely related to their cultural norm.

In summary, it seems evident from these studies that PPD is strongly correlated with various demographic factors and variables. Factors such as stress level related to pregnancy complications, family support, income, sleep deficit, marital status, and ethnicity are linked with postpartum depression. Research has shown there are increased costs to raising multiples, increased stress due to complications, and decreased hours of sleep compared to mothers of singletons.

Significance to Advanced Nursing Practice

Postpartum depression is the most common form of postpartum psychiatric illness requiring treatment from a primary care provider (Gold, 2002). Women are more likely to seek their advanced practice nurse (APNs) for psychological imbalances and mental health issues than any other provider (Gold).

Detecting postpartum depression is complicated by several factors. According to Epperson (1999), new mothers expect to have a period of adjustment after having a baby. However, they have difficulty being able to identify what is within the norm and when to seek help. Advanced practice nurses establish a formal mechanism for identifying symptoms of postpartum depression. These can include distinguishing PPD

characteristics from other mental illnesses, identifying those patients at risk, instituting formal and constant screening tools, and providing education and reading materials on PPD (Epperson, 1999).

Problem Statement

Gold (2002) defines a normal postpartum period as a two week period of time consisting of physical exhaustion, painful sequelae, dramatic changes in hormone and electrolyte balances, sleep deprivation, and non-psychosocial stressors. The consequences of these symptoms over a prolonged period of time are profound. PPD affects the mother, family members, and newborn. Well documented effects of postpartum depression include cognitive, emotional, and social delays in children (Abrams & Curran, 2009). In addition, mothers suffering from postpartum depression are less affectionate, less responsive, and less sensitive to their infants (Homewood, Tweed, Cree, and Crossley, 2009).

According to Gold (2002), lack of opportunity for detection of postpartum depression is a problem. Women see their healthcare provider six weeks after delivery, and then return on an annual basis. The six week visit entails a full physical exam and leaves little opportunity to conduct a proper assessment of a woman's mental status. The six week postpartum check is a hard time for women to admit to symptoms of postpartum depression (Gold). The next routine visit to screen for postpartum depression is one year later, often missing the postpartum depression.

Purpose Statement

The purpose of this study was to investigate the difference in postpartum depression between primiparous mothers of singletons versus primiparous mothers of multiples. According to Beck (2001) factors such as sleep deprivation, life stress (i.e. complications), social support, socioeconomic status, and ethnicity are significant risk factors for postpartum depression.

Research Question

Is there a difference in postpartum depression between primiparous mothers of singletons versus primiparous mothers of multiples?

Conceptual Definitions

Postpartum Depression: A subtype of major depression that includes a depressed mood plus four or more of the following symptoms: weight or appetite disturbance, psychomotor disturbance, fatigue or loss of energy, difficulty concentrating, feelings of worthlessness or guilt, and recurrent thoughts of death. The onset of symptoms is within four weeks of delivery (American Psychological Association, 2000). The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria for diagnosing major depression is often used to diagnose PPD. According to the DSM-IV, symptoms of major depression include: depressed mood, lack of pleasure or interest, sleep disturbances, weight loss, loss of energy, agitation, feelings of worthlessness, diminished concentration, and frequents thoughts of death or suicide.

Primiparous woman of a singleton: A women who has given birth to one live infant for the first time.

Primiparous woman of multiples: A woman who has given birth to more than one live infant for the first time (i.e. twins, triplets, quadruplets, etc.).

Demographic factors: Characteristics of a population.

Operational Definitions

Postpartum depression: Maternal depression occurring anytime from two weeks to 2-years postpartum, as measured by the Postpartum Depression Screening Scale (Beck, 2001).

Primiparous woman of a singleton: A woman between the ages of 18 and 45, residing in the Midwest, who gave birth to no more than one live infant for the first time within the past two years.

Primiparous woman of multiples: A woman between the ages 18 and 45, residing in the Midwest, who gave birth to two or more infants for the first time within the past two years.

Demographic factors: In this study, factors included: complications with pregnancy or delivery, marital status, social support, socioeconomic status, educational status, and ethnicity.

Assumptions

1. Participants will respond honestly when completing the questionnaires.

2. Advanced practice nurses are able to effectively manage and educate women about postpartum depression.

3. Advanced practice nurses can appreciate the mother's personal beliefs and values about motherhood.

4. Postpartum depression is complex and multidimensional.

Chapter Summary

The purpose of this study was to investigate the differences in postpartum depression between primiparous mothers of singletons versus multiples. Advanced practice nurses (APN) are often the only provider's mothers see during their postpartum period (Gold, 2002). It is necessary for APN's to be aware of the different experiences of mothers in order to adequately assess, educate, and implement a plan to prevent and treat postpartum depression.

In this chapter, the purpose of the study, significance to advanced practice nursing, problem statement, and research question were presented. The conceptual and operational definitions were explained, and the assumptions of this study were discussed. Chapter II will discuss the theoretical framework and its significance to this study, and a review of literature will be presented.

Chapter II

Theoretical Framework and Review of Literature

The purpose of this study was to investigate the difference in postpartum depression between primiparous mothers of singletons versus primiparous mothers of multiples. In this chapter, the theoretical framework for this study, Beck's PPD Theory (2001), and a discussion of the review of literature related to postpartum depression, will be presented.

Theoretical Framework

Beck (2000) began researching perinatal issues as early as 1972. The concepts and definitions used to describe Beck's PPD theory have been refined as her research on postpartum depression has developed over the years. The purpose of this theory was to provide insight into the experience of postpartum depression (McEwin & Wills, 2007). Beck's PPD theory was initially developed in 1993 after four major studies involving PPD were completed. The substantive theory developed was entitled "teetering on the edge", with the basic psychosocial problem identified as loss of control (McEwin & Wills, 2007). Since development of this theory, Beck has published fourteen other research studies and has redefined the theory by examining the following twenty-two concepts.

Concept one discusses and defines postpartum mood disorders. As cited in Alligood & Tomey (2010), postpartum depression is a non-psychotic major depressive

disorder with specific diagnostic criteria that begins as early as four weeks after birth. It may occur at anytime within the first year after childbirth (Beck & Gable, 2000).

Concept two is entitled loss of control. According to Beck & Gable (2000), there is a four stage process women who experience postpartum depression go through. Stage one (encountering terror) consists of anxiety attacks and obsessive, relentless thinking. Stage two (dying of self) consists of alarming unrealism and the attempts to destroy one's self through isolation. Stage three (struggling to survive) consists of seeking support and praying for relief. Stage four (regaining control) is the transitioning into recovery and mourning the lost time.

Concepts three through nine are specific criteria used for testing. These include prenatal depression, child care stress, life stress, social support, prenatal anxiety, marital satisfaction, and history of depression. Concepts three through fifteen are significant predictors or risk factors of postpartum depression. They include infant temperament (involves infant fussiness), maternity blues, self-esteem, socioeconomic status, marital status, and unplanned pregnancy. Concepts sixteen through twenty-two are all predictors and risk factors used to screen women for the symptoms of postpartum depression. These include sleeping and eating disturbances, anxiety and insecurity, emotional lability, mental confusion, loss of self, guilt and shame, and suicidal thoughts.

Concept six (social supports) examines a women's emotional support: family involvement and support group participation. Concept seven (prenatal anxiety) and concept nine (history of depression) are addressed by asking about history of mental

illness. Concept thirteen (socioeconomic status) includes income, education, and occupational status. Marital status is concept fourteen.

Concept sixteen (sleeping and eating disturbances) involves a woman's inability to sleep, difficulty falling asleep, interrupted sleep from waking up in the middle of the night, and difficulty falling asleep. It also includes loss of appetite, and knowing one needs to eat but is not eating. Concept seventeen is anxiety and insecurity. Concept eighteen is emotional lability, defined as a woman's sense that her emotions are unstable (i.e. crying all the time for no reason). Concept nineteen is mental confusion, or the inability to concentrate, focus, or complete a task. Concept twenty is loss of self. Women sense that their personal identity has changed since the birth of their infant, and fear they may never be their real self again. Concept twenty-one (guilt and shame) is defined as a woman's negative perspective on her performance as a mother. Concept twenty-two is suicidal thoughts, or frequent thoughts of hurting one's self to escape living.

Table 1 shows the risk factors associated with postpartum depression based on Beck's Postpartum Depression theory, and the risk factors for this study, because these were shown to influence postpartum depression (Table 1).

Table 1

Risk Factors Associated with Postpartum Depression

(table continues)

Beck's PPD Theory: Twenty Two Concepts	*Risk Factor Assessed using Demographic Questionnaire*	*Risk Factor Assessed Using Postpartum Depression Screening Scale*
Postpartum Mood Disorders	No	No
Loss of Control	No	No
Prenatal Depression	No	No
Unplanned/Unwanted Pregnancy	No	No
Life Stress	No	No
Prenatal Anxiety	No	No
Marital Satisfaction	No	No
Infant Temperament	No	No
Maternity Blues	No	No
Self-Esteem	No	No
Child Care Stress	Yes	No
Social Support	Yes	No
History of Depression	Yes	No
Socioeconomic Status	Yes	No
Marital Status	Yes	No

(table continues)

Beck's PPD Theory: Twenty Two Concepts	*Risk Factor Assessed using Demographic Questionnaire*	*Risk Factor Assessed Using Postpartum Depression Screening Scale*
Sleeping/Eating Disturbances	No	Yes
Anxiety and Insecurity	No	Yes
Emotional Lability	No	Yes
Mental Confusion	No	Yes
Loss of Self	No	Yes
Guild and Shame	No	Yes
Suicidal Thoughts	No	Yes

Case study application.

Mary and Mike Smith have been married for ten years and have been eagerly waiting for the perfect moment to attempt to conceive their first child. Mike recently was promoted to an executive officer in his corporation. He accepted the transfer out of state. Mary is excited to be able to quit her job and move with her husband in the hopes of being a stay at home mother. Ten months later, Mike and Mary are settled into their new home and delivered two premature, but overall healthy, baby girls. Mike spent the next week off from work to help Mary take care of them.

Mary is breast-feeding both children. She feeds the babies every two to three hours around the clock. Mike works ten hour days and comes home very tired. Mary has

no family or friends in the area since they moved. She has tried a few different nannies, but has not had success with any of them. A neighbor of Mary and Mike stops in the late afternoon to see how she is doing. Mary has not showered, combed her hair, or changed out of her pajamas. Mary expresses how busy she is with the two babies. She proceeds by explaining how she was expecting to be busy because she has twins. As both babies proceed to cry in the background, the neighbor invites herself in to help her.

They proceed to have a conversation. She tells the neighbor she feels well, but is a bit sleep deprived. She feels like she never gets to spend quality bonding time with each child individually, because as soon as she gets one settled, the other one needs her. Between changing diapers, feeding both children, and soothing all the crying, she finds no time to get dressed, eat, or take a shower. At times she feels extremely anxious when both are crying. She expresses how she is incapable of being a good mother to both children.

When Mike gets home, the neighbor meets him in the garage to discuss her worries about Mary. Mike says Mary is used to being busy and thanks her for bringing it to his attention. That night Mike wakes up and Mary is sitting up staring at the babies. Mary expresses she has not been able to sleep. She fears that her premature twins are going to die of sudden infant death syndrome (SIDS).

At that moment, Mike realizes Mary's condition. He is unable to recall the last time Mary showered, ate something, or slept in the past week. He has not seen her smile in months. Mike sees the neighbor the next day and asks if she can watch the kids for a few hours while he takes Mary to her advanced practice nurse (APN) for evaluation.

The APN takes the time to listen to Mary and Mike's concerns. Following a standardized protocol, the APN asks Mary to complete Beck's Postpartum Depression Screening Scale (PDSS). Mary's responses prompt the APN to discuss treatment options for PPD with the couple. The APN informs Mary that the symptoms she is experiencing are common in new mothers and that she could help her. The APN not only discusses anti-depressant medication therapy, but also refers Mary to the local mothers of multiples support group.

The APN schedules Mary for a follow up appointment in two weeks and starts her on anti-depressant therapy. At that time, Mary is re-evaluated using the PDSS. Mary verbalizes feeling more in control and an increased level of happiness. The mothers of multiples' support group members are able to help her find a nanny to help care for the twins, and frequently check in with her to provide support.

Mary's case is relevant to Beck's Postpartum Depression Theory. Her symptoms began four weeks after her delivery. She was having anxiety attacks when the babies cried, and feared sudden infant death syndrome. She had stopped caring for herself. She was isolated and had lost happiness in caring for both her babies. She was experiencing sleep disturbances and not eating. Mary had guilt and shame about being a good mother. She could not comfort both babies when they cried. When she did have quiet time to bond with one child, it would never last, because the other baby would awaken and demand attention.

Mary has other factors that contribute to her postpartum depression. She has no family or friends in the area. She has not been able to find a good nanny. Her husband is

in a high profile job; he works long hours and is not home to help her. She is not working, which may contribute to a loss of sense of purpose outside of being a mother. Mary is breastfeeding the twins, so she never gets a full night's sleep. Mary is concerned because she was told that multiple gestations and prematurity are risk factors for SIDS. There is less time for herself and less time to individually spend with each baby.

Beck's Postpartum Depression Theory is appropriate for this study because it explains known risk factors for postpartum depression. Beck's theory discusses 22 concepts, and when these concepts are applied to different mothers in unique situations, their likelihood of developing postpartum depression may be greater or less than another mother based on these factors. By taking these demographic factors into consideration, this study can determine whether giving birth to multiples versus a single child will increase the likelihood of postpartum depression, and which, if any, additional factors play a major role.

Literature Review

In this section, literature pertinent to this study is presented. Studies related to primiparous mothers of singletons versus multiples, and the relationship to postpartum depression is presented. Factors including stress/complications, sleep deprivation, social/marital support, socioeconomic status, and ethnicity are included. Screening tools used to assess for postpartum depression are also provided.

Complications/stress and PPD.

Choi et al., (2009) conducted a study exploring demographic factors and its relationship to PPD. The authors used data from the Early Childhood Longitudinal Study-Birth Cohort, a nationally represented sample of children born in 2001. They measured depressive symptoms in mothers using a version of the Center for Epidemiologic Studies Depression (CES-D) scale. The sample comprised 776 participants who had given birth to multiples, and 7,293 participants who had given birth to one child.

Both mothers of multiples and mothers of singletons were examined for neonatal characteristics, gestational age at delivery, mode of delivery, race, marital status, education attainment, household SES index, and mental health history. The results showed that mothers of multiples might were at an increased risk for postpartum depression. The authors stated that 19% of mothers of multiples had moderate to severe depressive symptoms after nine months. Sixteen percent of mothers of singletons experienced moderate to severe depressive symptoms after nine months. Parental stress was a suggested cause for this.

Choi et al., (2009) recommended further research should separate the groups of multiples and singletons. Furthermore, the CES-D screening tool is not indicative of postpartum depression since higher CES-D scores are more frequently seen in patients with depression. Hence, future studies should use a tool more definitive to postpartum depression (Choi et al.).

Findings from studies at Johns Hopkins Bloomberg School of Public Health indicated that mothers of multiple births had a 43% increased chance of having moderate

to severe depressive symptoms nine months after giving birth, compared to mothers of singletons (Wood-Wright, 2009).

Sheard et al. (2007) conducted a longitudinal study assessing the psychological adjustment during the postpartum period in mothers of single and multiple in-vitro fertilization (IVF) births. Two questionnaires were mailed out, once during pregnancy and once after pregnancy. A telephone interview was also conducted at six weeks.

Three different scales were used and included the Hospital Anxiety and Depression Scale (HADS), the Edinburgh Postnatal Depression Scale (EPDS), and the Parental Stress Index (PSI). Parity, age, social status, years in current relationship, and months to conceive were assessed. Both males and females participated in the study. The results showed that a couple conceiving twins or triplets experienced higher stress and anxiety during the second and third trimester. The rates of depression following delivery were 17 % for women who had a single IVF birth, and 10% for women conceiving multiples.

Sleep and PPD.

Flaherty & Damato (2009) found that mothers of twins sleep an average of 5.4 hours in a 24 hour period, compared to the recommended 7-8 hours of sleep per night. According to Haddon (2005), 76 % of mothers of newborn twins felt constantly exhausted compared to 8% of mothers of singletons. Flaherty & Damato conducted a descriptive longitudinal design study on the relationships between sleep duration, sleep quality, fatigue, and depression in fathers of twins. Their findings showed significant correlations between sleep quality and depression.

Marital status/support and PPD.

The organization Mothers of Super Twins (MOST) conducted a survey of 2,849 mothers of multiples. The survey showed that divorce rates increased accordingly for parents of twins (3.6%), triplets (5%), and quadruplets (9.2%).

Inandi et al. (2005) found that poor relationships with family members were an important risk factor for depression. Specifically, poor relationships with the father were closely linked with depressive symptoms. Women with no friends had an increased chance of depression, along with mothers who lacked support from their husband.

Skari et al. (2002) conducted a prospective, population based cohort study on 127 mothers and 122 fathers comparing levels of psychological stress after childbirth. Participants were asked to complete the General Health Questionaire-28 (GHQ-28), States of Anxiety, and Impact of Event Scale at zero and four days after birth, and again at six weeks and six months after birth. Childbirth itself was not found to be a psychological distress to most parents. Maternal distress was predicted by being a single parent. The authors concluded that less social support increased the likelihood of an acute stress response.

Socioeconomic status and PPD.

Race and income have been identified as variables that affect ones' risk for postpartum depression. Abrams & Curran (2009) investigated the experiences of low-income mothers. The researchers field work and in-depth interviews on low income mothers' experiences with postpartum depression identified five core symptoms: Ambivalence (feeling like they were not prepared for having a baby), caregiver overload

(feeling like the baby will never stop crying and they don't get a break), juggling (feelings that everyone depends on them and needs something else from them), mothering alone (lack of help or no father involved with the baby), and real-life worry (not having enough money, not knowing where to spend the night).

Analysis of the findings indicated that mothers of economic deprivation had significantly higher rates of postpartum depression. Low income mothers were found to have less access to healthcare professionals, and hence were more likely to have untreated postpartum depression (Abrams & Curran, 2009).

Ethnicity and PPD.

Postpartum depression has been reported in many different cultural settings. Gao et al. (2009) conducted a phenomenological study consisting of in-depth interviews of first time mothers at a postnatal clinical in a regional hospital in China. The authors used participants from southeast China who were recruited from the postnatal clinic at the regional hospital. The Chinese version of the Edinburgh Postnatal Depression (EPDS) was used to screen participants for PPD. Participants were all first time mothers who were six to eight weeks postpartum and had delivered a single baby.

Gao et al. (2009) found that Chinese cultural values influenced the rate of PPD. "Doing the month" is a Chinese custom in which the new mother is confined to her home for a full month after delivery. She is expected to rest, eat postpartum food, and take care of the baby with the sole help of her mother-in-law. According to Gao et al., this custom has been shown to increase stress and unhappiness to the new mother, and is related to the expectations of her mother-in-law. During this period of time, Chinese women

commonly complain of depressive symptoms related to feeling physically and emotionally exhausted, and perceive themselves as incompetent and imperfect mothers.

Beeghly et al. (2003) studied a sample of 163 African American mothers of healthy full term infants. Using the Center for Epidemiological Studies-Depression Scale (CES-D), three socio-demographic risk factors were found to be closely associated with depressive symptoms. The researchers focused on prevalence, stability, and socio-demographic factors correlating with depressive symptoms in black mothers during the first eighteen weeks after delivery. Mothers were also assessed by marital status, income, age, education, infant weight, gender, gestational age, maternal employment status, and number of hours infant was in daycare. Results of this study indicated that in the United States African American mothers typically came from a low socio-economic status, which was directly related to higher CES-D scores.

Postpartum depression screening tools.

There are several tools available to measure depression. However, there are only a few tools that are valid and reliable to measure postpartum depression. Three tools specific to postpartum depression are commonly used: Beck's Postpartum Depression Screening Scale (PDSS), the Edinburgh Postnatal Depression Scale (EPDS), and Beck's Depression Inventory (BDI).

The PDSS, developed by Beck and Gable (2000), is a 35-item Likert scale questionnaire with seven different subscales: sleeping/eating disturbances, anxiety/insecurity, emotional lability, cognitive impairment, loss of self, guilt/shame, and contemplating harm to ones' self. The scale is used to assess women for PPD two weeks

after delivery. It was specifically developed to measure postpartum depression based on the qualitative studies by Beck and Gable. The alpha reliability for the PDSS is .95 (Beck & Gable, 2000). The sensitivity of the PDSS is 94%, with a specificity of 98%, for major depressive disorder. It has not been tested in adolescents, but has been deemed reliable through research in postpartum women 18-46 years of age (DeRosa & Logsdon, 2006).

The Edinburgh Postnatal Depression Scale (EPDS) is the most widely used screening tool for postpartum depression (Gibson, Mc-Kenzie, Shakespeare, Price, & Gray, 2009). It consists of a ten item self-report questionnaire in which women rate how they felt in the past seven days. Areas of focus include inability to laugh, inability to look forward to things with enjoyment, calming one's self, feeling anxious or worried, feeling scared, feeling overwhelmed, difficulty sleeping, feeling sad, crying, and thoughts of harming one's self. Each question is scored on a scale from 0-3. The EPDS takes about five minutes to complete.

The Beck Depression Inventory Scale (BDI) is composed of twenty-one self-report multiple choice questions and is used to measure the severity of depression symptoms within the past one week (Beck, 2001). It is composed of items related to symptoms of depression such as hopelessness and irritability, but lacks applicability to postpartum depression specifically.

The current study used Beck's Postpartum Depression Screening Scale (PDSS) to identify differences in postpartum depression between two different groups. Concepts 16-22 of Becks Postpartum Depression Theory (sleeping/eating disturbances, anxiety/insecurity, emotional lability, mental confusion, loss of self, guilt/shame, and

suicidal thoughts) were used to form 35 questions, presented to the participant in no particular order. During analysis, the 35 questions are then matched back to the 7 corresponding categories to identify areas of interest.

Concept four (child care stress), six (social support), eight (marital satisfaction), nine (history of depression), thirteen (socioeconomic status), and fourteen (marital status) of Becks Postpartum Depression Theory are assessed in the demographics questionnaire.

Summary of Literature Review

The results of the aforementioned studies indicate that complications during pregnancy or delivery increase a mother's risk for PPD. It is clear from the literature that mothers of multiples are more likely to have complicated pregnancies, and have higher rates of cesarean births. The literature has suggested that mothers of multiples have more stress; however, this was not supported when compared to that of mothers of singletons. According to Becks Postpartum Depression theory, lack of sleep is considered an important element for the development of PPD. Research has shown that mothers of multiples sleep an average of 5.4 hours a night. Poor relationships, lack of support, and low socioeconomic status also increase a mother's risk for PPD. Results have demonstrated that mothers of multiples are at an increased risk for postpartum depression, however factors that play a role in PPD, or how the differences relate to that of mothers of singletons, have not been examined.

Chapter Summary

In this chapter, the framework for this study was presented. The key components of Beck's Postpartum Depression Theory were discussed. A variety of literature on postpartum depression related to parity and demographic factors were reviewed.

In Chapter III, study methodology including research design, sample, setting, data collection instruments and procedures, and data analysis will be presented. Protection of human participants and limitations to this study will also be discussed.

Chapter III

Methodology

The purpose of this study was to investigate the difference in postpartum depression between primiparous mothers of singletons versus primiparous mothers of multiples. In this chapter, the research design, sample, setting, procedures for data collection, instruments, and data analysis methods are presented. Limitations of the study methodology are offered.

Research Design

A descriptive comparative design was used. A descriptive comparative design makes it possible to establish comparisons between primiparous women who give birth to a singleton versus those who give birth to multiples. The demographic factors of each group were also compared, because research has shown that certain demographic factors like single marital status and low income lead to an increased risk of postpartum depression. To ensure that any resultant differences in postpartum depression are related to whether a woman gives birth to a single child versus multiple children, the researcher ensured that other demographic factors were equal.

Population, Sample, and Setting

The target population for this study was primiparous women of childbearing age of various ethnicities. The accessible population was primiparous women of single and

multiple-gestation births from obstetric clinics and support groups in the Midwest. The sample was a convenience sample of twenty-five primiparous women (twelve mothers of multiple-gestation births and thirteen mothers of single-gestation births). Inclusion criteria were:

1. Participants were between two weeks and two years of delivery of first child.
2. Participants delivered one or more infants.
3. Participants were between the ages of 18-45.
4. Participants were able to speak and read English.

Data Collection Instruments

Two instruments were used for data collection: a demographic survey developed by the researcher (Appendix A), and Beck's Postpartum Depression Screening Scale (Beck and Gable, 2000) (Appendix B). The demographic survey included age, marital status, educational level, occupation, household income, and history of depression.

The second instrument, Beck's Postpartum Depression Screening Scale (PDSS), has been accepted as a reliable measurement tool for postpartum depression. The 35 item scale is written at a third grade reading level and uses a rating of one (strongly disagree) to five (strongly agree). The PDSS has seven subscales including sleeping/eating disturbances (items 1, 8, 15, 22, 29), anxiety/insecurity (items 2, 9, 16, 23, 30), emotional lability (items 3, 10, 17, 24, 31), mental confusion (items 4, 11, 18, 25, 32), loss of self (items 5, 12, 19, 26, 31), guilt/shame (items 6, 13, 20, 27, 34), and suicidal thoughts (items 7, 14, 21, 28, 35).

Beck's PDSS (2000) is commonly used in studies involving postpartum depression. The clarity, simplicity, generality, empirical precision, and derivable consequences of Beck's PDSS are all rated well (Alligood & Tomey, 2010). The alpha reliability of the scale ranged from 0.83 to 0.94. This is considered highly accurate and considered an effective tool for postpartum depression screening (Beck & Gable, 2000).

Data Collection Procedures

Prior to beginning data collection, written approval to conduct the current study was obtained from the Institutional Review Board at the University of Wisconsin-Oshkosh. Participants were informed that returning the completed survey implied consent.

The researcher distributed one hundred informational packets about the current study to obstetric and gynecological offices in two counties in the Midwest, and to mothers of multiples' support groups based in the Midwest. Instructions to mail back all completed surveys to the researcher were included. The informational packets included the purpose of the study, eligibility criteria, informed consent, and the two questionnaires. The tools for data collection were sent to the facilities along with the researcher's contact information.

Pilot Study

In order to test the reliability of the two data collection instruments, a pilot study was conducted. The demographic survey along with the PDSS was administered to ten

postpartum women scheduled for a visit at a Midwest obstetric and gynecological office. Participants were between two weeks and two years postpartum. They were between the ages of 18 and 45, and were able to read and write English. Feedback on the ease and accuracy of the instruments was evaluated. All surveys came back fully completed and the inconsistent responding index (INC) scores were all below three. The INC score is the PDSS's scoring system that looks for consistency in the participants answers. An INC score over three indicated participants had difficulty reading or understanding the tool. Eight of the pilot participants were not diagnosed with postpartum depression and thus did not meet criteria for this study. While their results were not used in this research, they were used to evaluate the accuracy of the instruments. The remaining two surveys met the criteria and were added to the sample for analysis.

Data Analysis Procedures

Descriptive and inferential statistics were used in this study. The mean was used to describe the correlations between mothers of single and multiple-gestation births. Frequencies were used to evaluate total household income. A Mann-Whitney U test was used to test differences in the seven categories classified by the PDSS.

The descriptive design made it possible to establish comparisons of demographic factors between the two groups of primiparous mothers on postpartum depression, and also how the demographic factors correlated with postpartum depression. Correlations between demographic factors were completed to determine their relationship to postpartum depression scores.

Methodologic Limitations

1. Only a small sample of primiparous mothers of multiples were available for comparison to be made with mothers of singletons.
2. Self-reporting of information might have limited the reliability due to response bias.
3. The geographical location was limited to four data collection sites in the Midwest.

Chapter Summary

The purpose of this study was to investigate the difference in postpartum depression between primiparous mothers of singletons versus primiparous mothers of multiples. Prior to data collection, IRB approval was granted. The sample consisted of twenty-five primiparous mothers (thirteen of mothers of singleton births and twelve mothers of multiple-gestation births). The PDSS and a demographic questionnaire designed by the researcher were used to collect data. Descriptive and inferential statistics including the Mann-Whitney U test, correlations, and frequencies were used to analyze data. In this chapter, the research design, population, sampling method, data collection instruments, procedures for data collections, data analysis, and methodologic limitations were discussed.

Chapter IV

Results and Discussion

The purpose of this study was to investigate the difference in postpartum depression between primiparous mothers of singletons versus primiparous mothers of multiples. In this chapter, the results of the study are presented.

Sample Description

The target population for this study was primiparous women of childbearing age with varying demographic factors who gave birth to one (singleton) or more (multiples) children and experienced postpartum depression. The sample was recruited from four obstetric clinics and mothers of multiples' support groups located in two states in the Midwest.

Emails were sent to five mothers of multiples' groups in the Midwest. The support groups placed an advertisement in their quarterly newsletter asking for participation in this study. Once a participant was identified, the organization provided them with the survey packet. For those members who did not receive the newsletter, participation information was also discussed at the monthly meetings, and survey packets were distributed then.

The clinic supervisors from the four Midwest obstetric offices discussed participation and qualifications with their healthcare providers at their monthly meeting.

The clinic providers distributed the survey packet to those that qualified during the time of their visit.

All participants filled out surveys on a voluntary basis. The envelopes and surveys were sent back to the researcher via self-addressed and stamped envelopes. One hundred survey packets were sent out, and 45 were returned for a response rate of 45%. Twenty-two returned packets were not eligible because they did not meet the inclusion criteria, and 25 returned packets (12 multiples and 13 singletons) were usable for analysis.

Significant results of the demographic data questionnaire (n=25) are presented in Table 2. (See Appendix E for full statistics on demographic data.) Participants 1-12 are primiparous mothers of multiples, and participants 13-25 are primiparous mothers of singletons.

Table 2

Demographic Data

Demographic	*Mothers of Multiples (n=12)*	*Mothers of Singletons (n=13)*
Twin gestation	11	NA
Triplet gestation	1	NA
Mean Age	32.08	28.31
Ethnicity		
Caucasian	11	13
Asian	1	0

(table continues)

Demographic	*Mothers of Multiples (n=12)*	*Mothers of Singletons (n=13)*
Gestational age at time of delivery	32.5 weeks gestation	35.0 weeks gestation
Mean time since delivery	11.08 months	16.92 months
Household income		
Under $10,000	0.0%	0.0%
$10,000-$29,900	8.3%	7.7%
$30,000-$49,900	8.3%	69.2%
Over $50,000	83.0%	23.1%
Employment outside the home	91.7%	84.6%
Full-term birth	33.3 %	84.6 %
Utilizes daycare when at work	41.7%	38.5%
Spouse cared for child when at work	0%	7.7%
Family member cared for child when at work	41.7%	30.8%
Other (i.e.: nanny) cared for child when at work	8.3%	7.7%

Table 2 shows that participants included 13 mothers of singletons and 12 mothers of multiples (11 mothers of twins and one mother of triplets). Twenty four of the twenty five women were Caucasian, and one was of Asian descent. The range of gestation at delivery varied between 32.5 weeks for multiples and 35 weeks for singletons. Employment status differed between the two groups. Differences in income existed between the two groups, with the highest percentage of mothers of multiples reporting an income greater than $50,000 per year, and the highest percentage of mothers of singletons reporting an income between $30,000- $49,000.

In order to compare the differences in postpartum depression between the two groups, the differences in the demographics of these two groups were analyzed. This was done by performing a T-test, which found no statistically significant difference between the type of mother and her age. There was, however, a statistically significant difference between the type of mother and how long it had been since she delivered ($t(23) = -2.39$, $p = 0.026$).

The means from the demographic questionnaire are seen in Table 3 and divided into mothers of singletons and mothers of multiples. The mother of multiples had delivered 16 months prior to this study, and the mother of a singleton 11 months prior.

Table 3

Time Since Delivery in Months

Type of Mother	*Mean*	*Standard Deviation*
Multiples	16.92	6.895
Singleton	11.08	5.299

Table 4

Levene's Test for Equality of Variance

F	*Sig*	*t*	*df*	*Sig (2-tailed)*
1.509	0.232	-2.386	23	0.026

Table 5 discusses complications reported during pregnancy. Participants 1-12 are primiparous mothers of multiples, and participants 13-25 are primiparous mothers of singletons.

Table 5

Complications During Pregnancy

Participant ID	*Comments Provided*
1	Pre-term labor at 23 weeks, cerclage at 23.5 weeks, strict bedrest for 10 weeks, delivery at 32 weeks, gestational diabetes, cholestasis, and a lot of medication
2	Contractions, pre-term labor, pre-term rupture of membranes
3	None reported

(table continues)

Participant ID	*Comments Provided*
4	Gestational diabetes, using high doses of insulin, high blood pressure before pregnancy, obesity prior to delivery, extreme water retention near end of pregnancy, went on bedrest for last three weeks of pregnancy
5	Pre-term labor, put on bedrest
6	Bedrest at 28 weeks, high blood pressure
7	Pregnancy induced hypertension, cervical incompetence
8	Increased blood pressure, pre-term labor, feet swelling
9	Pregnancy induced hypertension, pre-term labor
10	None reported
11	Bedrest
12	Pre-term labor, water broke
13	Polyhydramnios, breech baby
14	None reported
15	None reported
16	None reported
17	None reported
18	None reported
19	Late elevated blood pressure and edema
20	None reported

(table continues)

Participant ID	*Comments Provided*
21	None reported
22	Blood pressure, spotting
23	Gestational diabetes
24	None reported
25	None reported

Nine out of 11 mothers of multiples reported complications, whereas only four out of 12 mothers of singletons reported complications. Primiparous mothers of multiples reported complications like bed rest, elevated blood pressure, and preterm labor during their pregnancies, where primiparous mothers of singletons reported preterm delivery, high blood pressure, and gestational diabetes.

Table 6

Complications During Delivery

Participant ID	*Comments Provided*
1	None reported

(table continues)

Participant ID	*Comments Provided*
2	None reported
3	Attempted homebirth, cesarean delivered in hospital, bleed a lot, blood transfusion, passed softball size clots, babies were 8 lbs. and 9 lbs., experienced a lot of bloating, belly was gigantic, had IV antibiotics, uterine injections for antibiotics, I believe I was sensitive to Percocet and it made me crazy.
4	Needed cesarean delivery, water broke naturally, twin's transverse
5	C-section, but it was planned
6	C-section, planned
7	C-section
8	C-section, bleed a lot
9	C-section
11	C-section
12	None reported
13	Emergency C-section
14	None reported
15	Emergency C-section
16	None reported
17	Cord wrapped around baby neck

(table continues)

Participant ID	*Comments Provided*
18	None reported
19	Emergency C-section for fetal heart tones
20	None reported
21	None reported
22	Epidural
23	None reported
24	None reported
25	None reported

Table 6 shows eight out of eleven mothers of multiples reported complications with their delivery. All eight mothers reported the need for a cesarean delivery. Five of twelve mothers of singletons reported complications with their delivery, three of which were cesarean births.

Table 7

Participants' Comments

Participant Id	*PDSS Score*	*Comment Provided*
1	119	First 6 months with multiples was busy time, it wasn't until 6 months after the delivery that I realized I wasn't getting better.
4	73	Was on meds for postpartum depression October 2007- June 2008. Have not used meds since June 2008 and have not felt any depression indicators.
5	127	Thanks for doing this study- what an important topic!
6	113	One baby was in NICU, one wasn't

Table 7 shows comments by mothers of multiples. The participants PDSS score is also displayed. The average PDSS score for a mother of a singleton was 95.85. The average PDSS score for a mother of multiple was 110.98.

Results

Is there a difference in postpartum depression between primiparous women of singletons versus primiparous women of multiple births? The distribution of loss of self total scores is not the same across mothers of singletons and mothers of multiples. Table 8 shows the seven categories assessed in the PDSS and the mean score between mothers of multiples and mothers of singletons. There was a significant difference in the two groups in the loss of self category. A Mann-Whitney U Test was completed and showed a significance of 0.20.

Table 8

PDSS Scores Across Seven Categories

Categories	*Singleton Mean*	*Singleton Std. Dev.*	*Multiples Mean*	*Multiples Std. Dev.*	*Total Mean*	*Total Std. Dev.*
Sleeping/Eating Disturbances	14.54	5.939	17.42	4.738	15.92	5.484
Anxiety/ Insecurity	14.85	4.580	18.00	4.264	16.36	4.627
Emotional Lability	16.38	4.805	17.67	4.075	17.00	4.425
Mental Confusion	15.69	5.089	18.17	4.933	16.88	5.069
Loss of Self	12.15	5.064	25.08	30.587	18.36	22.024
Guilt/Shame	11.69	4.366	14.17	4.366	12.88	4.456

Suicidal Thoughts	7.38	3.776	7.58	3.872	7.48	3.743
PDSS Score	95.85	29.283	110.08	22.661	102.68	26.773

Discussion

According to Chen (2008), mothers of multiples are at an increased risk for numerous complications. An increase in complications leads to increased stress, resulting in a higher incidence of postpartum depression. Incidence of pre-term labor differed between mothers of singletons and mothers of multiples. Seventy-five percent of primiparous mothers of multiples stated they had pre-term labor compared to 15% of primiparous mothers of singletons.

The PDSS form has seven categories which are the same as concepts 16 through 22 of Becks Postpartum Depression theory. Unfortunately, stress is not a factor assessed in the PDSS; therefore, the qualitative findings from the current study need to be examined further for differences.

Qualitative data showed that most primiparous mothers of multiples had a cesarean birth. Many reported pre-term labor, bed-rest, and elevated blood pressures. Two primiparous mothers of singletons reported that the baby had the umbilical cord wrapped around the neck during their vaginal delivery, and two reported having an emergent cesarean delivery for fetal heart tone issues. While Chen's (2008) study did not

specify if cesarean birth was considered a complication, it did show a relationship between postpartum depression and complications.

The current study showed no statistical differences in the overall PDSS score between mothers of singletons and mothers of multiples. 82% of mothers of multiples in this study experienced complications, however there was a lack of increase in their overall PDSS scores.

There was a significant correlation between the loss of self concept and whether a woman gave birth to multiples or singletons. Women who experience a loss of self feel that their identity has changed, and become fearful they will not be able to get back to their real self again since having their child. The mean PDSS score in the loss of self category for a mother of a singleton and a mother of a multiple was 12.15 and 25.08 respectively, demonstrating a greater sense of loss of self in women who gave birth to multiples.

According to Choi et al., (2009) low income increases the risk for postpartum depression, where mothers in the lowest income range were found to have the highest PDSS scores. This differs from the current study where despite the lower mean income of mothers of singletons, their mean PPDS scores did not show a statistically significant difference with those of mothers of multiples. The highest PDSS score in this study, however, was from a married mother of a singleton. Her income was between $10,000 and $29,900, and her PDSS score was 166. The average PDSS score for a mother of a singleton was 95.85, and her average income was $30,000-$50,000. The mean total

household income for a mother of a singleton was $30,000- $49,000. The mean total household income for a mother of multiples was over $50,000.

According to Inandi et al. (2005), women who have a significant other are less likely to suffer from postpartum depression. In this study, there was only one single participant that was a mother of singleton. There was one partnered couple with multiples and one with a singleton. There was not enough data on single participants in this study to make any conclusions.

Sheard et al. (2007) stated that mothers of multiples had less depressive symptoms than mothers of singletons. However, their qualitative interview revealed that mothers of multiples expressed feeling stressed and overwhelmed, consistent with the results of the current study.

According to Abrams & Curran, (2009) mothers of economic deprivation have significantly higher rates of postpartum depression. Low income mothers were found to have less access to healthcare professionals, and were more likely to have untreated postpartum depression.

Chapter Summary

In this chapter, study results and discussion of findings were presented. Descriptive statistics were used to determine the frequencies of the data. Inferential statistics such as a t-test were used to investigate any differences between postpartum depressions in primiparous mothers of multiples versus primiparous mother of singletons.

A Mann-Whitney U test was used to examine the relationship between demographic variables and PDSS scores.

Chapter V

Conclusions, Implications, and Recommendations

In chapter V, a summary of the study and conclusions are presented. Implications of the findings for nursing practice, education, and administration are discussed. Recommendations for further research are provided.

Summary

The purpose of this study was to investigate the difference in postpartum depression between primiparous mothers of singletons versus primiparous mothers of multiples. Two instruments were used to collect data. A 17-item demographic survey developed by the researcher, and Beck's Postpartum Depression Screening Scale (PDSS) (Beck, 2001). The demographic survey consisted of age, length of time since delivery of baby, marital status, education, income, mental health history, support system, ethnicity, feeding method, type of delivery, complications with pregnancy and delivery, and employment status. The PDSS was used to identify differences in depression scores between mothers of singletons and mothers of multiples.

The sample was a convenience sample drawn from four obstetric and gynecologic clinics in the Midwest, and from mothers of multiples support groups from Wisconsin and Minnesota. Of one hundred survey packets sent out, 47 were returned, and 22 were not eligible for participation in the study. Twenty-five completed survey packets (12 multiples and 13 singletons) were usable for analysis. All participants filled out surveys

on a voluntary basis. The envelopes and surveys were sent back to the researcher via self-addressed and stamped envelopes.

Relevance to Theoretical Framework

This study used Beck's Postpartum Depression Screening Scale (PDSS) to identify differences in postpartum depression between two groups of mothers. With content from seven major categories (concepts 16-22 of Beck's Postpartum Depression Theory), 35 questions were presented to the participant in no particular order. These seven categories included: sleeping/eating disturbances, anxiety/insecurity, emotional lability, mental confusion, loss of self, guilt/shame, and suicidal thoughts.

This study also used a demographic questionnaire created by the researcher. Concepts four (child care stress), six (social support), eight (marital satisfaction), nine (history of depression), thirteen (socioeconomic status), and fourteen (marital status) of Beck's Postpartum Depression Theory were assessed in the demographics questionnaire.

Concepts sixteen through twenty-two are all predictors and risk factors for the development of postpartum depression, and are used to screen women for the symptoms of postpartum depression. These include sleeping and eating disturbances, anxiety and insecurity, emotional ability, mental confusion, loss of self, guilt and shame, marital status, socioeconomic status, income, education, and suicidal thoughts. Beck's Postpartum Depression Theory revolves around these concepts as risk factors for postpartum depression. The current study explored these concepts within the context of postpartum depression in the two groups of primiparous mothers.

Beck's Postpartum Depression Theory worked well in the current study to explore differences in concepts sixteen through twenty-two. A more detailed demographic survey could have been used to explore differences between concepts one through fifteen; however, this was not necessary for the purpose of this study. The purpose of the demographic survey was to ensure comparability between mothers of singletons and mothers of multiples in respect to seven of Beck's 22 identified risk factors for PPD. While assessment of all 22 concepts may have given more information, the amount of time required by participants to complete the more detailed survey may have discouraged participation. Furthermore, the questions presented in the demographic survey were limited to a focused review of literature which allowed the researcher to determine if any gaps were present between individual concepts and whether a woman gave birth to a single child versus multiples.

The results of this study have established a difference in loss of self between mothers of multiples and mothers of singletons. Future research can explore this correlation further.

Conclusions

Based on the findings from this study, the following conclusions were drawn:

1. No statistically significant difference was identified in the PDSS scores of mothers of multiples versus mothers of singletons.

2. Mothers of multiples are more likely to experience a loss of self when compared to mothers of singletons.

3. Analysis of sleep/eating disturbances, anxiety/insecurity, emotional liability, mental confusion, guilt/shame, and suicidal thoughts showed no statistical difference between mothers of multiples and mothers of singletons.

4. Demographic analysis revealed mothers of multiples are older, have a higher income, and are more likely to be employed outside the home when compared to mothers of singletons.

5. Mothers of multiples are more likely than mothers of singletons to deliver premature infants.

Implications for Nursing Practice

It is important for the APN to create a safe and non-judgmental environment during postpartum office visits where mothers can openly verbalize their concerns. Advanced practice nurses need to foster a setting where education on the reality of postpartum depression can take place.

Mothers of multiples experience more of a loss of self versus mothers of singletons. Mothers of multiples experience a loss of personal identity and find themselves unable to feel like their real selves again. To help remedy this loss of self, APNs need to help mothers of multiples realize their unique identify outside being a mother, and encourage these patients to take a night out, join a support group, and continue doing the activities they did before having their children.

Thirteen percent of new mothers will experience postpartum depression (PPD) at some point during the first year after delivery (O'Hara & Swain, 1996). The cause of

PPD remains unclear (Gold, 2002), although several factors known to increase the risk have been identified. This research has shown there is a significant difference in loss of self mothers of multiples experienced when compared to their singleton counterparts. Advanced practice nurses need to be familiar with resources within their communities to refer these patients to help them gain back their sense of self.

Recommendations

The following are recommendations for further research:

1. Replicate this study using a larger sample size and with different ethnic groups.

2. Conduct a longitudinal study starting from the first prenatal visit until after the child's first five years of life to identify when and through what mechanism loss of self is regained.

3. Conduct a mixed study using both qualitative and quantitative approaches using concepts from Beck's Postpartum Depression Theory.

Chapter Summary

Postpartum depression can be influenced by many factors. This study determined there is a significant difference in loss of self between primiparous mothers of multiples versus primiparous mothers of singletons. Advanced practice nurses can establish a formal mechanism for identifying symptoms of postpartum depression. These can include distinguishing PPD characteristics from other mental illnesses, identifying those patients

at risk, instituting formal and constant screening tools, and providing education and reading materials on PPD (Epperson, 1999).

APPENDIX A

Hypothesis Test Summary

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Loss of self total score is the same across categories of Singleton or multiple.	Independent-Samples Mann-Whitney U Test	.020	Reject the null hypothesis.
2	The distribution of Sleeping/eating disturbances total score is the same across categories of Singleton or multiple.	Independent-Samples Mann-Whitney U Test	.165	Retain the null hypothesis.
3	The distribution of Anxiety/insecurity total score is the same across categories of Singleton or multiple.	Independent-Samples Mann-Whitney U Test	.056	Retain the null hypothesis.
4	The distribution of Emotional liability total score is the same across categories of Singleton or multiple.	Independent-Samples Mann-Whitney U Test	.324	Retain the null hypothesis.
5	The distribution of Mental confusion total score is the same across categories of Singleton or multiple.	Independent-Samples Mann-Whitney U Test	.126	Retain the null hypothesis.
6	The distribution of Guilt/shame total score is the same across categories of Singleton or multiple.	Independent-Samples Mann-Whitney U Test	.155	Retain the null hypothesis.
7	The distribution of Suicidal thoughts total score is the same across categories of Singleton or multiple.	Independent-Samples Mann-Whitney U Test	.824	Retain the null hypothesis.
8	The distribution of PDSS Overall score is the same across categories of Singleton or multiple.	Independent-Samples Mann-Whitney U Test	.064	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

APPENDIX B

Theoretical Framework

Theoretical Framework

Becks Postpartum Depression Theory: Major Concepts and Definitions

1. Postpartum Mood Disorders: Postpartum depression and maternity blues have become better delineated over time, as has the understanding of postpartum psychosis. Two other perinatal mood disorders, postpartum obsessive-compulsive disorder and postpartum-onset panic disorder, have been identified, as has how these disorders are different and how they are interrelated (Beck, 2002c).

Postpartum Depression: A non-psychotic major depressive disorder with distinguishing diagnostic criteria that often begins as early as 4 weeks after birth. It may also occur anytime within the first year after childbirth. Postpartum depression is not self-limiting and is more difficult to treat than simple depression. Prevalence rates are 13% to 25%, with more women affected who are poor, life in the inner city, or are adolescents. Approximately 50% of all women suffering from postpartum depression have episodes lasting 6 months or longer.

Maternity Blues: Also known as postpartum blues and baby blues, it is a relatively transient and self-limited period of melancholy and mood swings during the early postpartum period. Maternity blues affects up to 75% of all women in all cultures.

Postpartum psychosis: A psychotic disorder characterized by hallucinations, delusions, agitation, and inability to sleep, along with bizarre and irrational behavior. Although postpartum psychosis is relatively rare (1 to 2 women per 1000 births), it represents a true psychiatric emergency because both mother and baby (and perhaps other

children) are in grave danger of harm. Although postpartum psychosis often begins to appear during the first week postpartum, it is frequently not detected until serious harm has occurred.

Postpartum Obsessive-Compulsive Disorder: Only recently identified, the prevalence rates have not been reported. Symptoms include repetitive, intrusive thoughts of harming the baby, a fear of being left along with the infant, and hyper vigilance in protecting the infant.

Postpartum-Onset Panic Disorder: This disorder has been identified only recently and is also without reported prevalence rates. It is characterized by acute onset of anxiety, fear, rapid breathing, heart palpitations, and a sense of impending doom.

2. Loss of Control: It was identified as the basic psychosocial problem in the 1993 substantive theory of Beck's early work. This descriptive theory captured a process women go through with postpartum depression. Loss of control was experienced in all areas of women's lives, although the particulars of the circumstances may be different. The concept of loss of control fit with the extant literature and left women with feelings of "teetering on the edge" (Beck, 1993). The process identified consisted of the following four stages:

1. Encountering terror: consisted of horrifying anxiety attacks, enveloping fogginess, and relentless obsessive thinking.

2. Dying of self: consisted of alarming unrealness, contemplating and attempting self-destruction, isolating oneself.

3. Struggling to survive: consisted of battling the system, seeking solace at support groups, and praying for relief.

4. Regaining control: consisted of unpredictable transitioning, guarded recovery, and mourning lost time.

3. Prenatal Depression: Depression during any or all of the trimesters of pregnancy has been found to be the strongest predictor of postpartum depression. (Effect size= Medium).

4. Child Care Stress: Stressful events related to childcare such as infant health problems and difficulty in infant care pertaining to feeding and sleeping. (Effect side= Medium).

5. Life Stress: An index of stressful life events during pregnancy and postpartum. The number of life experiences and the amount of stress created by each of the life events are combined to determine the amount of life stress a woman is experiencing. Stressful life events can be either negative or positive and can include experiences such as the following: marital changes (e.g., divorce, remarriage), occupational changes (e.g., job change), crises (e.g., accidents, burglaries, financial crises, illness requiring hospitalization). (Effect size= Medium).

6. Social Support: Instrumental support (e.g., babysitting, help with household chores) and emotional support. Structural features of a woman's social network (husband or mate, family, and friends) include proximity of its members, frequency of contact, and number of confidants with whom the woman can share personal matters. Lack of social support is when a woman perceives she is not receiving the amount of instrumental or emotional support she expects. (Effect size= Medium).

7. Prenatal Anxiety: Occurs during any trimester or throughout the pregnancy. Anxiety refers to feelings of uneasiness or apprehension concerning a vague, nonspecific threat. (Effect size= Medium).

8. Marital Satisfaction: The degree of satisfaction with a marital relationship is assessed and includes how happy or satisfied the woman is with certain aspects of her marriage, such as communication, affection, similarity of values (e.g., finances, child care), mutual activity and decision making, and global well being. (Effect size= Medium).

9. History of Depression: A report of having had a bout of depression before this pregnancy. (Effect size= Medium).

10. Infant Temperament: The infant's disposition and personality. Difficult temperament describes an infant who is irritable, fussy, unpredictable, and difficult to console (Effect size= Medium).

11. Maternity Blues: Previously defined as a non-pathological condition after giving birth. Prolonged episodes of maternity blues (lasting more than 10 days) may predict postpartum depression (Effect size= Small to medium).

12. Self-Esteem: A woman's global feeling of self-worth and self-acceptance. It is her confidence and satisfaction in self. Low self-esteem reflects a negative self-evaluation and feelings about oneself or one's capabilities (Effect size= Medium).

13. Socioeconomic status: A person's rank or status in society involving a combination of social and economic factors such as income, education, and occupation (Effect size= Small).

14. Marital Status: A woman's standing in regard to marriage; denotes whether a woman is single, married or cohabitating, divorced, widowed, separated, or partnered (Effect size= Small).

15. Unplanned or unwanted pregnancy: Refers to a pregnancy that was not planned or wanted. Of particular note is the issue of pregnancies that remain unwanted after initial ambivalence (Effect size= Small).

16. Sleeping and Eating Disturbances: Inability to sleep even when the baby is asleep, tossing and turning before actually falling asleep, waking up in the middle of the night, and difficulty going back to sleep. Loss of appetite, consciously being aware of the need to eat, and still unable to eat.

17. Anxiety and Insecurity: Overattentive to relatively minor issues, feelings of jumping out of one's skin, feeling the need to keep moving, or pacing. An ever-present feeling of insecurity and a sense of being overwhelmed in the new role of mother.

18. Emotional Lability: A woman's sense that her emotions are unstable and out of her control, commonly characterized as crying for no particular reason, irritability, explosive anger, and fear of never being happy again.

19. Mental Confusion: Marked inability to concentrate, focus on a task, or make a decision. There is a general feeling of being unable to regulate one's own thought processes.

20. Loss of Self: Women sense that those aspects of self that reflected their personal identity have changed since the birth of their infant, so they cannot identify who they really are and are fearful that they might never be able to be their real selves again.

21. Guilt and Shame: A woman's perception that she is performing poorly as a mother and has negative thoughts regarding her infant. Results in an inability to be open with others about how she feels, and this contributes to a delay in diagnosis and intervention.

22. Suicidal Thoughts: Women's frequent thoughts of harming themselves or ending their lives to escape the living nightmare of postpartum depression.

Adapted from Alligood & Tomey (2010, p. 725-728).

APPENDIX C

Demographic Questionnaire

Demographic Questionnaire

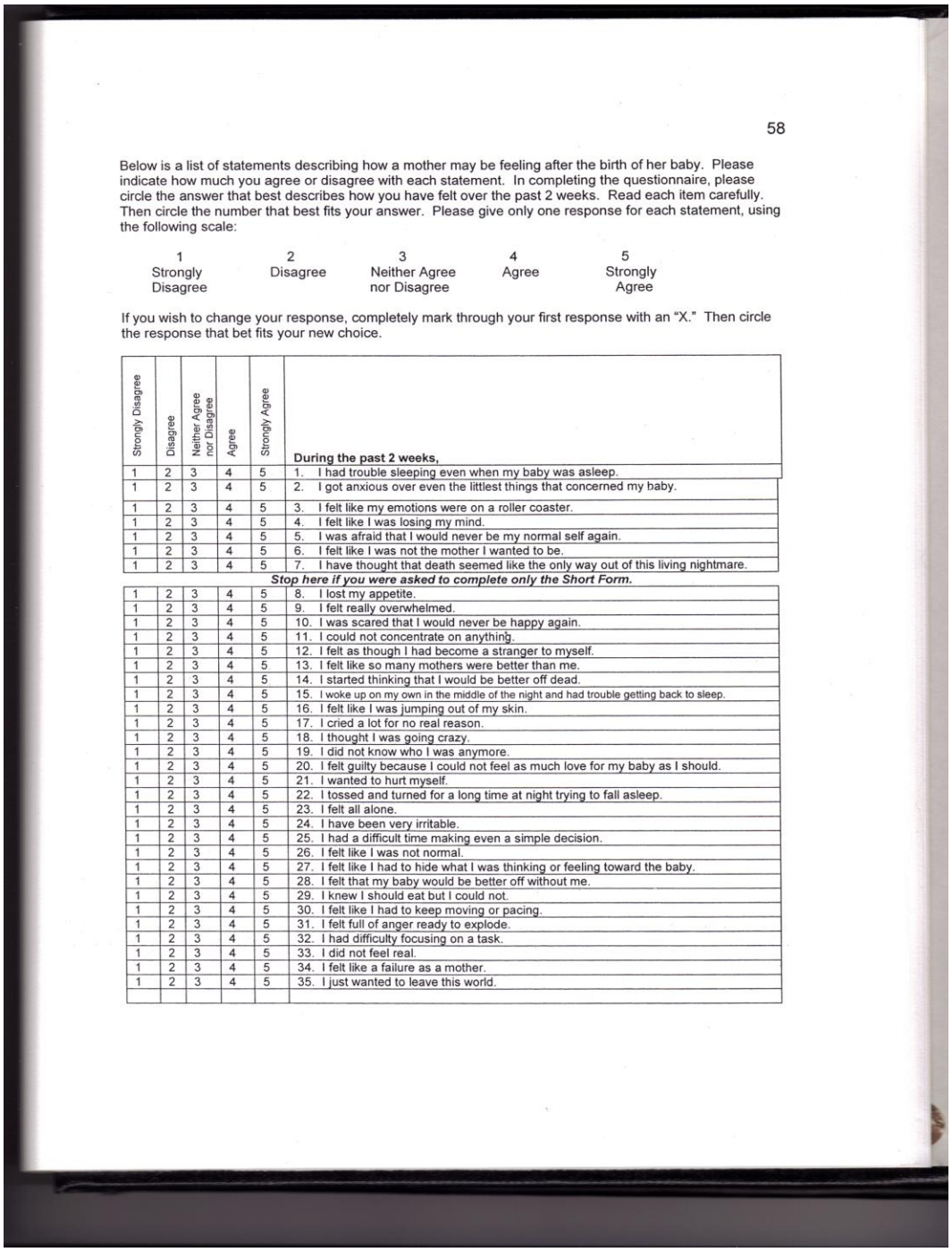
Please complete this short survey by placing your answer on the line provided or circling the appropriate response. Thank you in advance for your time in this research.

1. What is your age?
2. How long has it been since you delivered your baby?
3. Was your baby full term when born? If not, how early was your baby?
4. What is your marital status? Currently married / separated / divorced / widowed / never married, but in a relationship / single
5. What is your highest level of education? Some high school / high school graduate / some college / technical degree / bachelor's degree / master's degree or more
6. What is your total household income? Under 10,000 / 10,000-30,000 / 30,000-50,000 / over 70,000
7. Do you have a history of depression? Yes / No
8. Do you have support from your spouse or significant other? Yes / No
9. Do you have a good relationship with your spouse or significant other? Yes / No
10. What is your ethnicity?
11. How are you feeding your baby? Breast / bottle / both
12. What type of delivery did you have? Vaginal / Cesarean
13. Did you have any complications during your pregnancy? Please explain.
14. Did you have any complications during your delivery? Please explain.
15. Are you currently employed outside of the home? If so, who cares for your child when you are gone? Family member / daycare / spouse

16. Do you have any comments you would like to share?

APPENDIX D

Beck's Postpartum Depression Screening Scale



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Below is a list of statements describing how a mother may be feeling after the birth of her baby. Please indicate how much you agree or disagree with each statement. In completing the questionnaire, please circle the answer that best describes how you have felt over the past 2 weeks. Read each item carefully. Then circle the number that best fits your answer. Please give only one response for each statement, using the following scale:

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

If you wish to change your response, completely mark through your first response with an "X." Then circle the response that bet fits your new choice.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	During the past 2 weeks,
1	2	3	4	5	1. I had trouble sleeping even when my baby was asleep.
1	2	3	4	5	2. I got anxious over even the littlest things that concerned my baby.
1	2	3	4	5	3. I felt like my emotions were on a roller coaster.
1	2	3	4	5	4. I felt like I was losing my mind.
1	2	3	4	5	5. I was afraid that I would never be my normal self again.
1	2	3	4	5	6. I felt like I was not the mother I wanted to be.
1	2	3	4	5	7. I have thought that death seemed like the only way out of this living nightmare.
					Stop here if you were asked to complete only the Short Form.
1	2	3	4	5	8. I lost my appetite.
1	2	3	4	5	9. I felt really overwhelmed.
1	2	3	4	5	10. I was scared that I would never be happy again.
1	2	3	4	5	11. I could not concentrate on anything.
1	2	3	4	5	12. I felt as though I had become a stranger to myself.
1	2	3	4	5	13. I felt like so many mothers were better than me.
1	2	3	4	5	14. I started thinking that I would be better off dead.
1	2	3	4	5	15. I woke up on my own in the middle of the night and had trouble getting back to sleep.
1	2	3	4	5	16. I felt like I was jumping out of my skin.
1	2	3	4	5	17. I cried a lot for no real reason.
1	2	3	4	5	18. I thought I was going crazy.
1	2	3	4	5	19. I did not know who I was anymore.
1	2	3	4	5	20. I felt guilty because I could not feel as much love for my baby as I should.
1	2	3	4	5	21. I wanted to hurt myself.
1	2	3	4	5	22. I tossed and turned for a long time at night trying to fall asleep.
1	2	3	4	5	23. I felt all alone.
1	2	3	4	5	24. I have been very irritable.
1	2	3	4	5	25. I had a difficult time making even a simple decision.
1	2	3	4	5	26. I felt like I was not normal.
1	2	3	4	5	27. I felt like I had to hide what I was thinking or feeling toward the baby.
1	2	3	4	5	28. I felt that my baby would be better off without me.
1	2	3	4	5	29. I knew I should eat but I could not.
1	2	3	4	5	30. I felt like I had to keep moving or pacing.
1	2	3	4	5	31. I felt full of anger ready to explode.
1	2	3	4	5	32. I had difficulty focusing on a task.
1	2	3	4	5	33. I did not feel real.
1	2	3	4	5	34. I felt like a failure as a mother.
1	2	3	4	5	35. I just wanted to leave this world.

Beck, C. & Gable, R. (2002). *Postpartum depression screening manual.* Los Angeles: CA: Western Psychological Services.

APPENDIX E

Consent Form

Consent Form

I, Angela Parmentier, a graduate student at the University of Wisconsin Oshkosh, am conducting a study on the differences in postpartum depression between first time mothers who have single births and first time mothers who have multiple births. I would appreciate your participation in this study as it will assist me in making recommendations to APN's or healthcare professionals for improving screening of postpartum depression.

The purpose of this study is to investigate the differences in postpartum depression between primiparous mothers who have a single birth and primiparous mothers who deliver multiples.

You are eligible if:

1. You have given birth to a baby within two weeks to two years of this study
2. You can read English.
3. You have been diagnosed with postpartum depression
4. You have no previous history of mental illness.

Participation in this study involves completing a short demographic form and a one page Postpartum Depression Screening Scale. It should take no longer than 10 minutes of your time. Please do not include your name or contact information. This information will provide valuable data to nurse practitioners.

There is a chance of emotional discomfort with filling out this questionnaire along with the inconvenience of the time it will take you to complete the two questionnaires. Other than that, there are no risks involved with participation in this study.

Participation is voluntary and you have the right to refuse or withdraw from the study at any time. You will be filling out this questionnaire in the presence of your healthcare professional. Your consent is implied by completing this questionnaire.

The information you provide will be kept completely confidential. It will not be placed as part of your medical record or discussed with anyone. Any reports or publications of this study will not identify you in any way. Once the study is completed, I would be glad to share the results with you if you so desire.

In the meantime, if you have questions, you may write or email the investigator at:

Angela Parmentier

1590 Park Drive

Green Bay, WI 54313

angieparmentier@gmail.com

If you have any questions or complaints about your treatment as a participant in the study, you may call or write:

Chair, Institutional Review Board for Protection of Human Participants

C/O Grants Office

UW-Oshkosh

800 Algoma Blvd.

Oshkosh, WI 54901

920-424-1415

The chairperson may ask you for your name, but all complaints are kept confidential.

"I have received an explanation of the study and agree to participate. I understand that my participation in this study is strictly voluntary. By filling out these questionnaires, I am giving my informed consent."

Thank you for your cooperation and participation.

Angela Parmentier, RN, BSN

APPENDIX F

Request for Clinic Participation

Request for Clinic Participation

To whom it may concern:

I am in the process of writing my master's thesis for the degree, family practice nurse practitioner. I am researching the differences in postpartum depression in moms of multiples verses mothers of single births. Since becoming a mother of twins, I realized the need for better screening and support from healthcare professionals for mothers of multiples. I am hoping this research will prove this and help healthcare professionals realize the struggles we have, in return provide better postpartum care. I am hoping the organization can be of assistance to me by aiding me in participant recruitment.

The participants will be asked to complete two short forms. Participants must have delivered within 2 years, have no history of mental illness, and been diagnosed with postpartum depression. If you are willing to, I would like it if you would mention this at the monthly meeting and make the surveys available to those who are eligible and interested. You do not need to do any collection of the information, as I have enclosed self-addressed envelopes for the information to be mailed back to me.

I have attached a brief abstract of the research proposal for your review. I was granted permission by University of Wisconsin Oshkosh's Intuitional Review Board to conduct this research. I would be pleased to provide you with further information if you deem necessary.

If you are willing I would like to mail you some of the forms. I have the applied consent form, eligibility criteria, and forms in individual envelopes for ease of distribution.

Thank you for your time and consideration.

Angela Parmentier

angieparmentier@gmail.com

1590 Park Drive

Green Bay, WI 54313

920-242-0477

APPENDIX G

Demographic Group Statistics

Table G-1

Demographic Group Statistics 1

Total Household Income	*Mother of Singleton*	*Mother of Multiple*	*Total*
$10,000- 29,900	7.7%	8.3%	8.0%
	(n= 1)	(n= 1)	(n= 2)
$30,000- 49,900	69.2%	8.3%	40.0%
	(n= 9)	(n= 1)	(n= 10)
Over $50,000	23.1%	83.3%	52.0%
	(n= 3)	(n= 10)	(n= 13)
Total	100.0%	100.0%	100.0%
	(n= 13)	(n= 12)	(n= 25)

Table G-2

Demographic Group Statistics 2

Employed Outside the Home	*Mother of Singleton*	*Mother of Multiple*	*Total*
Yes	84.6%	91.7%	88.0%
	(n= 11)	(n= 11)	(n= 22)

(table continues)

Employed Outside the Home	*Mother of Singleton*	*Mother of Multiple*	*Total*
No	15.4%	8.3%	12.0%
	(n= 2)	(n= 1)	(n= 3)
Total	100.0%	100.0%	100.0%
	(n= 13)	(n= 12)	(n= 25)

Table G-3

Demographic Group Statistics 3

Who Cares for Child(ren) while Mother at Work	*Mother of Singleton*	*Mother of Multiple*	*Total*
Not Employed	15.4%	8.3%	12.0%
Outside Home	(n= 2)	(n= 1)	(n= 3)
Family Member	30.8%	41.7%	36.0%
	(n= 4)	(n= 5)	(n= 9)
Daycare	38.5%	41.7%	40.0%
	(n= 5)	(n= 5)	(n= 10)
Spouse	7.7%	0.0%	4.0%
	(n= 1)	(n= 0)	(n=1)

(table continues)

Who Cares for Child(ren) while Mother at Work	*Mother of Singleton*	*Mother of Multiple*	*Total*
Other	7.7%	8.3%	8.0%
	(n= 1)	(n= 1)	(n= 2)
Total	100.0%	100.0%	100.0%
	(n= 13)	(n= 12)	(n= 25)

Table G-4

Demographic Group Statistics 4

History of Depression	*Mother of Singleton*	*Mother of Multiple*	*Total*
Yes	38.5%	25.0%	32.0%
	(n= 5)	(n= 3)	(n= 8)
No	61.5%	75.0%	68.0%
	(n= 8)	(n= 9)	(n= 17)
Total	100.0%	100.0%	100.0%
	(n= 13)	(n= 12)	(n= 25)

Table G-5

Demographic Group Statistics 5

Full Term Birth	*Mother of Singleton*	*Mother of Multiple*	*Total*
Yes	84.6%	33.3%	60.0%
	(n= 11)	(n= 4)	(n= 15)
No	15.4%	66.7%	40.0%
	(n= 2)	(n= 8)	(n= 10)
Total	100.0%	100.0%	100.0%
	(n= 13)	(n= 12)	(n= 25)

Table G-6

Demographic Group Statistics 6

Highest Level of Education Completed	*Mother of Singleton*	*Mother of Multiple*	*Total*
High School	23.1%	0.0%	12.0%
	(n= 3)	(n= 0)	(n= 3)
Some College	38.5%	16.7%	28.0%
	(n= 5)	(n= 2)	(n= 7)

(Table continues)

Highest Level of Education Completed	*Mother of Singleton*	*Mother of Multiple*	*Total*
Four-year College	38.5%	83.3%	60.0%
Degree or More	(n= 5)	(n= 10)	(n=15)
Total	100.0%	100.0%	100.0%
	(n= 13)	(n= 12)	(n= 25)

Table G-7

Demographic Group Statistics 7

Marital Status	*Mother of Singleton*	*Mother of Multiple*	*Total*
Single	7.7%	0.0%	4.0%
	(n= 1)	(n= 0)	(n= 1)
Married	84.6%	91.7%	88.0%
	(n= 11)	(n= 11)	(n= 22)
Partnered	7.7%	8.3%	8.0%
	(n= 1)	(n= 1)	(n= 2)
Total	100.0%	100.0%	100.0%
	(n= 13)	(n= 12)	(n= 25)

Table G-8

Demographic Group Statistics 8

Type of Delivery	*Mother of Singleton*	*Mother of Multiple*	*Total*
Vaginal	84.6%	8.3%	48.0%
	(n= 11)	(n= 1)	(n= 12)
Cesarean	15.4%	91.7%	52.0%
	(n= 2)	(n= 11)	(n= 13)
Total	100.0%	100.0%	100.0%
	(n= 13)	(n= 12)	(n= 25)

Table G-9

Demographic Group Statistics 9

Race/Ethnicity	*Mother of Singleton*	*Mother of Multiple*	*Total*
White	100.0%	91.7%	96.0%
	(n= 13)	(n= 11)	(n= 24)
Asian	0.0%	8.3%	4.0%
	(n= 0)	(n= 1)	(n= 1)
Total	100.0%	100.0%	100.0%
	(n= 13)	(n= 12)	(n= 25)

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