DO SUPPORT GROUPS HELP NEW MOTHERS WITH POSTPARTUM DEPRESSION?

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Presented
to the Faculty of
California State University, Chico

In Partial Fulfillment
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Master of Science
in
Nursing

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Postpartum depression (PPD) is a major depressive disorder. Research shows that PPD can occur in 10-15% of new mothers in the United States. New mothers that are at greater risk are those that have a history of depression or previous postpartum depression. The purpose of this study was to evaluate whether new mothers who completed the “Bittie Baby and Me” (BB & M) series will score lower on the Edinburgh Postnatal Depression Scale (EPDS) questionnaire than those who did not complete or attend the support group series.

A quasi-experimental design was used to collect data from 71 new mothers that volunteered to participate in this study. Seventy-one new mothers completed the EPDS questionnaire at one to two days postpartum at a rural Northern California hospital. Twenty-three new mothers attended the “BB & M” class series (experimental
The remaining 48 new mothers chose not to attend the “BB & M” classes (control group). At eight weeks postpartum, the same EPDS questionnaire was administered to both groups. All 23 new mothers from the experimental group completed the EPDS questionnaire during the last class (class 6). Forty-eight new mothers in the control group were mailed the second EPDS questionnaire and an ice-cream gift certificate at seven and a half weeks postpartum with a return of 34 completed EPDS questionnaires.

The hypothesis is new mothers who attend the “BB & M” support group series will score lower on EPDS than those who do not attend. When comparing the EPDS scores at one to two days postpartum to eight weeks for the control group there were no differences between the pretest and posttest EPDS scores. However, when comparing the EPDS scores at one to two days postpartum to eight weeks for the experimental group there was a decrease in the EPDS posttest scores compared to the EPDS pretest scores.

The results suggest the new mothers that completed the “BB & M” classes scored lower on the EPDS questionnaire. Lower EPDS scores indicated the new mothers had a decreased risk for PPD. The EPDS scores for the new mothers who chose not to attend the “BB & M” classes had higher EPDS scores at eight weeks postpartum than they had at one to two days postpartum. Higher EPDS scores indicated the new mothers had an increased risk for PPD. The results from this study showed that new mothers who attended the “BB & M” classes had lower EPDS scores.

Nurses serve a vital role in promoting health care, providing support, and collecting data that will assist them with identifying new mothers at risk for PPD. Ma-
Tertiary nurse educators play an essential role in providing perinatal support groups and parenting classes to assist new mothers in their new role.
CHAPTER I

INTRODUCTION TO THE THESIS

Background/Overview of the Problem

Having a baby is usually a joyous event. The anticipation and thrill of having this miracle of life is the most wonderful experience one could ever imagine. According to Logsdon, Wisner, and Pinto-Foltz (2006) “a synchrony between mother and infant interactional behavior results in a dance in which the infant elicits maternal behavior, the mother responds to the infant cues, and the infant develops confidence that future needs will be met” (p. 654). Postpartum depression (PPD) could interfere with maternal and infant bonding. Depression after pregnancy may be caused by a rapid decline in the level of reproductive hormones that occur after delivery (National Institute of Mental Health, 2008). Women experiencing postpartum depression may not be able to control their emotions, thought processes, or behavior (Beck, Records, & Rice, 2006).

The greatest impact of depression is among women between the ages of 18 and 44, the childbearing years (Godfrey, 2005). Postpartum depression affects the entire family system. According to Smith, Brunetto and Yonkers (2004), approximately one in four women will have depressive symptoms during pregnancy. Approximately 85% of new mothers may experience some type of mood disorder. Most new mothers may experience mild symptoms, such as the baby blues. Postpartum depression is more severe and occurs in 10-15% of new mothers in the United States (Saju, Contag, & Templeton,
New mothers at greater risk are those that have a history of depression or previous postpartum depression.

Several other factors may predispose a woman to postpartum depression, such as stressful life events, past episodes of depression, and a family history of mood disorders. According to Edhborg, Friberg, Lundh, and Widstrom (2005), new mothers that experienced a stressful life event, had a history of psychiatric illness, or a lack of family support are more likely to experience postpartum depression. Wisner, Parry, and Piontek (2002) stated that postpartum depression is unrelated to a woman’s education level, the sex of her infant or feeding choices, the mode of delivery, or whether the pregnancy was planned.

According to Beck (2006), postpartum depression is a major depressive disorder. For a diagnosis to be made the patient must have five or more of the following symptoms for at least two weeks: insomnia or hypersomnia, psychomotor agitation or retardation, fatigue, feelings of worthlessness or guilt, changes in appetite, decreased concentration, depressed mood or loss of interest, or thoughts of suicide (Beck, 2006). New mothers that have a diagnosis of PPD have an increased risk of being hospitalized; this disease is the most frequent form of maternal morbidity following delivery (Letourneau et al., 2007).

Statement of the Problem

New mothers with PPD sometimes do not divulge their feelings or symptoms to others. The stigma of depression and the belief that all mothers should be happy can cause shame, fear, or embarrassment (Beck, 2006). Nurses should be aware of the signs
and symptoms of postpartum depression in order to provide appropriate nursing interventions to new mothers during the first year after childbirth (Beck, 2006). Nurses should encourage new mothers to share their experiences and seek help for symptoms of postpartum depression.

New mothers with PPD do not realize they suffer from a mood disorder, but believe they are failures as mothers. New mothers and their families should be informed of the signs and symptoms of postpartum depression, prior to discharge from the hospital. Handouts should be given on PPD and access to support networks. These mothers should be informed that postpartum depression is a treatable mood disorder with a biochemical origin (Beck, 2006). Mothers need to feel cared for and supported by their care providers, nurses, and their families.

According to Driscoll (2006), if PPD is not identified or treated there could be serious consequences, such as altered mother-baby bonding and altered family dynamics, suicidal thoughts, or thoughts of harming the baby. For these reasons, it is imperative for maternal-child nurses to make the identification, referral, and provide support to new mothers experiencing postpartum depression.

Relevance/Importance to Nursing

Health care providers should be able to identify the affective responses during the mother’s postpartum check-ups or by their pediatric practitioners during well baby visits. Nurses and care-providers are able to assist with improving the detection of new mothers with postpartum depression. Maternal depression should be considered a risk factor in a child’s overall health assessment (Freeman et al., 2005). Detection of
postpartum depression is an important health consideration in the overall health of children. Health care providers should be more cognizant of the growing incidence of postpartum depression and be better prepared to offer help and treatment to mothers (Ugarriza & Schmidt, 2006).

Andrews and Roy (1986), in describing the nursing role in Roy’s Adaptation Model suggested that the nurse’s role is to “promote adaptation in situations of health and illness-to enhance the interaction of the person with their environment, thereby promoting health” (p. 51). Nurses need to have current knowledge about available evidence based treatments to assist new mothers with treatment options and to facilitate access to social support networks (Horowitz & Goodman, 2005). Nurses that are knowledgeable on PPD can educate new mothers and their families about signs and symptoms, recommend appropriate referrals, and encourage them to participate in their treatment (Cho, Holditch-Davis, & Miles, 2008).

Postpartum depression is a crippling mood disorder, historically neglected in health care, leaving mothers to suffer in fear, confusion, and silence (Beck, 2006). Undiagnosed it can adversely affect the mother-infant relationship and lead to long–term emotional problems for the child (Beck, 2006). New mothers who experience postpartum depression are often anxious about their infants’ health. These mothers usually are sadder, more anxious, more aggressive, and more at risk for harming themselves or their baby than mothers who are not depressed (Behnke, 2004). The primary goal for nurses in the assessment process is to identify women at risk for postpartum depression. If a woman complains of symptoms, the goal is to limit the severity of those symptoms and prevent complications of the disorder by getting her into treatment (Driscoll, 2006).
According to Ugarriza and Schmidt (2006), the development and implementation of alternative support systems for new mothers could be beneficial. Beck (2006) stated that support groups helped to counter the isolation and loneliness mothers felt, and introduced them to other women who had recovered from postpartum depression. Offering these types of support groups allowed new mothers to share their experiences with other mothers. Community programs such as perinatal support groups and parenting courses could help prevent perinatal disorders (Moses-Kolko & Roth, 2004). New mothers need to feel they are not alone, that what they are experiencing is real, and there is hope (Honikman, 2006).

Theoretical Framework

The framework for this quasi-experimental study was based on Mercer’s Theory of Maternal Role Attainment and the Roy Adaptation Model (RAM). Mothers who have placed their new infant as an equally important family member and who enjoy the roles of being a mother Have Achieved Maternal Role Attainment (Mercer, 1990). The Roy Adaptation Model states:

if the client is an adaptive system, and if the goal of adaptation is reached when the focal stimuli is within the patient’s adaptation level, then nursing intervention involves manipulating the focal, contextual, and residual stimuli so the patient can cope with the stimuli. (Roy & Roberts, 1981, p. 46)

Maternal Role Attainment is a process that usually occurs over a three to ten month period (Mercer, 1986). The components of the mothering role include attachment to the infant through identifying, claiming, and interacting with the infant, gaining competence in mothering behaviors, and expressing gratification in the mother-infant interactions (Mercer, 1986). If the woman’s health is compromised due to either
complications of childbirth or other disease processes her maternal adaptation could be delayed (Mercer, 1986). The health professional’s contact with the mother during the postpartum period is more intensive and extensive than it was during pregnancy. Mercer (1977) implied maternity nurses were in a fortunate position to collect data, observe mothering acts and assist new mothers in their new role. It is beneficial to new mothers and their families to be assessed as being at risk as early as possible and should be offered additional support during this period (Mercer, 1990).

The Roy Adaptation Model for Nursing identified the recipient of nursing care as an adaptive system. According to Roy and Roberts (1981), a system is described in its simplest form as a mechanism involving input, internal feedback processes, and output. Adaptive responses are those that promote integrity of the person in terms of the goals of survival, growth, reproduction, and self-mastery (Roy & Roberts, 1981). Roy's model emphasized that nursing has the ability to assist the person’s adaptation effort by managing the environment. The individual uses appropriate coping skills to deal with stressors in their environment. The nurse evaluates how well the individual can adapt and whether there is a need to intervene to promote adaptation (Roy & Roberts, 1981).

The use of these two models will assist the investigator with this study. Mercer’s theory postulates that nurses have the responsibility for promoting health and the care given within the first year after a woman gives birth (Mercer, 1990). Roy defined the goal of nursing as the promotion of adaptation by contributing to the person’s health, quality of life, and dying with dignity (Andrews & Roy, 1986).

According to Mercer’s theory, nurses should offer new mothers additional support during the postpartum period. The hospital for this study offered support classes
for new mothers who delivered at their facility. The “BB & M” support group series started five years ago. The manager of the maternity unit evaluated if other hospitals in the area were offering prenatal and postnatal classes. The manager found that most of the hospitals did not offer both prenatal and postnatal classes. The manager discovered studies that suggested new mothers who had a positive prenatal and postnatal experience, would most likely return to the same hospital for their next delivery. These mothers and their families were more likely to return to this hospital for future medical care.

The classes were developed by a registered nurse (RN) whose qualifications include; a Bachelors Degree in Child Development, Masters Degree in Educational Psychology with an emphasis on early human development, International Certified Childbirth and Parenting Educator (ICCE), and a Certified Lactation Educator (CLE). This RN perinatal nurse was well qualified to facilitate the “BB & M” classes. The “BB & M” classes used structured formal education topics in an informal setting allowing open discussion. The perinatal educator for the “BB & M” support group series discussed a variety of topics, such as infant care, infant feedings, coping strategies, signs, and symptoms of PPD. These classes run for six weeks consecutively.

Research Question/Hypothesis

The question for this study is the following: Do new mothers, who give birth in a rural northern California hospital and who complete the “Bittie Baby and Me” (BB & M) support group series score lower on the Edinburgh Postnatal Depression Scale (EPDS) than those who do not attend? The hypothesis is new mothers who attend the “BB & M” support group series will score lower on EPDS than those who do not attend.
Purpose

The purpose of this study is to assess whether new mothers who complete the “BB & M” series will score lower on the EPDS than those who did not complete or attend the support group series. The investigator will evaluate the effect of the “BB & M” support groups offered to new mothers in a small rural area of northern California. The “BB & M” class is offered free of charge for the first six-weeks for new mothers and their newborns until age three months. After completing, the first six-week series there are additional support classes available for these new mothers for a small fee. The second six-week series, “Bigger Baby and Me,” is offered to mothers and their infants from age three to seven months.

Definitions of Terms

Baby Blues or Postpartum Blues

A common temporary psychological state right after childbirth when a new mother may have mood instability, weepiness, sadness, anxiety, and often feel overwhelmed. Usual onset is within the first week up to three weeks after delivery. The baby blues do not always require medical treatment. Usually attending a support group with new mothers is helpful (“Baby Blues,” 2004).

Bittie Baby and Me (Newborn–3 months)

This is a six-week class offered for mothers that have just delivered a baby to infants three months of age. Mothers are encouraged to attend the classes with their baby. The RN perinatal educator provides informative sessions on a variety of subjects such as,
infant care and development, and ways to cope with the emotional, social, and physical transitions into parenthood (Enloe Medical Center, 2010).

Bigger Baby and Me (3-7 months)

This six class series is offered to mothers and their baby’s from age three to seven months. The RN perinatal educator discusses issues affecting infant’s healthy development (Enloe Medical Center, 2010). Both of these classes are offered at the Mother and Baby Care Center at a northern California hospital.

Edinburgh Postnatal Depression Scale (EPDS)

This scale was developed to assist primary care providers to detect mothers suffering from postnatal depression. This scale consists of ten short statements, with four possible choices. The questions ask how she has felt in the past seven days. Each choice is given a numerical value and then all ten statements are totaled. If the mother scores over twelve, she is more likely to have postpartum depression. This scale can be administered as early as three days postpartum and up to one-year postpartum (Cox, Holden, & Sagovsky, 1987).

New Mother

A female that has given birth to a child, who is between one day and one year of age.

Postpartum

This period encompasses the time from the delivery of the placenta and membranes to the return of the woman’s reproductive system to its nonpregnant condition (Mattson & Smith, 2004).
Postpartum Depression

Is a nonpsychotic depressive illness that is usually manifested within four weeks after the delivery and affects 10-15% of postpartum women in the United States (Mattson & Smith, 2004). Symptoms may include depressed mood, tearfulness, anhedonia, insomnia, fatigue, appetite disturbance, suicidal thoughts, and recurrent thoughts of death (Saju et al., 2007).

Postpartum Psychosis

A very serious mental illness that can affect a new mother. The episode of psychosis usually begins within one to three months of delivery and affects 0.2% of postpartum women in the United States (Mattson & Smith, 2004). This disease includes hallucination, delusion, and phobias (Saju et al., 2007). Risk for infanticide and suicide are very high among women with untreated postpartum psychosis (Saju et al., 2007).

Prevalence/Incidence

The “prevalence” of a condition means the number of people who currently have the condition, whereas "incidence" refers to the annual number of people who have a case of the condition (“Postpartum Depression,” 2007).

Qualifications of the Investigator

The investigator graduated from California State University, Chico, in 2005 with a Bachelor of Science Degree in Nursing. She has completed the course work in the master’s program including a research course in Nursing Education, at California State University, Chico. She has been involved in nursing since 1981 as a Licensed Practical Nurse (LPN) and as a Registered Nurse (RN) from an associate degree nursing program.
She has worked in multiple departments as a registered nurse including postpartum, nursery, labor and delivery, medical-surgical units, dialysis, mental health, and home health care. She has worked at several hospitals on their maternity units as both a LPN and a RN for 25 years. The investigator is currently working full time as a nursing clinical and theory instructor, at a community college Associate Degree Nursing Program and License Vocational Nursing Program.

Conclusion

Postpartum depression is a serious health problem that can have devastating effects on mothers, their families, and on the health care community who provide care for them. Depression can affect the new mother’s quality of life as well as harm her baby. Nurses should explain to new mothers that PPD is treatable and curable. It is critical to intervene early for new mothers that are depressed. The hopes are to minimize the effects of maternal depression on new mothers and their loved ones. During the discharge process nurses should educate new mothers and their families about the signs and symptoms of postpartum depression. Care providers and nurses should discuss available resources and early intervention programs for new mothers and their families.

Chapter II will research the impact that postpartum depression may have on new mothers and their families. Mothers affected by postpartum depression may have increased risks for future PPD. Infants born to mothers who experience PPD may struggle with developmental and behavioral problems. Research presented in this chapter will discuss new mothers’ perceptions on attending support groups and the impact group therapy had on them and their families.
CHAPTER II

IMPACT OF POSTPARTUM DEPRESSION

Chapter II will investigate the impact postpartum depression may have on the new mother and her family. Research presented in this chapter will show new mothers’ perceptions after attending support groups and the impact group therapy had on them and their families. Research recommended an increase public awareness of PPD that could assist new mothers and their families in identifying symptoms of PPD.

Overview of Postpartum Depression

PPD is a serious mood disorder that can affect a mother’s confidence in herself and her ability to care for her infant appropriately. PPD is a major childbirth complication (U.S. Department of Health and Human Services, 2000); however, postpartum screening for PPD is not a part of standard prenatal care in the United States (Horowitz & Goodman, 2005). PPD usually occurs during the first four weeks after delivery and could cause significant risks to maternal, infant, and family well-being. Beck (2006) describes it as “a thief that steals motherhood” (p. 40). If PPD remains undetected or untreated, it could influence a mother’s ability to interact with her infant and her family emotionally and cognitively (McQueen, Montgomery, Lappan-Gracon, Evans, & Hunter, 2008).
The initial episode of postpartum depression can begin within the first four weeks after delivery and can reappear any time within the first two years (Smith, Brunetto, & Yonkers, 2004). Postpartum depression is an atypical mood disorder characterized by symptoms such as tearfulness, mood swings, despondency, feelings of inadequacy, inability to cope with the care of the baby, and increasing guilt about the birth and performance as a mother (Ugarriza & Schmidt, 2006).

**Risk of PPD During Pregnancy**

Depression during pregnancy is one of the strongest predictors for postpartum depression (Godfrey, 2005). According to Harrington and Greene-Harrington (2007) maternal depressive symptoms have been associated with increased stress, lack of support, poor weight gain, little to no prenatal care, alcohol and drug abuse. The effects on the fetus could be a preterm delivery, low birthweight, and/or intrauterine growth restriction (Smith et al., 2004). Any woman that has high levels of stress, such as conflicts with their partner or other family members can experience depressive symptoms (Lau & Wong, 2008). Untreated maternal depression can lead to poor mother-infant bonding and impaired infant cognitive development (Harrington & Greene-Harrington, 2007).

According to Kendall-Tackett (2007) stress of any kind increases inflammation and is related to depression and anxiety in postpartum mothers. The elevation of inflammation levels (White Blood Cells) is normal in the last trimester and in the postpartum period (Kendall-Tackett, 2007). These elevated levels help prepare a woman for labor and help to fight infection after delivery. In depressed mothers, these
levels could be too high. New mothers who are depressed could have elevated or low cortisol levels and this could cause increased inflammation (Kendall-Tackett, 2007). Other risk factors that may cause elevated inflammation in postpartum mothers are sleep disturbance, pain, breastfeeding difficulties, and psychological trauma (Kendall-Tackett, 2007).

Influences of PPD on the Family

Postpartum depression may affect bonding between the mother and her infant as well as inhibiting the infant’s development. Infants of mothers who have suffered with postpartum depression are more likely to develop insecure attachments, behavioral problems and score poorly on cognitive tests (Freeman et al., 2005). New mothers that are depressed usually disengage from their babies or react in a hostile way (Kendall-Tackett, 2005). Depressed mothers have difficulty reading their baby’s cues and are not able to respond appropriately to their needs.

Mothers with postpartum depression were less likely to engage in preventive health measurements for themselves or their babies. According to Freeman et al. (2005), the detection of postpartum depression had extensive consequences for the well-being of children and should be of concern in the pediatric setting. These findings emphasized the importance of early detection by health care professionals and care providers, who are able to intervene on behalf of these mothers and their babies.

Four-year-old children of mothers who had experienced PPD while they were infants were found to have diminished development of cognitive skills (Smith et al., 2004). According to Josefsson and Sydsojo (2007), four-year-old children of women who
had postpartum depression displayed more behavioral problems than children of nondepressed mothers.

Josefsson and Sydsojo (2007) conducted a longitudinal study in Sweden with pregnant women registered at the antenatal care clinics in four communities, during 1997 through 1999. The original sample consisted of 753 pregnant women between 35 and 36 weeks gestation. The researcher sent letters to each of these women six months after their delivery. These letters contained an Edinburgh Postnatal Depression Scale (EPDS), a Swedish version of the Richman Pre-School Behavior Checklist and a short questionnaire asking about age, ongoing illness, pharmacological medication, pregnancy, and if their babies were born at term and less than six months old. There were 675 that took part in the study, 221 in the index group, and 454 in the control group (Josefsson & Sydsojo, 2007).

The index group consisted of all new mothers with PPD according to the EPDS in a population-based study (Josefsson & Sydsojo, 2007). The control group consisted of new mothers without PPD according to the EPDS during the same period. Approximately four years later these women were asked to answer a short questionnaire on general health, complete the EPDS, and to assess their child’s behavior with the Richman Pre-School Behavioral Checklist (Josefsson & Sydsojo, 2007).

The researchers investigated the prevalence of depressive symptoms in new mothers who have experienced PPD symptoms and surveyed the opinions these same mothers had in regard to their physical and mental health four years after delivery (Josefsson & Sydsojo, 2007). The researchers examined the behavior of four-year-old children born to new mothers affected by PPD (index group) and new mothers not
affected by PPD (control group) (Josefsson & Sydsojo, 2007). The results demonstrated that mothers who experienced depressive symptoms were four times more likely than the control group to show PPD symptoms at their follow up appointments (Josefsson & Sydsojo, 2007).

The researchers discovered that new mothers who had a history of PPD were at greater risk for depressive symptoms, and more likely to use antidepressants. Josefsson and Sydsojo (2007) concluded that mothers who had PPD and continued to experience depressive symptoms had more of an effect on their child’s behavior at four years of age than those mothers who did not experience depressive symptoms. Mothers that did not have PPD symptoms were less likely to have a child with behavioral problems at age four.

The researcher acknowledged a methodological weakness was that the children’s behaviors were based solely on maternal evaluation and not on observations or diagnostic interviews (Josefsson & Sydsojo, 2007). Other limitations of this study included using a convenience sampling strategy, a questionnaire, and not using diagnostic interviews or observations. Future studies could include diagnostic interviews, evaluating the influence of the women’s socio-economic status, and paternal mental health as risk factors for negative outcomes on children’s early behavioral and emotional development.

Mothers’ Perceptions of Support Groups

Letourneau et al. (2007) conducted a study in Alberta and New Brunswick, Canada on how mothers with postpartum depression perceived the benefits of support groups. This study identified the need for appropriate support groups, resources available,
barriers to accessing these resources, and preferred interventions perceived by new mothers that had experienced PPD (Letourneau et al., 2007).

The researchers interviewed mothers individually (Alberta, n=24; New Brunswick, n=17) and in groups (Alberta, n=5; New Brunswick, n=6) (Letourneau et al., 2007). Fifty-two mothers participated in this study. New mothers were eligible if they reported depressive symptoms within the past two years, or within 12 weeks of delivery, had symptoms longer than two weeks postpartum, or could not care for themselves or their infant.

The researchers used a qualitative, semistructured, individual interview guide for mothers that consisted of 38 questions that focused on resources available, stressful situations, and preferences for interventions (Letourneau et al., 2007). The Edinburgh Postnatal Depression Scale (EPDS) was used to assess for PPD. The EPDS is a ten-item self-report instrument, with items rated on a 4-point scale to produce a summative score ranging from 0-30 (Cox et al., 1987). The researcher selected scores of 12 and higher to identify women with depressive symptoms. Cox et al. recommended further evaluation for women who scored over 10 points. After collection and analyses of data, the researchers presented the information to the new mothers. The researchers performed in-depth individual and group interviews to validate their findings with the participants. Interviews were tape recorded and transcribed verbatim.

Letourneau et al. (2007) described that new mothers needed someone to listen to their symptoms, confirm they were good moms, normalize their feelings, and reassure them that there is treatment for PPD. Mothers preferred individualized counseling sessions, but enjoyed attending support groups with other mothers who shared similar
The mothers in this study suggested that a knowledgeable and compassionate person facilitate these groups. These participants found their health care providers did not validate their symptoms of PPD, and did not provide appropriate interventions.

The researchers recommended that information on PPD be advertised via television, radio, and newsprint media advertisement to the public (Letourneau et al., 2007). The researchers believed that making the public aware of PPD would encourage new mothers to disclose symptoms they had experienced. The participants in this study emphasized the need to increase public awareness on PPD. They believed if people understood the symptoms of PPD, they would receive more support from family, friends, and care providers.

The researchers concluded that with their results and findings from other studies, the information obtained provided insight into the support needs, resources, and interventions necessary to assist new mothers and their families with PPD. Limitations for this study included a small sample size, using a convenience sampling strategy, and lack of a control group. Future studies could include a larger sample size, random sampling, a control group, and a diagnosis of PPD of new mothers by their care provider.

**Therapeutic Group Program in a Rural Area**

Craig, Judd, and Hodgins (2005) conducted a pilot study on a therapeutic group program provided by community health workers for PPD among women living in rural Victoria. A psychologist and a probationary health psychologist provided a one-day training program to health workers. New mothers who had reported signs of depression
or anxiety since the birth of their baby and had a baby less than twelve months of age were recruited through the community health services. Sixteen women were recruited; two did not finish the program.

The researchers used a repeated measure design. They collected information on two occasions; before the program started and after completion of the program. The researchers used EPDS and the Hospital Anxiety and Depression Scale (HADS), which assessed for generalized anxiety and depressive symptoms. Fourteen women completed the pre and post-program data collection and two women dropped out of the nine-week program (Craig et al., 2005).

The results suggested that a nine-week therapeutic group program with focus on cognitive-behavioral strategies might be effective in reducing anxiety and depression in women living in rural Victoria. The EPDS and HADS scores decreased with each additional therapeutic session these women attended. The researchers evaluated the effectiveness of cognitive-behavioral therapy and the use of group work that encouraged social support for these women (Craig et al., 2005).

Limitations were the small sample size and lack of a control group. Further studies could consist of a larger sample size, increase the length of the therapeutic groups, and use facilitators that are experts in PPD.

The Need for Support Groups

Ugarriza and Schmidt (2006) explained that even though new mothers had been educated on the signs and symptoms of PPD in their childbirth classes, they felt a need to have this addressed in the postpartum period by their care providers. New
mothers believed that resources and support groups are not easily available to them (Letourneau et al., 2007). Research is needed on the availability of support groups and screening tools for new mothers experiencing PPD. According to Ugarriza and Schmidt, development and implementation of alternative support systems for new mothers would be beneficial. Beck (2006) stated that support groups helped to counter the isolation and loneliness the mothers felt and introduced them to new mothers who had recovered from postpartum depression.

Conclusion

PPD is a serious mood disorder that affects a mother, her child, and her family. New mothers who may have experienced PPD believed that increased public awareness could have assisted them and their families to recognize the symptoms of this mood disorder. Caregivers need to identify signs and symptoms of PPD, develop a trusting relationship, and provide appropriate interventions for new mothers.

New mothers who attended support groups felt a sense of emotional growth and strength from their supportive therapy. New mothers with PPD preferred individualized counseling, but stated once they felt better they would attend support groups with other new mothers experiencing PPD. There is a need for public awareness of the prevalence, symptoms, and resources available for PPD.
CHAPTER III

RESEARCH METHODOLOGY

Chapter III describes the research methodology that was used to evaluate new mothers, comparing participants who attended the “Bittie Baby and Me” (BB& M) support group series with those who choose not to attend. The investigator will discuss the research design, location, sampling size and methods used for this study. The validity and reliability of the EPDS questionnaire was addressed for this study.

Research Design

The investigator used a quasi-experimental design in this study. According to Experiment-Resources (2008), a quasi-experimental design involves selecting groups where a variable is tested, without using a pre-selection process. Usually the division between groups is done using a convenience sample. Burns and Grove (2005) explained the sample comprises participants who are simply available in a convenient way to the researcher. Participants were selected for either the control group or the experimental group. According to Trochim (2006), a comparison group is structured as a pretest-posttest randomized experiment and the groups are not selected by random design. Comparison groups are selected from the same population as the experimental group. These nonequivalent groups are two intact groups that are convenient to the investigator
to use for this study. Trochim explained the differences between these two groups are that the experimental group will attend a program and the comparison group will not.

In this study, the investigator administered the Edinburgh Postnatal Depression Scale (EPDS) questionnaire to new mothers one to two days postpartum and prior to discharge from the maternity unit. This included new mothers in both the experimental group and the control group. The experimental group consisted of new mothers who completed the “BB & M” support group series. The control group consisted of new mothers who chose not to attend the “BB & M” support group series. The EPDS was administered a second time to the new mothers who completed the “BB & M” support group series over six weeks (class 6). These new mothers completed the “BB & M” series at eight weeks postpartum. The EPDS questionnaire was administered a second time to non-participating new mothers at eight weeks postpartum. The investigator provided verbal and written instructions to the new mothers in the control group about the second EPDS questionnaire prior to discharge from the maternity unit. The second EPDS questionnaire and an ice-cream gift certificate were mailed at seven and one-half weeks postpartum. The EPDS questionnaires were completed and returned by eight weeks postpartum.

The independent variable was participation in the “BB & M” support group series taught by a perinatal registered nurse. New mothers selected to be either participants or non-participants. New mothers that attended the series were provided information on infant care and development, infant feedings, and ways to cope with the emotional, social, and physical transitions into parenthood. Each class is two hours in duration, scheduled weekly, and was offered to new mothers beginning at one to two
weeks postpartum. The series ran consecutively for six weeks. New mothers attended until they completed the six week series. Based on prior classes, an average of 12 to 20 new mothers typically have attended the “BB & M” support groups series.

The dependent variable was the results from the scores on the EPDS questionnaires for new mothers that either attended or did not attend the “BB & M” support group series. The extraneous variables, limitations, or areas of the study’s weakness were identified. Influencing factors included maternal age, number of children, education level, socioeconomic status, past depressive symptoms, health status, and cultural perspectives. The inability to answer the EPDS questionnaire or refusal to answer the second EPDS questionnaire at eighth weeks postpartum for either the control or experimental group could influence the results of this study. Limitations for this study included a small sample size and participants who only spoke English. Thirty-four new mothers were excluded from this study. Eight refused to be in the study and 12 that did not speak English. Fourteen participants in the control group answered the first EPDS questionnaire but did not return the second EPDS questionnaire.

Research Location and Setting

This study took place in a rural community in the Northern Sacramento Valley, California. The community population is approximately 87,000 in the city limits and 106,000 in the surrounding areas. Total births at this medical center hospital are approximately 120 to 150 births a month, totaling approximately 1400-1600 births a year. This hospital offers prenatal classes, lactation services and “BB & M” support group classes.
The “BB & M” support group is for new mothers and their babies from newborn to 12 weeks. The “BB & M” support group series are offered at an off site outreach center, approximately one mile from the hospital. The support groups were lead by knowledgeable nursing trained staff. The “BB & M” support group series were offered consecutively for six weeks. New mothers can start classes anytime during the series and continue until they have completed the six classes.

Sampling Method

The experimental group included new mothers who gave birth on the maternity unit who were one to two days postpartum and selected to attend the “BB & M” support group series. The information presented by a perinatal registered nurse at the “BB & M” support group series included: infant care, infant feedings, infant massage, choosing quality childcare, coping strategies, signs and symptoms of PPD. The investigator used a convenience sampling strategy for this population. The sample size for the experimental group was twenty-three participants.

The control group included new mothers who gave birth on the maternity unit and were one to two days postpartum. The investigator used a convenience sampling strategy for this population. The subjects (control group) who participated were added into the study until the appropriate sample size was obtained. The sample size for the control group was thirty-four participants.

The inclusion criteria for this study applied to both the experimental and control groups. Inclusion criteria are the characteristics a participant has in order to be part of a targeted population (Burns & Grove, 2005). New mothers (experimental and
control group) who met inclusion criteria delivered a full-term (36 to 42 weeks gestation) healthy infant on the maternity unit during the study. The infants showed no evidence of congenital abnormalities and were in the care of the mother. The new mothers had at least a junior high education and spoke English. New mothers who reported symptoms of depression in the past twelve months were excluded. Eight participants in the control group and three participants in the experimental group reported symptoms of depression greater than one year.

Human Subject Protection

Researchers and reviewers of research have an ethical responsibility to recognize and protect the rights of human subjects (Burns & Grove, 2005). These human rights are: the right to self-determination, the right to privacy, the right to anonymity and confidentiality, the right to fair treatment, and the right to protection from discomfort and harm.

The right to self-determination was protected by informing the participants verbally on the maternity unit the purpose of the study. The participants had a choice to participate or not to participate. They were informed they had the right to withdraw from the study at any time. All participants signed an informed consent to voluntarily participate (Appendix A). Participants were not coerced into participating or harmed if they did not participate in this study. There were not any excessive rewards for volunteering to participate in this study. Participants that completed the study received a small gift. New mothers that participated in the “BB & M” support group series chose a gift valued at one to five dollars in a basket containing infant and women items. New
mothers in the control group were mailed a two-dollar ice-cream certificate with their second EPDS questionnaire.

The right to privacy was protected by explaining informed consent to the participants. Informed consent was signed by the participants volunteering to participate in the study. The information collected at the beginning and at the end of the “BB & M” classes were coded in a way to ensure participants’ privacy. Their identities were not revealed in any publication that resulted from this study.

The right to autonomy and confidentiality was protected by giving each participant a code number instead of using their name. The master list of participants’ names, consents, and codes were kept separate from the data collected to protect participants’ anonymity. Data collected was placed in a locked file in the investigator’s office. The data collected was entered in the computer using the code numbers for identification. Approval from the Institutional Review Board (IRB) at California State University, Chico, and the hospital IRB was obtained prior to the collection of data.

The right to fair treatment was provided to all new mothers in the support group, whether they participated in the study or not. The investigator kept all appointments made with participants for this study and had an agreed upon time for the termination of this study.

The right to protection from discomfort and harm was provided by doing no harm or causing discomfort to the participants. The EPDS questionnaire was administered to participants at the hospital following delivery, in the last support group (experimental group) and at the new mothers’ home (control group) (Appendix B). Participants were informed that some of the questions may deal with their emotions and if
this made them uncomfortable, they could stop answering the questionnaire. If at any time the participant answered ‘yes’ to harming themselves or their baby they were immediately referred to their care provider and/or mental health care provider. All participants denied harming themselves or their infant. Therefore, no participants were referred to their care provider.

Data Collection

The maternity staff asked the new mothers on the maternity unit one to two days postpartum who met subject criteria if they would like to volunteer to participate in a study. At this time, the investigator explained the study and asked the new mother if she will attend the “BB & M” support group series. Those who attended the “BB & M” support group series were designated the experimental group. Those who chose not to attend the “BB & M” support group series were in the control group. This procedure continued until forty new mothers who met the criteria for either the experimental or control group agreed to participate in this study. The number of participants chosen for this study was based on consulting with a statistician at California State University, Chico.

Both the experimental and control group completed the informed consent form (Appendix A), the EPDS questionnaire at one to two days postpartum (Appendix B), a demographic questionnaire (Appendix C), and the new mothers information form (Appendix D). The EPDS questionnaire was adapted for this study by the investigator renaming the questionnaire to “Emotional Well-Being of New Mothers Questionnaire.” There were no other changes to the EPDS questionnaire. The investigator collected all
forms, questionnaires and evaluated for completeness. Uncompleted questionnaires were not included in this study (14 participants were excluded).

After seven and one-half weeks postpartum, the investigator mailed the new mothers in the control group a second EPDS questionnaire (Appendix B), a letter asking the new mother to complete this questionnaire by eight weeks postpartum (Appendix E) and a ice-cream gift certificate (valued at two dollars). A stamped self-addressed envelope was enclosed for the new mothers to mail the information back to the investigator within two to three days after receiving the forms.

The investigator attended the “BB & M” support group series offered to new mothers who had a baby between the ages of one week to eight weeks old. The investigator recorded attendance of the participants by having new mothers sign in weekly. The investigator tracked and recorded attendance of the new mothers that agreed to participate in this study. A second EPDS questionnaire (Appendix B) and new mothers information form (Appendix F) was administered to new mothers at the completion of the six week “BB & M” support group series. The second EPDS questionnaire (Appendix B) was administered to both the control and experimental group at eight weeks postpartum. The following question was added to the second EPDS: “Do you feel you had the support you needed in caring for you and your new baby?”

Data Collection Instruments

A data collection instrument utilized for this study was the Edinburgh Postnatal Depression Scale (EPDS) questionnaire that was administered to participants twice in both the experimental group and the control group. The EPDS is a ten-item self-
report screening instrument, designed and validated for postnatal use for identifying postpartum depression (PPD) symptoms (Cox et al., 1987). The mother checks one of four responses that best represented how she felt in the past week. The questionnaire can be completed in approximately five minutes or less. Each item is scored on a 4-point scale (0-3), receiving a minimum score of 0 and a maximum score of 30 (McVey & Tuohy, 2007). According to Cox and Holden (2003), EPDS scores are more reliable when mothers complete the EPDS without assistance from others.

According to Cox et al. (1987), a score over 12 is indicative of PPD among new mothers. Cox et al. suggested the cut off score of greater than 12 is most effective in confirming new mothers with depressive symptoms in the postpartum period who are English speaking. An EPDS score of greater than 12 does not necessarily indicate that new mothers have PPD. Nor does a score of 11 indicate that new mothers do not experience depression symptoms, especially if the care provider has identified symptoms for PPD (McVey & Tuohy, 2007). The use of the EPDS questionnaire along with the care providers’ comprehensive assessment could help to determine if new mothers experience symptoms of PPD (McVey & Tuohy, 2007). According to Cox et al., “users may reproduce the Edinburgh Postnatal Depression Scale questionnaire without further permission providing they respect copyright by quoting the names of the authors, the title and the source of the paper in all reproduced copies” (p. 786). Appendix B provides instructions on how to use and score the EPDS questionnaire. The investigator was denied permission to include the EPDS questionnaire to this study for electronic publication.
EPDS was developed to assist care providers with a screening tool to detect postpartum depression (PPD) without confounding somatic items (such as weight loss, insomnia, low energy), which are common after childbirth (Moses-Kolko & Roth, 2004). The factors assessed are the ability to laugh, anticipate pleasure, unnecessary blaming of oneself, worry and anxiety, fear and panic, with several more questions related to how they are feeling (Moses-Kolko & Roth, 2004). The EPDS could identify if the new mother’s PPD symptoms are improving or worsening and could assist with the intervention strategies needed to assist them in their treatment plan (McVey & Tuohy, 2007).

EPDS scores for each client were documented each time participants had completed the questionnaire. The investigator added the results of the EPDS scores. A mother who had a score of 12 or over, or checks self harm on the questionnaire was referred immediately to a care provider and/or mental health care provider. The investigator compared the results of the two completed EPDS questionnaires from both the participants in the experimental group and the control group.

A demographic questionnaire was administered to new mothers (experimental and control group) on the maternity unit at one to two days postpartum. The demographic data collection included age, education, number of children, income, employment, ethnicity, maternity leave, a past medical history of PPD or depression, available support person, and any complications during their pregnancy, delivery, or postpartum (Appendix C).

The investigator designed four forms that were administered to new mothers in both the control group and the experimental group. The informed consent was given to
all participants for this study (Appendix A). The second form described demographic information (Appendix C). The third form identified new mothers’ addresses and provided them a private code number (Appendix D). All participants in the control and experimental group completed these three forms in the hospital at one to two days postpartum. The fourth form was a questionnaire asking if the classes were beneficial. This form was administered to new mothers at eight weeks postpartum that completed the “BB & M” support group series (Appendix F).

Data Analysis

The investigator used frequency distributions and means to analyze the demographic data collected from the control group and the experimental group. According to Burns and Grove (2005), the independent t-test is used to analyze the statistical differences between two samples. The data received from the EPDS questionnaire from both sample groups were analyzed using an independent and paired t-test.

An independent t-test was used to compare the EPDS pretest scores between the control group and the experimental group. The independent t-test was also used to compare the mean difference scores (EPDS pretest scores minus the posttest scores) between the control group and the experimental group. The mean scores were compared between the two sample groups using the EPDS pretest and posttest differences. The results were statistically significant, indicating higher EPDS mean scores for the experimental group. A paired t-test was used to compare the pretest and posttest mean scores separately for the control and experimental groups. The investigator determined
there was a statistical difference in the mean scores between the new mothers who completed the “BB & M” support group series and the new mothers that did not attend the classes.

Validity and Reliability

According to Moses-Kolko and Roth (2004),

the EPDS was originally validated and found to have 86% sensitivity and 78% specificity when a cut off score of more than 12 was used to estimated postpartum major depression. The sensitivity can be increased to 96% with a cut off score of more than nine. (p. 183)

According to Boyd, Le, and Somberg (2005) the EPDS questionnaire was used in several countries and it is translated into many languages, including Dutch, Chinese, Spanish, Finnish, Portuguese, Bengali, Italian, Arabic, Sweden, and Turkish.

    The use of EPDS in several countries and in many languages demonstrates moderate to good reliability properties. Boyd et al. (2005) explained the “test-retest reliabilities are in the good to moderate range” (p. 147). Eberhard-Gran, Eskild, Tambs, Opjordsmone, and Samuelson (2001) concluded that when the “EPDS was applied in a general population of postpartum women with a prevalence of 13%, the positive predictive value for depression is probably less than 50%, with a large proportion of false positives” (p. 248). Boyd et al. stated studies that selected women based on a prior cutoff score on the EPDS usually had a higher prevalence for PPD.

According to Cox et al. (1987), the EPDS questionnaire used by mothers to self-report PPD had well established sensitivity and validity, and was sensitive to changes in the severity of depression over a period of time. The scale was acceptable for childbearing women and was able to be completed in less than five minutes. The EPDS
had a simple method to scoring that assisted the health care providers in the early
detection of mothers with PPD (Cox et al., 1987) The data collected suggested that
sensitivity and specificity of the scale could be increased if the mothers completed the
EPDS questionnaire individually (Cox et al., 1987). Health providers recognized the
advantage using the EPDS in detecting mothers with PPD. Cox et al. suggested the EPDS
questionnaire could be used in the community setting for treatment studies of mothers
with of PPD.

Conclusion

EPDS is a screening tool used by health care providers in the early detection
of new mothers with postpartum depression. The EPDS questionnaire was administered
to new mothers at one to two days postpartum and again at eighth weeks postpartum to
both the control group and the experimental group. The data from this study are presented
in Chapter IV.
CHAPTER IV

INTERPRETATION OF THE RESULTS

The purpose of this study was to evaluate whether new mothers who completed the “BB & M” series scored lower on the EPDS than those who did not complete or attend the support group series. The investigator used a quasi-experimental design in this study. The investigator administered the Edinburgh Postnatal Depression Scale (EPDS) questionnaire to new mothers one to two days postpartum and at eight weeks postpartum.

Data were collected between August 24 and November 13, 2009. Fifty-seven eligible participants completed the informed consent, demographic information, and the EPDS questionnaire in the hospital at one to two days postpartum. There were 34 new mothers in the control group and 23 in the experimental group. Thirty-four participants were excluded from this study. Eight new mothers declined to be in the study, 12 did not speak English, and the remaining 14 did not return the second EPDS questionnaire.

Forty-eight new mothers answered the first EPDS questionnaire at one to two days postpartum in the hospital. The control group was mailed a letter, the EPDS questionnaire, and an ice-cream gift certificate at seven weeks postpartum. Thirty-four of the 48 in the control group returned the EPDS questionnaire at eight weeks postpartum. The investigator was unable to contact the remaining fourteen. The completion rate for the control group was 71 percent.
Twenty-three new mothers in the experimental group were given the EPDS and the new mother information form in the last “BB & M” class (class 6). Upon completion of the “BB & M” class series the new mothers were able to choose a gift valued at one to five dollars in a basket containing infant and women items. The completion rate for the experimental group was 100%.

Sample Characteristics

Demographic data are displayed for the control group and the experimental group in Table 1. Data consist of participant age, educational level, family income, ethnicity, marital status, and number of children.

The ages of the participants in the control group ranged from 17 to 42 years with a mean age of 29. The ages of the participants in the experimental group ranged from 23 to 33 years with a mean age of 29. The educational level ranged from some high school to post graduate work for the control group. The educational level ranged from high school graduate to post graduate work for the experimental group. The mean level of education in the control group was 14 years and in the experimental group was 15 years. The mean family income level was between $40,100-60,000 in both the control group and the experimental group.

Twenty-four participants in the control group were Caucasian (70.6%), with nine Hispanic (26.5%), and one Asian. Twenty-one participants in the experimental group were Caucasian (91.3%) with one Hispanic and one Asian. Twenty-five (73.5%) participants in the control group were married. Nineteen (82.6 %) participants in the experimental group were married. The number of children living at home (excluding
Table 1

**Demographic Characteristics**

<table>
<thead>
<tr>
<th>Characteristics, Range</th>
<th>Control Group (n=34)</th>
<th>Experimental Group (n=23)</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Percentages (n)</td>
<td>Percentages (n)</td>
</tr>
<tr>
<td>Age (years)</td>
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<tr>
<td>&lt;25</td>
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<td>25-30</td>
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<td>30-35</td>
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<td>43.5 (10)</td>
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<td>&gt; 35</td>
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<tr>
<td>Education</td>
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<td>High school or less</td>
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</tr>
<tr>
<td>Some college</td>
<td>35.3 (12)</td>
<td>30.4 (7)</td>
</tr>
<tr>
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<td>17.4 (4)</td>
</tr>
<tr>
<td>Family Income</td>
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<td></td>
</tr>
<tr>
<td>&lt;20,000</td>
<td>26.5 (9)</td>
<td>17.4 (4)</td>
</tr>
<tr>
<td>20,000-40,000</td>
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<td>4.4 (1)</td>
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</tr>
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<td>Hispanic</td>
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<td>4.4 (1)</td>
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<td>82.6 (19)</td>
</tr>
<tr>
<td>Single</td>
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<td>17.4 (4)</td>
</tr>
<tr>
<td>Number children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>23.5 (8)</td>
<td>69.6 (16)</td>
</tr>
<tr>
<td>One child</td>
<td>35.3 (12)</td>
<td>26.1 (6)</td>
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<tr>
<td>More than two children</td>
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<td>4.4 (1)</td>
</tr>
</tbody>
</table>
present baby) for the control group was between 0 to 4 children with a mean of 1.25. The number of children living at home (excluding present baby) for the experimental group was between 0 to 2 children with a mean of 0.35.

The control group and the experimental group were compared in terms of the length of their maternity leave as indicated in Table 2. Three (8.8%) participants in the control group and two (8.7%) participants in the experimental group planned to return to work between two to six weeks postpartum. Four (11.8%) participants in the control group and four (17.4%) participants in the experimental group planned to return to work between eight to ten weeks postpartum. Thirteen (38.2%) participants in the control group and ten (43.5%) in the experimental group planned to return to work between 12 to 16 weeks postpartum. Two (5.9%) participants in the control group and four (17.4%)
participants in the experimental group planned to return to work between six months to one year postpartum. The remaining 12 (35.3%) participants in the control group and three (13%) in the experimental group do not plan to return to work. The participants in the control group were able to stay at home longer with their infants than the participants in the experimental group.

Both the control group and the experimental group were asked the following questions: “Have you ever been diagnosed with postpartum depression or depression prior to this pregnancy? If you answered yes, how long ago were you diagnosed with this mood disorder?” Twenty-six (76.5%) participants in the control group and 20 (87%) in the experimental group denied PPD or depression. Two participants (5.9%) experienced PPD and six (17.6%) experienced depression in the control group. One (4.4%) participant experienced PPD and two (8.7%) experienced depression in the experimental group.

Three participants (8.8%) in the control group and one (4.4%) participant in the experimental group experienced PPD over one year but less than two years. Two participants (5.9%) in the control group and two (8.7%) participants in the experimental group experienced depression between five and ten years. Three participants (8.8%) in the control group experienced depression over ten years (see Table 3).

Twenty-nine (85.3%) participants in the control group and 20 (90%) in the experimental group stated they had support with this baby. Two (5.9%) in the control group and two (8.7%) in the experimental group did not have the support they needed with this baby. Three (8.8%) in the control group and one (4.4%) in the experimental group received support sometimes with this baby. Many of the participants in both groups had support from their husbands/ significant others and family (see Table 4).
Table 3

Postpartum Depression/Depression

<table>
<thead>
<tr>
<th>Postpartum depression (PPD) or depression in the past</th>
<th>Control Group (n=34)</th>
<th>Experimental Group (n=23)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>76.5 (26)</td>
<td>87.0 (20)</td>
</tr>
<tr>
<td>PPD</td>
<td>5.9 (2)</td>
<td>4.4 (1)</td>
</tr>
<tr>
<td>Depression</td>
<td>17.6 (6)</td>
<td>8.70 (2)</td>
</tr>
</tbody>
</table>

How long ago did you experience above?

| >1 year <2 years (PPD) | 8.8 (3) | 4.4 (1) |
| 5-10 years (depression) | 5.9 (2) | 8.7 (2) |
| >10 years (depression)  | 8.8 (3) | 0       |

Twenty-six (76.5%) participants of the control group and 17 (73.2%) of the experimental group did not have any complications during their pregnancy, labor and delivery, or postpartum during this pregnancy. Eight (23.5%) participants of the control group and six (26.1%) of the experimental group had complications during this pregnancy (see Table 4). Complications described by the new mothers during this pregnancy were migraines, hyperemesis, elevated blood pressure, gestational diabetes mellitus, and bleeding in the first trimester. Complications described during this labor and delivery consisted of cesarean section due to either fetal distress, failure to progress, or a
Table 4

Support Person/Complications During Pregnancy, Delivery, or Postpartum?

<table>
<thead>
<tr>
<th></th>
<th>Control Group (n= 34)</th>
<th>Experimental Group (n=23)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percentages (n)</td>
<td>Percentages (n)</td>
</tr>
<tr>
<td>Do you have a support person to assist you at home with your new baby?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>85.3 (29)</td>
<td>90.0 (20)</td>
</tr>
<tr>
<td>No</td>
<td>5.9 (2)</td>
<td>8.7 (2)</td>
</tr>
<tr>
<td>Sometimes</td>
<td>8.8 (3)</td>
<td>4.4 (1)</td>
</tr>
<tr>
<td>Who is your support person?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Husband/ significant other only</td>
<td>64.7 (22)</td>
<td>52.2 (12)</td>
</tr>
<tr>
<td>None</td>
<td>0</td>
<td>4.4 (1)</td>
</tr>
<tr>
<td>Husband/significant other &amp; family</td>
<td>35.3 (12)</td>
<td>43.5 (10)</td>
</tr>
<tr>
<td>Complications during pregnancy, delivery, or postpartum?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>23.5 (8)</td>
<td>26.1 (6)</td>
</tr>
<tr>
<td>No</td>
<td>76.5 (26)</td>
<td>73.2 (17)</td>
</tr>
</tbody>
</table>

breech presentation. Other complications during this pregnancy included a difficult labor, episiotomy, a vacuum delivery, and bleeding after delivery.

Each new mother completed the EPDS questionnaire while in the hospital at one to two days postpartum and completed the second EPDS questionnaire at eight weeks postpartum. The control group was mailed a second EPDS questionnaire at seven and one
half weeks to their home to complete at eight weeks and return to the investigator. The investigator administered the second EPDS questionnaire to the experimental group at the sixth “BB & M” class.

Thirty-four (71%) participants in the control group returned their second EPDS questionnaire. Fourteen (29%) did not return the second EPDS questionnaire. Twenty-three (100%) of the participants from the experimental group completed the classes and the second EPDS questionnaire. The EPDS scores for both the control group and the experimental group are presented in Table 5 and Table 6.

Table 5

*Results of the Edinburgh Postnatal Depression Scale (EPDS) Questionnaire Control Group (n=34) (Total Scores 1-30 Points)*

<table>
<thead>
<tr>
<th>Total Scores</th>
<th>EPDS # 1 at 1-2days postpartum</th>
<th>Percentage (n)</th>
<th>EPDS # 2 at 8 weeks postpartum</th>
<th>Percentage (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>76.5 (26)</td>
<td>41.7 (20)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-10</td>
<td>17.6 (6)</td>
<td>18.8 (9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11-15</td>
<td>5.9 (2)</td>
<td>4.2 (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-20</td>
<td>0</td>
<td>4.2 (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-25</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26-30</td>
<td>0</td>
<td>2.1 (1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Two (5.9 %) participants in the control group and four (17.4%) participants in the experimental group had EPDS scores over 11, at one to two days postpartum. Five
Table 6

Results of the Edinburgh Postnatal Depression Scale (EPDS) Questionnaire
Experimental Group (n= 23) (Total Scores 1-30 Points)

<table>
<thead>
<tr>
<th>EPDS # 1 at 1-2days postpartum</th>
<th>EPDS # 2 at 8 weeks postpartum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Scores</td>
<td>Percentage (n)</td>
</tr>
<tr>
<td>0-5</td>
<td>39.1 (9)</td>
</tr>
<tr>
<td>6-10</td>
<td>43.5 (10)</td>
</tr>
<tr>
<td>11-15</td>
<td>13.0 (3)</td>
</tr>
<tr>
<td>16-20</td>
<td>4.4 (1)</td>
</tr>
<tr>
<td>20-30</td>
<td>0</td>
</tr>
</tbody>
</table>

(14.7%) participants in the control group and no participants in the experimental group had EPDS scores over 11, at eight weeks postpartum (Table 6).

An EPDS score of greater than 12 does not necessarily indicate that new mothers have PPD. Nor does a score of 11 indicate that new mothers do not experience depressive symptoms. The EPDS questionnaire is a tool used to evaluate if new mothers are at risk for PPD.

The following question was added to the second EPDS for the participants to answer: “Do you feel you had the support you needed in caring for you and your new baby?” Many of the participants believed they had support in caring for their baby. Twenty-six (76.5 %) participants in the control group and twenty-two (95.7%) in the experimental group stated they had support with the new baby. Three (8.8%) in the
control group did not have the support they needed. Five (14.7\%) in the control group and one (4.4\%) in the experimental group received some support (see Table 7).

Table 7

*Mothers Perception for Receiving Support*

<table>
<thead>
<tr>
<th></th>
<th>Control Group (n= 34)</th>
<th>Experimental Group (n=23)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you feel you had the support you needed in caring for you and your new baby?</td>
<td>Percentages (n)</td>
<td>Percentages (n)</td>
</tr>
<tr>
<td>Yes</td>
<td>76.5 (26)</td>
<td>95.7 (22)</td>
</tr>
<tr>
<td>No</td>
<td>8.8 (3)</td>
<td>0</td>
</tr>
<tr>
<td>Sometimes</td>
<td>14.7 (5)</td>
<td>4.4 (1)</td>
</tr>
</tbody>
</table>

Selective answers given by participants in the experimental group included the following: “My husband was very supportive.” “My husband is gone a lot during the week for work. So at times I feel like a single parent.” “Yes, very much from my boyfriend and my mom.” “I’m getting more support and feeling not so alone. I have an awesome hubby and very supportive friends and family.”

Selective answers given by participants in the control group included the following: “es, I had wonderful support beginning in the hospital and continued at home with my family and friends. Even with great support it was a difficult time, but it is getting easier everyday.” “I admit the first four weeks was a little draining…getting used
to two kids, but all are settling in now. I had to remind myself how to mother an infant again. I’m tired, emotional, and stressed sometimes, but what mother isn’t.” “Yes definitely! My family has been a huge help and a great support system. I feel very blessed.” “Not as much, but then again, it is my third baby. We just do what we can when we can.” “The childbirth classes and my delivery at the hospital was a great experience. My doctor was excellent and my husband is amazing. I love being a mom. I also have very supportive family and friends.” “My husband is very supportive and helps with the baby. We both have enjoyed becoming parents.”

The participants in the experimental group received an additional questionnaire after completing all six classes of the “BB&M” (see Appendix F). All 23 participants attended all six classes in the series and confirmed the “BB&M” classes were helpful. The participants confirmed the “BB&M” classes met their expectations. Selective answers given by participants in the experimental group included the following: “The classes exceeded my expectations.” “I couldn’t have managed without the classes.” “I loved the support I received from the instructor and other mothers in the class.” “Many of my questions and concerns have been answered.” “The classes were helpful and supportive.” “I loved the classes.” “The classes were very informative.”

Analysis of the EPDS Scores

A paired t-test was used to compare the EPDS scores at one to two days postpartum to eight weeks. The paired t-test determined the significance of the results of the EPDS questionnaire for new mothers that completed the “BB & M” series (experimental group) and those that did not attend the classes (control group). Paired t-
tests compared the pretest and posttest means separately for the control and experimental groups (see Table 8). The results for the control group confirmed there were no differences between the pretest and posttest EPDS scores (with a $p$-value of 0.16). The test results for the experimental group revealed lower EPDS posttest scores compared to their EPDS pretest scores. The test results were statistically significant (with a $p$-value of 0.0001).

The EPDS mean scores, standard errors (SE), and the probability ($p$-values) for both the control group and the experimental group are presented in Tables 8, 9, 10, and 11.

An independent t-test was used to compare the mean difference scores (EPDS pretest scores minus the posttest scores) between the control group and the experimental group (see Table 9). The test results showed a statistically significant difference between the mean difference scores for the control and the experimental groups (with a $p$-value of 0.001). The control group had lower EPDS pretest scores at one to two days postpartum and higher EPDS posttest scores at eight weeks postpartum. The experimental group had

Table 8

*Paired Differences Between EPDS Pretest and Posttest Scores*

<table>
<thead>
<tr>
<th>Group</th>
<th>Number</th>
<th>Mean</th>
<th>SE</th>
<th>$p$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>34</td>
<td>-1.29</td>
<td>.899</td>
<td>0.16</td>
</tr>
<tr>
<td>Experimental</td>
<td>23</td>
<td>2.87</td>
<td>.597</td>
<td>0.0001*</td>
</tr>
</tbody>
</table>

*Statistically significant.*
### Table 9

*Independent T-test Comparing the Mean Differences*

<table>
<thead>
<tr>
<th>Group</th>
<th>Number</th>
<th>Mean</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>34</td>
<td>1.29</td>
<td>.77</td>
</tr>
<tr>
<td>Experimental</td>
<td>23</td>
<td>2.87</td>
<td>.93</td>
</tr>
</tbody>
</table>

\[p\text{-value}=0.001^*\]

*Statistically significant.

### Table 10

*EPDS Scores of New Mothers in Both Groups at One to Two Days Postpartum*

<table>
<thead>
<tr>
<th>Group</th>
<th>Number</th>
<th>Mean</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>34</td>
<td>4.15</td>
<td>.68</td>
</tr>
<tr>
<td>Experimental</td>
<td>23</td>
<td>7.30</td>
<td>.90</td>
</tr>
</tbody>
</table>

\[p\text{-value}=0.048^*\]

*Statistically significant.*
Table 11

**EPDS Scores of New Mothers in Both Groups at Eight Weeks Postpartum**

<table>
<thead>
<tr>
<th>Group</th>
<th>Number</th>
<th>Mean</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>34</td>
<td>5.44</td>
<td>.88</td>
</tr>
<tr>
<td>Experimental</td>
<td>23</td>
<td>4.43</td>
<td>1.1</td>
</tr>
</tbody>
</table>

*p*-value=0.047*

*Not statistically significant.

higher EPDS pretest scores at one to two days postpartum and had lower EPDS posttest scores at eight weeks postpartum.

Additionally, an independent t-test was performed to compare the EPDS pretest scores between the control group and the experimental group. Table 10 shows the results were statistically significant, indicating higher EPDS mean scores for the experimental group (with a *p*-value of 0.048). The control group’s EPDS mean scores were lower at one to two days postpartum. The experimental group’s mean scores were higher at one to two days postpartum. The new mothers in the control group had experienced less depression at one to two days postpartum than the new mothers in the experimental group.

According to the results at eight weeks postpartum, the new mothers in the experimental group had lower EPDS scores than the new mothers in the control group. The results from the EPDS questionnaire for the new mothers in the control group
showed higher EPDS scores at eight weeks postpartum than they previously had at one to two days postpartum.

Finally, an independent t-test was used to compare the EPDS posttest scores between the control and the experimental groups at eight weeks postpartum. Table 11 shows the test results were not significantly different (with a \( p \)-value of 0.47). The results showed little difference between the control and the experimental groups’ mean scores at eight weeks postpartum. However, the results of the paired t-test showed the experimental group had lower EPDS scores at eight weeks postpartum than the control group as shown in Table 8. The new mothers in the control group had higher EPDS scores that could indicate an increased risk for PPD.

Conclusion

The test results from the EPDS questionnaire showed that the new mothers in the experimental group had increased risk for PPD at one to two days postpartum. The new mothers in the control group had a lower risk for PPD at one to two days postpartum. At eight weeks postpartum, the new mothers’ EPDS scores increased for the control group and decreased for the experimental group. New mothers with an EPDS score greater than 12 are more likely to experience PPD.
CHAPTER V

REFLECTIONS, LIMITATIONS,
IMPLICATIONS, SUMMARY
AND RECOMMENDATIONS

Reflections on the Findings

The purpose of this study was to examine the effect of a postpartum support group for new mothers, on postpartum depression. The investigator used a quasi-experimental design and a convenience sampling strategy for this study. The Edinburgh Postnatal Depression Scale (EPDS) questionnaire was administered to new mothers in the control and experimental groups at one to two days postpartum and at eight weeks postpartum. The experimental group consisted of new mothers who completed the “BB & M” support group series. The sample size for the experimental group was twenty-three participants. The control group consisted of new mothers who chose not to attend the “BB & M” support group series. The sample size for the control group was 34 participants.

The EPDS questionnaire was administered a second time to the new mothers in both groups at eight weeks postpartum. Twenty-three participants in the experimental group completed the second EPDS questionnaire as well as the “BB & M” support group series. The completion rate for the experimental group was 100%. Thirty-four participants in the control group completed the second EPDS questionnaire. Fourteen
participants in the control group did not complete the second EPDS questionnaire. The completion rate for the control group was 71%.

The data received from the EPDS questionnaire from both sample groups were analyzed using an independent and paired t-test. An independent t-test was used to compare the EPDS pretest scores between the control group and the experimental group. The independent t-test was also used to compare the mean difference scores (EPDS pretest scores minus the posttest scores) between the control group and the experimental group. A paired t-test was used to compare the pretest and posttest mean scores separately for the control and experimental groups. The investigator determined there was a statistical difference in the mean scores between the new mothers who completed the “BB & M” support group series and the new mothers that did not attend the classes. The investigator’s findings from this study indicate that new mothers who completed the “BB & M” support group series had lower EPDS scores than those who did not attend the series.

There is a possibility the new mothers that scored higher on the EPDS questionnaire at one to two days postpartum anticipated the need for extra support after the birth of their baby. The new mothers from the experimental group may have chosen to attend the “BB & M” classes to get the support they needed to assist them with caring for their new baby. New mothers who participated and completed the “BB & M” series stated the classes were helpful, supportive, and exceeded their expectations. The participants felt the instructor and other new mothers in the class supported them. According to Letourneau et al. (2007), new mothers wanted the facilitator of the support group to be knowledgeable and caring. The participants believed the instructor was
knowledgeable and compassionate about the information she presented in the “BB & M” classes.

New mothers in the experimental group concluded the classes were informative and recommended new mothers to attend the “BB & M” classes. Beck (2006) strongly recommended support groups for new mothers. Beck stated that support groups provided hope for new mothers who might have experienced PPD. According to Letourneau et al. (2007), new mothers who liked attending support groups often did not want a set schedule of topics to discuss and wanted the support from other new mothers.

The new mothers in this experimental group liked the idea of having assigned topics weekly. They expressed that the information provided was beneficial but the support they received from each other was even more important. Many of the new mothers in this experimental group plan to form playgroups and friendships.

Craig et al. (2005) studied the impact a therapeutic group program had on women with PPD. The researchers administered the EPDS questionnaire and the Hospital Anxiety and Depression Scale (HADS), before and after the participants attended the program. The EPDS and HADS scores decreased with each therapeutic session these women attended. Group interventions had been a positive impact on women with PPD because they encouraged informational and emotional support.

The “BB & M” classes had scheduled topics that ran for six consecutive weeks. The RN perinatal educator at the “BB & M” classes presented weekly topics. For the first hour, the RN perinatal nurse discussed the scheduled topic for that week. During the “BB & M” classes, the RN encouraged new mothers to participate in the discussion. The last thirty minutes of the class new mothers asked questions and discussed infant
concerns with each other. According to Letourneau et al. (2007), new mothers that attended support groups wanted to meet with other new mothers to discuss similar experiences.

Limitations of the Study

Limitations were the small sample size for the experimental group and the short length of the “BB & M” classes (6 classes). Other limitations of this study included using a convenience sampling strategy. Further studies could consist of a larger sample size, using a random sampling strategy, and increasing the length of the “BB & M” classes. This study was limited to one rural Northern California hospital. Most of the participants for this study consisted of white, educated, married, and middle class new mothers. It would be beneficial to replicate this study by using a more diverse population. It would be useful to include other hospitals in the Northern California region. Northern California has an increasing population of African American, American Indian, Asian, Hispanic, Middle Eastern, and Hmong. By including other Northern California hospitals, the number of new mothers of all ethnic backgrounds and socio-economic levels could be increased.

New mothers were asked at one to two days postpartum if they could attend the “BB & M” classes. Several new mothers were interested in attending the classes but could not due to a lack of childcare for their other children at home. The new mothers suggested that if childcare was provided for their other children they could have attended the classes. However, since childcare was not provided, mothers were unable to attend the classes. In another study, women also described childcare as a reason for not
participating or completing their therapy sessions (Ugarriza & Schmidt, 2006). In the future, having childcare provided by the hospital could be beneficial to new mothers and may have allowed them to attend the “BB& M” classes.

Implications for Nursing Practice

According to Letourneau et al. (2007), new mothers stated it was helpful to have a supportive spouse for emotional support and to help them cope better with PPD. Most new mothers in this study from both the control and experimental groups identified their spouse or boyfriend, mothers, and families as key sources for support. Some new mothers in this study reported they did not receive adequate support because their spouse was unaware of what to do for someone experiencing symptoms of postpartum depression.

According to Ugarriza and Schmidt (2006), most new mothers attended childbirth classes prior to the birth of their baby. During this time, many topics were discussed. The authors stated there needed to be more information presented on the signs and symptoms of PPD. Ugarriza and Schmidt recommended that women should receive information on PPD before the birth of their baby. This information could assist new mothers and their families in identifying signs and symptoms of PPD. The perinatal nurse educator who facilitated the “BB & M” classes explained that new mothers received information on PPD during their childbirth classes at this hospital. All participants in the experimental group stated they had taken their childbirth classes at this hospital and received information on PPD.
In this study, the investigator used the EPDS questionnaire to screen new mothers for depressive symptoms. The EPDS questionnaire can assist new mothers in communicating their feelings to their care provider and/or nurse. Nurses should routinely evaluate all new mothers for PPD and identify those that may need further evaluation and/or support. Nurses may need to assist new mothers that either have low literacy levels, or do not speak English, with the questions on the EPDS questionnaire. Nurses who provide care to young children and/or their mothers should be aware of the signs and symptoms of PPD.

Implications for Nursing Education

According to Letourneau et al. (2007), new mothers suggested a need for increasing public awareness on the incidence, signs and symptoms, and treatment options available for women experiencing PPD. This information was provided in the “BB & M” classes offered to new mothers. The participants in this study were also given a “Going Home” booklet from the hospital after the delivery of their baby. This booklet provided new mothers written information on mother and infant care, as well as the signs and symptoms of PPD. The new mothers in the experimental group received PPD information during their childbirth classes, during their hospitalization, and at the “BB & M” classes.

Nurses need to be aware of signs and symptoms of PPD for new mothers during the first year after childbirth (Beck, 2006). Having more education on PPD will allow nurses and instructors to help new couples cope with fears and anxiety of this mood disorder. In this study, the participants in both the experimental and control group were
offered information regarding PPD during their hospitalization. All new mothers at this hospital were provided written and verbal information on PPD in their own language.

Care providers need to be concerned about the incidence of PPD and recognize the signs and symptoms of this disorder (Ugarriza & Schmidt, 2006). They should be aware of resources and/or treatment options available to new mothers that may experience PPD. According to Letourneau et al. (2007), new mothers wanted their care providers to validate their symptoms, offer emotional support, and provide information to decrease their feelings of embarrassment.

In this study, maternity nurses encouraged new mothers to attend the “BB & M” classes offered after discharge from the hospital. The results of this study suggest that support groups helped new mothers at risk for PPD. The majority of these new mothers stated their families provided them the support they needed in caring for their new baby. According to Lau & Wong (2008), a new mother’s perception of the availability of social support decreased her incidence of PPD. Social networks can provide new mothers emotional and functional support. Nurses are instrumental in teaching new mothers and their families about the signs and symptoms of PPD, normalizing their feelings, and encouraging support methods to help decrease their fears.

Implications for Nursing Research

Is there a possibility the hospital could implement alternative therapies for new mothers who are unable to attend the “BB & M” classes? According to Ugarriza and Schmidt (2006), development and implementation of alternative support systems for new mothers could be beneficial. One suggestion could be telephone support. According to
Ugartiza and Schmidt, telephone support had a positive impact to those clients that were homebound and unable to attend support classes. An experienced health professional via telephone conducted cognitive-behavioral therapy, relaxation techniques, and problem solving strategies once a week (Ugartiza & Schmidt, 2006). The mothers in the study spoke with the same therapist each week. The results showed decreased depression scores after the mothers completed their sessions (Ugartiza & Schmidt, 2006). It may be beneficial if therapists or maternity nurses could provide telephone support to new mothers that could not attend the “BB & M” support group series.

Additional research should be conducted to determine if telephone support could decrease EPDS scores for new mothers at risk for PPD. This research could compare the new mothers’ EPDS scores that have attended the “Bittie Baby & Me” classes and those that have weekly telephone support. The nurse facilitator of the “BB & M” classes could lead the telephone support. The information provided could be on the same topics that were discussed in the “BB & M” classes.

The investigator recommends further study of support groups offered over a longer period that might influence EPDS scores for new mothers at risk for PPD. Once the new mothers have completed the “Bittie Baby and Me” six class series, they have an opportunity to attend additional classes. This same hospital offers a “Bigger Baby and Me” support group series that runs for another 12 weeks. Further research could evaluate the EPDS scores for new mothers that complete the next 12 class series. The EPDS questionnaire could be given to the new mothers after they complete both the “Bittie Baby & Me” and the “Bigger Baby and Me” support group series. This study could
evaluate whether new mothers that attended both the support group series scored lower on the EPDS questionnaire than those who did not attend both series.

Summary, Conclusion, and Recommendations

Seventy-one new mothers were given the first EPDS questionnaire at the hospital at one to two days postpartum. Twenty-three new mothers chose to attend the “BB & M” classes for six weeks (experimental group). Forty-eight new mothers (control group) completed the first EPDS questionnaire at one to two days postpartum. Twenty-three new mothers from the experimental group and 34 new mothers from the control group completed the second EPDS questionnaire at eight weeks postpartum.

The EPDS pretest scores and posttest scores were compared between the control group and the experimental group. The new mothers in the control group had a lower EPDS pretest score at one to two days postpartum and higher EPDS posttest scores at eight weeks postpartum. The new mothers in the experimental group had higher EPDS pretest score at one to two days postpartum and had lower EPDS posttest scores at eight weeks. New mothers in the experimental group that attended the “BB & M” classes had lower EPDS scores after completing the “BB & M” series than the new mothers in the control that did not attend the classes.

Based on the data from this study, the investigator concluded that the “BB & M” classes might have helped new mothers decrease their risks for PPD. At eight weeks postpartum, five participants in the control group and zero participants in the experimental group had EPDS scores over 11. Participants in both groups denied any feelings of harming themselves or their baby. An EPDS score of greater than 12 does not
necessarily indicate that new mothers have PPD. Nor does a score of 11 indicate that new mothers do not experience depressive symptoms. The care provider needs to perform a clinical assessment on the new mother to confirm the diagnosis of PPD (Cox et al., 1987). In this study, participants with EPDS scores over 11 were referred to their care provider for further evaluation.

New mothers that attended the “BB & M” support group series were provided educational information on infant care, parenting skills, and emotional support. A knowledgeable and compassionate perinatal nurse educator facilitated the “BB & M” classes. The new mothers in the experimental group who attended the “BB & M” support group series felt a sense of emotional growth and support. These new mothers believed they developed trusting relationships with other new mothers in the class. The new mothers confirmed the classes were exceptional and exceeded their expectations. Several new mothers stated, “The classes were helpful and supportive.”

According to Letourneau et al. (2007), new mothers felt they would have received more support from their family, friends, and care providers if there were increased public awareness of PPD. In this study, participants were asked if they were given the support they needed in caring for their new babies. Many of the participants believed they had received the required level of support, but a minority of the participants believed that they did not have the appropriate support required to provide proper care. Further research is recommended to determine what influences a support person(s) may have on new mothers that may be at risk for PPD.

Maternity nurses share the joy experienced by new mothers after the birth of their baby. According to Mercer (1977), maternity nurses are able to assess the mother’s
mood and affect as well as the interactions between the mother and her baby during the postpartum period. Roy and Roberts (1981) emphasized the need for nurses to evaluate how well the new mother is adapting to her role and whether there is a need to intervene to promote adaptation. According to Roy’s Adaptation Model and Mercer’s Theory, nurses are responsible for promoting health, providing support, and collecting data that will assist them with identifying new mothers at risk for PPD (Andrews & Roy, 1986; Mercer, 1977; Mercer, 1990). Nurses play a vital role in screening new mothers for PPD, as well as providing interventions and treatment for this mood disorder. Nurses need to make appropriate referrals to assist new mothers on the right path to recovery.
REFERENCES
REFERENCES


doi:10.1080/0264830500031360


doi:10.1111/j.1552-6356.2006.00071.x


APPENDIX A
CONSENT TO PARTICIPATE IN A
RESEARCH STUDY

STUDY TITLE: POSTPARTUM FOLLOW UP STUDY

Principal Investigator: Jaime Laffins RN, BSN

This Consent Form may contain words that you do not understand. You should ask the investigator to explain any words or information that you do not clearly understand.

BACKGROUND

You are invited to participate in a research study conducted by Jaime Laffins RN, master’s student at California State University, Chico. This study will involve the completions of two questionnaires; one offered today in the hospital and another in eight weeks. The amount of time required for your participation will take approximately five minutes to complete the questionnaire offered twice in this study.

Because the study involves the collection of information to develop general knowledge, rather than solely to treat an individual, it is considered “research” and is referred to as such in this consent form.

REQUIREMENTS TO PARTICIPATE IN THIS STUDY

This study will begin at one to two days postpartum and end at approximately eight weeks postpartum. This study will involve the completions of two questionnaires; one offered today in the hospital and another in eight weeks. The amount of time required for your participation will take approximately five minutes to complete the questionnaire offered twice in this study. Also a background information survey will be administered today at the hospital.

If you decide to participate in this study, you will be asked to sign this consent form.

Number of Participants: There will be approximately 40 to 80 patients at Enloe Medical Center that may participate in this study.
BENEFITS

This research may assist health care professionals to provide support systems needed to help future mothers.

POTENTIAL RISKS AND BENEFITS FOR PARTICIPATION IN THE STUDY

There are no known risks associated with this research. Some of the questions may deal with emotions and if this makes you uncomfortable you can stop with the questionnaire. The investigator will provide you with a list of support services you may wish to contact.

RESEARCH-RELATED INJURIES

No injuries related to data collection have been identified. Some of the questions on the questionnaire may be sensitive to you. If this occurs please discuss it with the investigator or nursing staff.

ALTERNATIVES

The alternative is not participating in this study.

COSTS AND COMPENSATION:

Neither you, your doctor, nor Enloe Medical Center will receive any money or compensation of any kind if you participate in this study. The investigator will not receive any payment or compensation for this research study.

This research study is self-funded by the investigator.

There is no charge for participation in this study. New mothers that have completed the two questionnaires and the “Bittie Baby & Me” support group series will chose a gift valued at one to five dollars in a basket containing infant and women items. New mothers that have completed and mailed their second EPDS questionnaire back at eight weeks postpartum will receive a two dollar ice-cream certificate.

DECIDING NOT TO PARTICIPATE

Your participation in this study is completely voluntary. If you decide not to participate, your decision will not affect your present or future medical care in any way. Your doctor will care for you exactly the same way for your condition, regardless of whether or not you choose to participate in this study. If you decide not to participate, you will have routine doctor’s visits to check on the status of your condition. However, any data collection regarding your condition will be entered into a study database. Your doctor can treat your medical condition without your participation in this study. You have the right to refuse to participate in this study or to withdraw at any point without affecting your
present or future medical care. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You are free to seek care from a physician of your choice at any time. If you do not take part in or withdraw from the study, you will continue to receive care.

The investigator may terminate your participation in this study if you do not complete all the forms and/or do not complete the “Bittie Baby and Me” support group series.

**PRIVACY AND CONFIDENTIALITY**

If you participate in this study, it will involve the use and disclosure of your personal information, including your age, gender, date of delivery, education, family income level, single or married, ethnic origin, and history of postpartum depression.

The information obtained from this study will be coded in a way to ensure your privacy. Your individually identifiable health information/identity will be kept confidential and will not be revealed in any publication that might result from this study. All study data will be collected and kept in a locked drawer by Jaime Laffins, RN.

The purposes for which you would be authorizing the use and disclosure of your personal information, as a participant in this research study would be to promote the objectives of this research study as described elsewhere in this Consent Form, and to facilitate related monitoring, regulatory oversight, quality assurance activities, Food and Drug Administration (FDA) inspection, billing and payment activities. Any reports or publications about the study or any other research will not include your name or a description of you. Information received during the study will not be used to market to you; your name will not be placed on any mailing lists or sold to anyone for marketing purposes.

There is no expiration date to your authorization for the use and disclosure of your personal information as described above. However, you may withdraw your authorization at any time, and the withdrawal will be effective upon receipt. Please note that if you withdraw your authorization, personal information that has already been obtained will continue to be used and disclosed as described above.

Your withdrawal must be made in writing and addressed to the person noted below:

**Jaime Laffins**

Address is not disclosed for electronic publication.

By signing this Consent Form, you are authorizing the above uses and disclosures of your personal information as described above. If you do not sign this Consent Form, including this authorization, you will not be eligible to participate in this research study.
QUESTIONS YOU MAY HAVE

Jaime Laffins, RN has discussed this study with you and you have been given the opportunity to ask questions which have been answered to your satisfaction. If you have any further questions regarding this study, you should call Jaime Laffins, RN. This number is not disclosed for electronic publication.

An Institutional Review Board (IRB) has been established at Enloe Medical Center. The purpose of this Board is to protect the interests of human subjects participating in research. The Board is an impartial third party not directly involved with the research. The Board invites any comments, questions, or complaints, which you may have, regarding: 1) treatment; 2) response to this treatment; and 3) patient's rights as an investigational research subject. Comments may be addressed to:

Chair, Institutional Review Board – Enloe Medical Center
c/o Mary Jo Lopez, Clinical Research Associate, CCRP
Enloe Cancer Center/Clinical Trials Office
265 Cohasset Road, Suite 120
Chico, CA 95926
Telephone: (530) 332-3829 - 8:00 AM to 4:30 PM Monday through Friday.

SIGNATURES

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<th>Research Participant (Print Name)</th>
<th>Research Participant Signature</th>
<th>Date</th>
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By signing above, you acknowledge that you have read this Consent Form, you have been given the opportunity to ask questions, and you understand what participation in this study will involve. You freely consent to participate, with the understanding that you may withdraw your consent at any time without penalty or loss of benefits to which you are otherwise entitled. You also acknowledge that you have received an appropriately executed copy of this informed consent and the Medical Research Subject Bill of Rights.

<table>
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<th>Witness Name (Print Name)</th>
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<tr>
<th>Investigator (Print Name)</th>
<th>Investigator Signature</th>
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The above-signed Jaime Laffins, RN hereby certifies that she has discussed the research project with the research participant and has explained all of the information contained in the Consent Form to the research participant, including any adverse reactions that may reasonably be expected to occur. The above-signed further certifies that the research participant was encouraged to ask questions and that all questions were answered.
MEDICAL RESEARCH SUBJECT'S BILL OF RIGHTS

The rights below are the rights of every person who is asked to participate in medical research.

As a research subject (participant), you have the following rights:

1. To be told the nature and purpose of the research.
2. To be told what will happen and whether any of the procedures, drugs or devices are different from what would be used in standard practice.
3. To be told about any significant risks, side effects or discomforts that can be reasonably expected from the research.
4. To be told of any expected benefits from participating in the research.
5. To be told the other available treatments that could be chosen instead, and how they may be better or worse than participating in the research.
6. To be allowed to ask any questions concerning the research both before agreeing to be involved and during the course of the study.
7. To be told what sort of medical treatment is available if any complications arise.
8. To refuse to participate at all or to withdraw consent to participate at any time, without jeopardizing the right to receive present or future care.
9. To receive a copy of the signed and dated consent form.
10. To be free of pressure when considering whether to agree to participate in the research.

Date: _____________
Time: _____________

Signature: ________________________________ (patient)
Signature: ________________________________ (parent/legal guardian)

If signed by other than patient, indicate relationship:

Witness: ________________________________
APPENDIX B
INSTRUCTIONS FOR THE USE OF
THE EDINBURGH POSTNATAL
DEPRESSION SCALE (EPDS)

J.L. Cox, J.M. Holden, & R. Sagovsky
Department of Psychiatry,
University of Edinburgh

INSTRUCTIONS

The mother is asked to underline the response, which comes closest to how she has been feeling in the previous 7 days.
1. All ten items must be completed.
2. Care should be taken to avoid the possibility of the mother discussing her answers with others.
3. The mother should complete the scale herself, unless she has limited English or has difficulty with reading.
4. The EPDS is a screening instrument, not a diagnostic tool. It is designed to be used with all women after childbirth as part of routine practice - for example at the 6-week check and immunizations at 3 and 5 months. It should be used to normalize and validate women's feelings.

SCORING

Response categories are scored 0, 1, 2, and 3 according to increased severity of the symptom.

Items marked with an asterisk are reverse scored (i.e. 3, 2, 1, and 0). The total score is calculated by adding together the scores for each of the ten items.

Mothers who score above a threshold 12/13 are likely to be suffering from a depressive illness of varying severity. However, the EPDS score does not show a linear relationship to severity of depression or urgency of treatment. A woman with a high score should always be interviewed and assessed before a decision is made about suitable treatment. If the high score is repeated after two weeks, this almost certainly indicates depression.
Where a mother comes from a different culture, there may be cultural differences in interpretation and the score may not accurately reflect the mother's mood. The EPDS should be used only to open the subject for discussion. The score should not be relied upon.

*Users may reproduce the scale without further permission providing they respect copyright by quoting the names of the authors, the title and the source of the paper in all reproduced copies. The investigator was allowed to use the EPDS questionnaire for this study.*

BACKGROUND INFORMATION

Date of Delivery____
Age____

Education:
___ completed junior high school
___ some high school
___ high school graduate
___ some college
___ 2 year college associate degree
___ 4 year college degree
___ post graduate work

Family income level:
___ less than 20,000
___ 20,001 to 40,000
___ 40,001 to 60,000
___ 60,001 or more

Race:
___ African American
___ Asian
___ Caucasian
___ Native American
___ Hispanic
___ Other – specify __________

Please circle one: Married / Single

How many other children do you have? ____

If employed, are you able to take maternity leave? Please circle one: Yes / No.
If so, for how long? ______

Have you ever been diagnosed with postpartum depression or depression? Please circle one: Yes / No. If so, how long ago? ______

Did you have any complications during your pregnancy, delivery, or postpartum?

Do you have a support person to assist you at home with your new baby? ____
If yes, who is your support person? ______
NEW MOTHERS INFORMATION FORM

AT 1-2 DAYS POSTPARTUM

Please fill in the following information.

Name:

Address:

Code #_________
(Jaime Laffins, RN will assign you a unique code number for protection of your identity)
Dear Participant,

My name is Jaime Laffins, RN, Master’s student. I spoke with you at the hospital about the research study I am conducting concerning emotional well-being. In the hospital, you filled out a questionnaire on your emotional well-being. I explained that I would be sending this same questionnaire to you in seven and one-half weeks after your delivery. Please fill out this questionnaire at eight weeks postpartum and return in the enclosed stamped envelope.

This questionnaire should only take about five minutes to complete. I understand that you are quite busy with your new baby. Thank you for your time in completing this questionnaire. The information received from this study will assist health professionals in providing care for new mothers and their babies.

Enclosed is an ice-cream gift certificate to thank you for your participation in this study.

Please contact me if you have any questions.

Sincerely,

Jaime Laffins, RN
Number not disclosed for electronic publication.
NEW MOTHERS INFORMATION FORM

AT 8 WEEKS POSTPARTUM

Please answer the following questions.

How many “Bittie Baby and Me” classes did you attend? ______

Did you find the classes helpful?

Did the classes meet your expectations?

Code #_________
(Jaime Laffins, RN will assign you a unique code number for protection of your identity)