

A SURVEY OF POSTPARTUM DEPRESSION
IN SOUTHEASTERN MONTANA

by

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A thesis submitted in partial fulfillment
of the requirements for the degree

of

Master

of

Nursing

MONTANA STATE UNIVERSITY
Bozeman, Montana

July 2004

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Valerie Ann Kent

July 14, 2004

This work is dedicated to my children:
Jason Tyler, Meghan Marlene, Courtney Ann and Rebecca Rose Atwood.

ACKNOWLEDGEMENTS

This opportunity is taken to thank those special people who helped make my thesis a reality.

To my committee members, Barbara Derwinski-Robinson, Dr. Fredricka Gilje, and MaryBeth Johnson for their expertise, wisdom, guidance and dedication.

To the St Vincent Healthcare Mother/Newborn unit and the registered nurses there, who helped me to achieve more than I ever dreamed.

To my children, who gave me the reasons to climb the wall and make the leap to the other side.

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ABSTRACT

There has been little research on postpartum depression (PPD) in the southeastern region of Montana. In the clinical experience of this researcher, relatively few health care providers perform a thorough assessment for PPD as part of postpartum care. Health care providers tend to underestimate both the incidence and effects of PPD. This study surveyed 16 women in southeastern Montana at their 4 to 6 week postpartum health care visit, using a standardized Postpartum Depression Screening Scale (PDSS). Surveys were scored while participants were at the clinic, and results were made available to the participants' health care providers. Women were surveyed at a physician-run OB/GYN practice. Fifteen of the women were married and one woman was single. One woman had only a high school education, 7 had some college, and 8 had 4-year college degrees. All of the women had health care insurance. Of the 16 women surveyed, 8 had PDSS scores consistent with normal adjustment. Five had PDSS scores consistent with significant symptoms of postpartum depression, and 3 women had PDSS scores that indicated a positive screen for postpartum depression. While the results fall within the prevalence rates indicated in the review of literature, they are not statistically significant and cannot be generalized to all women in southeastern Montana or to other populations. This study should be replicated with a larger sample size.

CHAPTER 1

INTRODUCTION

Throughout recorded history, observers have found it difficult to describe the symptoms of Postpartum Depression (PPD). Hippocrates described “puerperal fever” in 460 BC. Symptoms were recorded as “agitation, delirium and attacks of mania.” An 11th-century author pondered the causes of depression after childbirth, writing that “if the womb is too moist, the brain is filled with water, and the moisture running over to the eyes, compels them to involuntarily shed tears” (Leopold & Zoschnick, 2003, para 1). The last four decades have brought an increasing interest in PPD; however, health care providers, sociologists, and mothers themselves still face many questions relating to this disorder.

Because of a disparity in the definition of onset, the prevalence of PPD has been difficult to study (Andrews-Fike, 1999). The *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV) defines PPD as having onset within four weeks of delivery. However, evidence has shown a correlation of depression and childbirth even with onset of symptoms as late as 6 to 12 months after delivery (Beck, 1998; Gold, 2002; Spinelli, 1998). The majority of epidemiologic studies of PPD have used a broader definition of onset than the DSM-IV. Many epidemiologic studies have accepted the onset of symptoms up to one year after the delivery of an infant. Studies have suggested that the time of highest risk for developing PPD is about three months

after delivery (Andrews-Fike, 1999). New York state laws now require that clinicians notify postpartum women that “one in 10 women will begin motherhood with a depressive episode, and that one or two in 1000 will suffer postpartum psychosis” (Spinelli, 1998, p. 34). Leopold and Zoschnick (2003) estimate that of 4 million births each year in the United States, 1.6 million will be complicated by a postpartum mood disorder. Reported prevalence of PPD has ranged from 7%-26% (Andrews-Fike, 1999; Beck, 1998, Ray & Hodnett, 2002).

Background and Significance of Study

The area of southeastern Montana covered by this study (see Figure 1) has a population of approximately 100,000. Ninety-four percent of the population is Caucasian, 4.5% is Native American, 0.9% Asian, and 0.9% African American. The median household income for the year 1999 (the last year for which data is available) was \$36,727. Sixty nine percent of families in the area depend on two incomes, and an additional 8.5% of those families have incomes below the poverty level. Ten percent of families have no husband present, and 54% of those families have income levels below the poverty level (US Census Bureau, 2000). Ten percent of the population has either a high school level or lower education. No information was available regarding the percentage of the population with health insurance. In 1999, 1655 live births were registered for the region covered by this study.

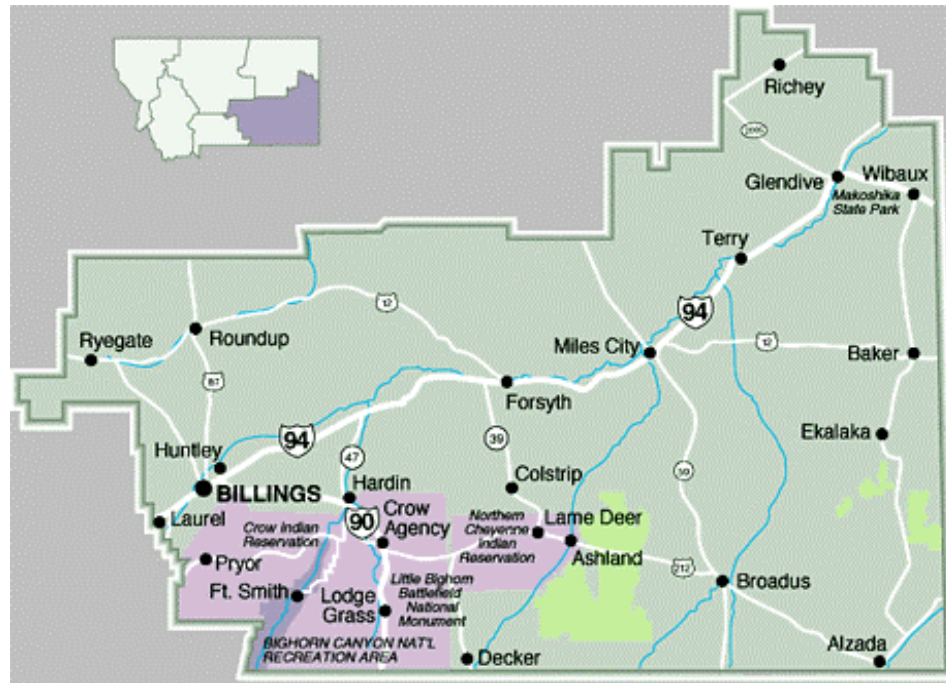


Figure 1. Study Area in Southeastern Montana

Puerperal mood disorders, including PPD, are more prevalent than any other complication of pregnancy, including gestational diabetes, pregnancy-induced hypertension and preterm delivery. Postpartum depression has been found to create lasting destructive effects on women and their families (Beck, 1993, Wood, Thomas, Droppelman, & Meighan, 1997), and yet in the past, women's health care providers have received little education about this condition (Leopold & Zoschnick, 2003). As late as 1997, Diket and Nolan (1997) reported that two major textbooks in obstetrics failed to mention depression associated with pregnancy and delivery.

It has been estimated that only 20% of the women who experience PPD report it to their health care providers (Fishel, 2004, p. 972). This statement is particularly sobering

because severity of symptoms and duration of depression have been linked to the length of delay in obtaining adequate treatment (Beck, 2001, p. 275; Nonacs & Cohen, 1998).

Problem

There has been little research on PPD in the southeastern region of Montana. Many of the area's residents live in rural communities and must travel some distance to obtain health care services. In the clinical experience of this researcher, relatively few health care providers perform a thorough assessment for PPD as part of postpartum care. Health care providers tend to underestimate both the incidence and effects of PPD. There have been few interventions available for women who live in southeastern Montana and suffer from PPD. Despite the fact that the review of literature indicates women with a history of depression or a previous episode of PPD are at higher risk, only a small percentage are offered prophylactic treatment (Leopold & Zoschnick, 2003; Spinelli, 1998). If only 20% of women with symptoms report them and the reported prevalence is 7-26%, the actual prevalence of PPD is significantly higher than researchers have yet reported.

Purpose

The purpose of this study was to survey the incidence of PPD in southeastern Montana. Postpartum care could be enhanced as health care providers acquire a greater awareness of the incidence of PPD.

Definition of Terms for the Purpose of This Study

1. Postpartum: the period of time immediately following the birth of an infant and extending as long as one year after delivery
2. Postpartum blues: symptoms of mood lability ranging from euphoria to tearfulness experienced by 50-85% of new mothers beginning at about day three following delivery and ending approximately two weeks after delivery (Gold, 2002; Fishel, 2004; Nonacs & Cohen, 1998; Spinelli, 1998). Postpartum blues have been considered a benign condition and caregivers have tended to downplay their significance (Diket & Nolan, 1997); however, postpartum blues have been identified as being predictive of PPD (Gold, 2002; Spinelli, 1998).
3. Postpartum psychosis: a form of bipolar disorder affecting 1-2 out of 1000 births. Symptoms of rapidly changing moods and erratic behavior can begin as early as 48-72 hours after delivery, and clinical manifestations include psychotic thoughts, severe depression and mania (Andrews-Fike, 1999; Gold, 2002; Nonacs & Cohen, 1998). This disorder is considered a psychiatric emergency and requires inpatient treatment (Andrews-Fike, 1999; Nonacs & Cohen, 1998).
4. Postpartum depression: The *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV) defines PPD as part of the spectrum of major depression, with a modifier for having onset within four weeks of delivery of an infant. Most scientific research of postpartum depression

has used the expanded criteria for onset of symptoms. A review of the literature suggests that symptoms of PPD can develop as late as 6-12 months after delivery (Beck, 1998; Gold, 2002; Spinelli, 1998). Symptoms of PPD can range from depressed mood, irritability, anxiety and obsessive thoughts to emotional lability, guilt and poor concentration (Gold, 2002).

Conceptual/Theoretical Framework

In 2002, Beck & Gable (2002) created the Postpartum Depression Screening Scale (PDSS), based on the theoretical framework of “Teetering on the Edge” (Beck, 1993). Beck, a nurse researcher and certified nurse midwife, formulated this midrange theory based on themes identified in qualitative research studies. Gable is an educational psychologist.

Beck’s studies of postpartum depression documented the theme of loss of control as the basic social psychological problem of PPD. Loss of control was described as a feeling of uncontrollable anxiety that women expressed. Women spoke of the feeling of being on the edge of insanity (Beck, 2002). Beck identified the four-stage process that women move through when dealing with PPD: encountering terror, dying of self, struggling to survive, and regaining control.(Beck, 1993, p. 42).

Encountering Terror

This is the first stage of postpartum depression. It has a sudden onset and can either begin within the first few weeks postpartum or be delayed for a period of up to six months or longer after the birth of the infant. Women surveyed by Beck spoke of suffering anxiety attacks, obsessive thinking and “enveloping foggiess” (Beck, 1993, p. 44). Women in the initial stage of teetering on the edge report being frightened and having feelings of extreme fatigue.

Dying of Self

The first stage of PPD leads to three consequences, which comprise the second stage of PPD, the “dying of self” (Beck, 1993, p. 45). Dying of self consists of “alarming unrealness, isolating oneself, and contemplating and attempting self-destruction” (Beck, 1993, p. 45). It is during this stage that mothers reported feeling disconnected from the world around them. They reported feeling disengaged from their partner and their infants, and tended to lose interest in activities that they previously enjoyed. Women reported perceiving themselves as isolated. They also reported isolating themselves from potential social support, believing that no one understood what they were going through. Some women developed agoraphobia, which led to further feelings of isolation. Many reported a loss of interest in sex and intimacy (Beck, 1993).

The third consequence, “attempting self-destruction,” was reported as the result of overwhelming feelings of guilt and the perception of themselves as failures at motherhood. Some women reported thoughts of harming themselves or their infants during this time, which furthered their feelings of shame and low self-worth. Beck’s

study records one mother's poignant words:

I started thinking death thoughts at one point. I didn't plan suicide, but I started thinking I'd be better off dead. I had never been that low in my whole life when I thought death was the way to go. I just wanted to get out of this world. It was like everything was black (Beck, 1993, p. 46).

Struggling to Survive

Women who survive the overwhelming feelings of postpartum depression do so by entering the third stage, "struggling to survive." The women in Beck's study reported three coping strategies: battling the system, praying for relief, and seeking solace in a postpartum depression support group (Beck, 1993, p. 46). It is during this time that women are most likely to seek help from health care providers or others who may be able to support them in their struggle.

It has been estimated that only 20% of the women who experience PPD report it to their health care providers (Fishel, 2004, p. 972). The women in Beck's 1993 study reported that once the decision had been made to seek help, disappointment and frustration often followed. Some women gave accounts of health care providers minimizing their concerns, hence the name Beck gave to this strategy, "battling the system" (Beck, 1993, p. 46). Some of the women in Beck's study reported finances as a deterrent in getting appropriate medical intervention for PPD.

A second strategy reported by some of the women was that of praying for relief. These women found comfort in communicating their distress to a higher power and potential source of help in their struggle to survive. The third strategy was that of “seeking solace in a support group” (Beck, 1993, p. 47). Women reported feeling validated from meeting and talking with other women in similar circumstances. Others reported feeling hope that they could or would someday regain control over their depression.

Regaining Control

Beck described the final stage of postpartum depression as that of recovery through regaining control. The final stage has been described as a slow process that comes about as a result of the struggle to survive. Three consequences characterize this stage: unpredictable transitioning, mourning lost time, and guarded recovering (Beck, 1993, p. 47). Women reported unpredictable transitioning as the gradual process of recovery. One woman said this about her experience as she began regaining control:

When I got out of my severest depression, I had more good times than bad times. I had days where I felt like nothing had ever happened. I mean I was normal. I really felt such intense love for my baby. I could have a relationship with my husband. Then the next day for no reason at all I'd wake up and just be off (Beck, 1993, p. 47).

According to Beck's theory, recovery is not sudden but gradual and erratic. Another consequence that women reported as they began recovering was the realization that they had lost time with their infants. Some women reported feeling cheated of time,

and others spoke of a sense of sadness at what they had missed during their infant's development (Beck, 1993). Beck identifies the final consequence of the struggle to survive as "guarded recovery" (Beck, 1993, p. 47). It is during this time that mothers reported feeling like themselves again. "When I was sick, I didn't want my baby. I didn't love my husband. I didn't want to work. I hated everything. When I got better, it all melted away" (Beck, 1993, p. 47).

Beck noted that while mothers' symptoms gradually faded away, they were still cognizant of a feeling of vulnerability. It was apparent that PPD had created a lasting effect on their lives (Beck, 1993).

Summary

Postpartum depression (PPD) has long been studied and yet often goes undiagnosed and underreported. The incidence of postpartum depression in southeastern Montana has not been researched, and both health care providers and the public could benefit from a raised awareness of this disorder. Beck and Gable used the substantive theory of PPD called "Teetering on the Edge" to develop the Postpartum Depression Screening Scale (PDSS). This screening tool has a high sensitivity and specificity for PPD. The researcher used this tool to determine the incidence of postpartum depression in southeastern Montana.

CHAPTER 2

REVIEW OF LITERATURE

Introduction

The review of literature was undertaken using the PubMed database. Eight hundred fifty references were found when using the term “postpartum depression” and limiting the search to peer-reviewed journals dating from 1995 to present. Articles were reviewed from health care, nursing, and sociopolitical literature. The following major foci were identified from the review of literature: history of postpartum depression research, prevalence of PPD, risk factors, symptoms, and effects on women, their partners and their offspring. Available interventions for PPD were also reviewed.

Postpartum Depression Research Perspectives

Medical Perspective

While there is not a great deal of research prior to the 1960s, it has long been recognized that childbirth is associated with a considerable increase in psychological morbidity (Tod, 1964; Pitt, 1968). As early as 1963, the Pugh et al. study found a significant positive relationship between recent childbirth and admission to psychiatric hospitals in England (cited in Pitt, 1968). Kendell, Chalmers, and Platz’s (1987) famous study of 54,087 postpartum women in Scotland from 1971-1981 found the highest risk of psychiatric admission for women within 30 days postpartum, but risk continued to be

elevated until 90 days. This study also showed a higher relative risk of psychiatric admission in women for up to two years following childbirth.

There is some controversy as to whether PPD can be identified fairly as a distinct diagnosis or if it is part of the broad spectrum of mood disorders (Viinamaki, Niskanen, Pesonen, & Saarikoski, 1997). For many years, the United Kingdom has considered PPD as part of a range of puerperal illness and consequently as a distinct diagnosis (Andrews-Fike, 1999). In the United States, PPD has not been defined as a distinct diagnosis. It is considered part of the spectrum of major depression, with a modifier for postpartum onset (DSM-IV).

Sociological Perspective

Sociological researchers Mauthner (1998) and Nicolson (1999) consider postpartum depression to be a healthy response to a series of losses, rather than a disease or disorder as proposed by the medical model. The women in Nicolson's (1999) study identified symptoms of depression stemming from the losses of identity, body shape from birth and breastfeeding, time for self, autonomy, femininity and sexuality.

Boyer (1990) concluded that some cultures, especially those with a strong extended family support system, had lower rates of PPD. The cultures found to have lower rates of PPD had rituals ensuring a time of rest for the new mother. These findings support the socio-political perspective of PPD as a natural response to stress and loss of self (Boyer, 1990). In contrast, Huang and Mathers (2001) compared the rates of PPD between women in the United Kingdom and women in Taiwan, finding rates similar between the two cultures despite large differences in culture and care systems. No

research was located discussing PPD and women who live in rural areas.

In the United States, childbirth has been culturally accepted as a time of joy and happiness. Expressions of negative feelings during the postpartal period have been discouraged. Nicolson (1999) perceived that women felt conflicting emotions following childbirth. Bozoky and Corwin (2001) proposed that pressure to adapt easily to changes in lifestyle and the new role of motherhood contribute to symptoms of PPD. Mauthner (1998) and Nicolson (1999) reported that the amount of loss and conflict women felt differed based on social situation.

Traditional quantitative research based on the medical model has been criticized by sociological researchers as too “objective and dispassionate” (Mauthner, 1998, p. 354). Mauthner also suggests that traditional clinical research has not paid enough attention to mothers’ individual subjective accounts of their experiences. Beck’s (2002) metasynthesis of qualitative postpartum depression research described conflict between myths of motherhood and reality as key to understanding why women develop PPD. Women become disillusioned with motherhood and feel despair and sadness as they fail to live up to their expectations of themselves as mothers (Beck, 2002). Logsdon, McBride, and Birkimer (1994) supported this view, stating that depressive symptoms originated when there was incongruity between a woman’s antenatal expectations and the reality of the postpartal period.

The sociological perspective has been criticized for failing to explain why some women do not develop depression after childbirth. Mauthner (1998) cautioned against the narrow-minded view that PPD is caused by the sociopolitical environment in which women live. Despite an unchanged sociopolitical environment, some women regain their previous emotional ability, which Mauthner (1998) points out as a flaw in the sociological perspective. Existing quantitative and qualitative research has also been criticized because most studies have been done on homogenous groups of white, well-educated, middle-class women (Boyer, 1990; DeJoseph, 1997; Hobfoll, Ritter, Lavin, Hulsizer, & Cameron, 1995; Taylor, 1996).

Prevalence

Prevalence of PPD has been difficult to determine because of the difference in criteria for time of onset used by the DSM-IV and that used by most epidemiological studies. The literature reveals a reported prevalence of 7%-26% in the United States (Andrews-Fike, 1999; Beck, 1998, Ray & Hodnett, 2002). Prevalence has also been difficult to establish because of underreporting by mothers themselves. It has been estimated that only 20% of women who experience symptoms of PPD report those symptoms to their health care providers. Symptoms of PPD are often minimized by both mothers and care providers as normal, natural consequences of childbirth (Mauthner, 1998; Nonacs & Cohen, 1998). Evidence has been presented that mothers may also be reluctant to disclose their feelings of depression for fear of stigmatization and fear that

their depressive symptoms might be determined as evidence of being a “bad mother” (Gold, 2002, p. 30).

Numerous studies have shown that clinical depression in general and PPD, in particular, often go undetected and undertreated in the primary care setting (Gold, 2002). Two British researchers, Cooper and Murray (1997) reported that “almost half of those independently identified as depressed were not detected as such by their health visitor, a finding which replicates that of a study carried out 10 years earlier” (p. 98). Bagedahl-Strindlund and Borjesson (1998) found that after performing a history and physical, Swedish care providers only diagnosed 2% of mothers as suffering from PPD, while 14.5% of the same mothers were found to be positive for symptoms when using a self-reporting postpartum depression screening tool. These results seem to show that objective symptoms of PPD differ from subjective.

Risk Factors

Causes of PPD may be physiological, psychological, situational, or multifactorial (Boyer, 1990; Fishel, 2004). The review of literature revealed the major predisposing factors for developing PPD to be social in nature. Stressful life events, childcare stress, and prenatal anxiety appear to have predictive value for PPD. In addition, a history of a previous episode of PPD (Leopold & Zoschnick, 2003), marital conflict, and single parenthood are also predictive (Andrews-Fike, 1999; Bagedahl-Strindlund & Borjesson, 1998; Beck, 1998; Boyer, 1990; Gold, 2002; Ray & Hodnett, 2002; Nonacs & Cohen, 1998; Stanton, Lobel, Sears, and DeLuca, 2002; Viinamaki et al., 1997). A meta-analysis

of postpartum depression studies found the risk factors of prenatal depression, poor self-esteem, childcare stress and prenatal anxiety to have the highest effect size in predicting PPD (Beck,2001). Life stress, lack of social support, poor marital relationships, previous history of depression, infant temperament, and history of maternity blues were also reported as having also having a moderate effect in predicting PPD (Beck, 2001, p. 280).

Kendal et al.'s (1987) seminal study of the years 1971-1981 found strong positive correlations between parity, single motherhood at the time of birth, infant death after delivery, and Cesarean section with psychiatric admission after childbirth. A history of psychiatric or physical illness also appears to be predictive of PPD (Cooper & Murray, 1997). A Swedish study reported strong positive correlation of prenatal depression and PPD (Joseffson, Berg, Nordin, & Sydsjo, 2001). The Logsdon et al. (1994) study cites and confirms the results of O'Hara's studies in 1986 and 1990, which found PPD to be related to insufficient emotional support and marital unhappiness. The Hobfoll et al. (1995) study of 192 urban women classified as low income revealed a rate of PPD of 23.4%, which was estimated as double the rate found in middle-class samples. Higher rates were also found for women who did not have a partner living with them (Hobfoll et al., 1995)

Bozoky and Corwin's (2001) study found fatigue to be an important predictor of PPD. Fatigue can be a symptom of generalized depression and is highly prevalent in postpartum women because of the normal physical and adaptational demands of motherhood (Bozoky & Corwin, 2001). In addition, Bozoky and Corwin cite the Small et al. (1994) study in which the women themselves rated fatigue as one of the strongest

contributing factors for PPD. Bozoky and Corwin also found evidence that early postpartum fatigue was predictive of PPD, particularly fatigue on the 14th postpartal day.

Length of hospital stay also appears to increase risk of PPD (Hickey, Boyce, Ellwood, & Morris-Yates, 1997). In this Australian study, mothers discharged from the hospital prior to three days following delivery had a higher rate of PPD than mothers who stayed four to five days. This finding could be significant for women in the United States, where hospital stays are rarely longer than three days, unless significant complications occur following delivery. When other risk factors for PPD were controlled using a logistic regression analysis, early discharge was shown to have an independent significant effect. Mothers hospitalized for longer than five days also showed a higher incidence of PPD. However, these mothers also had experienced more complicated labors and had given birth to infants who were sicker than the infants of mothers discharged earlier than five days, and these factors could have contributed to the higher rate of PPD (Hickey et al., 1997).

Some studies in the review of literature suggested that the extreme changes in hormone levels from pre-delivery to post-delivery could be risk factors for PPD. No consistent positive correlation has been found between serum levels of hormones and PPD (Gold, 2002; Llewellyn, Stowe, & Nemeroff, 1997).

Symptoms

With the exception of the mother's intense feelings of guilt and anxiety about her ability to parent, symptoms of PPD are similar to those of generalized depression (Fishel,

2004; Gold, 2002). Postpartum depression, in its milder forms, can cause women to experience symptoms of anxiety, depression and an inability to feel able to care for their infant. In addition, mothers may feel guilty about experiencing depression during a time that society sees as a joyful event (Gold, 2002). Beck (2002) also states that anxiety can be a major component of PPD. Beck's (2002) metasynthesis of postpartum depression studies described participants who complained of feeling anxious and overwhelmed, and thinking obsessive thoughts. Participants also complained of cognitive impairment, feelings of isolation/loneliness, guilt, and, in some cases, the desire to harm themselves.

Fishel (2004) contends that irritability with a tendency to escalate into emotional outbursts is a distinct feature of PPD. Fishel states that the outbursts generally are directed at significant others but sometimes can be directed towards the infant (p. 973). Depressed mothers have also been found to be less attuned to their infants' needs than non-depressed mothers (Murry, Fiori-Cowley, & Hooper, 1996). Gold (2002) also reports depressed mothers as having feelings of ambivalence towards their infant.

Effects on Women

The Wood et al. (1997) study found that women suffering from PPD reported a perception of their infants as "demanding and difficult." These women were also disturbed by their inability to soothe their infants. The women in Wood et al.'s study saw themselves as inept at motherhood and were overwhelmed with obsessive thoughts of failure, sending them into a deeper depression. Effects of PPD can be devastating for the

woman involved and her developing infant and other children in the home, as well as for partners and spouses (Beck, 2001; Georgiopoulos, Bryan, Wollan, & Yawn, 2001).

The review of literature also found postpartum depression to have a significant negative relationship on maternal role attainment (Fowles, 1996). Maternal role attainment (as described by Fowles), is a “woman’s perceived competency of her ability to carry out infant care and feeding as well as the subjective evaluation of her infant and herself as a mother” (p. 76). Adolescent mothers with PPD were found to be more likely to have negative feeding interactions with their infants and described less maternal confidence and satisfaction with motherhood than teen mothers who were not depressed (Panzarine, Slater, & Sharps, 1995). The Viinamaki et al. (1997) study found that women with PPD symptoms 24 months following delivery used more alcohol, smoked more and reported experiencing more stressful life events than women who did not identify themselves as still depressed. Spinelli (1998) estimates women who have a history of PPD to be 300 times more likely to have another episode of PPD in subsequent pregnancies. If PPD goes untreated, there is a greater risk of development of a chronic depressive disorder in the mother (Andrews-Fike, 1999; Nonacs & Cohen, 1998). A 1998 Danish study found a high rate of suicide among postpartum women who had PPD severe enough to require psychiatric admission. Of the women who died during the first year after childbirth, 66% were found to have died of unnatural causes, and 25% of the “natural deaths” were estimated to be the result of alcohol or drug use (Appleby, Mortensen, & Faragher, 1998, p. 210).

Effects on Partners

When a woman develops PPD, her partner can react with confusion and anger. Fishel (2004) states that men sometimes withdraw or feel blamed or neglected during this highly charged, emotional time. In the Viinamaki et al. (1997) study, partners of women who experienced PPD expressed that their relationships with the mothers deteriorated during pregnancy. These relationships had not improved when the same group was surveyed again two years later. Postpartum depression has also been found to cause problems with family integration (Fishel, 2004). Leopold and Zoschnick (2003) state that a mother functionally impaired by depression places a significant emotional burden on the family unit and relationships. When the mother's income was previously used to support the family, depression can place a significant financial burden on the family unit as well.

Effects on Children

The true impact of maternal PPD during the early developmental years of a child's life is still unknown. Studies using animals have shown significant positive correlation between early postnatal stressors (including maternal deprivation) and changes in the way the brain handles stress during later years of development. These neuroendocrine changes are reported to affect socialization behaviors in the offspring of both rats and primates (Llewellyn et al., 1997). Cooper and Murray (1997) reported longitudinal studies indicating that early relationships between mother and infant within the context of PPD were predictive of the course of the infant's future cognitive, emotional and social development. One of these studies found that increased levels of

maternal depression had a significant positive correlation to poorer infant mental and motor development at one year of age (Cooper & Murray, 1997).

Infants of mothers who experienced PPD have also been found to have poorer cognitive development at 18 months than infants whose mothers were not depressed (Murray et al., 1996). Not surprisingly, postpartum depression has also been shown to have an adverse effect on mother-infant interaction. Mothers reported higher rates of problems with infant feeding, crying and sleeping than non-depressed mothers. These mothers also appeared to be less responsive to their infants and perceived problems in their relationship with their infants. Infants of mothers with PPD were fussier and exhibited more negative facial expressions and vocalizations than infants of non-depressed mothers (Beck, 1998; Cooper & Murray, 1997; Murray et al., 1996).

Infants of mothers who were not depressed had positive early interactions and were found to have greater cognitive and relational skills than infants of mothers with PPD. Studies have also shown a positive correlation between mothers with PPD and incidence of child abuse and neglect (Nonacs & Cohen, 1998; Spinelli, 1998). A significant positive relationship between PPD and delayed development was also discovered, as well as increased social and behavioral problems, especially in boys.

The Luoma et al. (2001) longitudinal cohort study of depressed mood during pregnancy and after childbirth found that over time, however, the impact of maternal depression on children's well being was less than expected. The results of this study suggested that some of the negative impact of maternal depression could be compensated for as the mother's depression resolves and the child continues to develop. Children of

adolescent mothers may be particularly at risk, as these mothers have been shown be especially likely to cope with depression by emotional detachment and avoiding unpleasant situations with their infants (Panzarine et al., 1995).

Screening and Screening Tools

Because depression during pregnancy is a strong predictor of PPD, screening, diagnosis and treatment during the antepartum time is very important (Gold, 2002; Nonacs & Cohen, 1998). Llewellyn et al. (1997) suggest complaints of depressive symptoms that exist after the first two weeks postpartum or complaints separated by more than three days should trigger the care provider to assess more thoroughly for PPD. The six-week postpartum visit is an ideal time for screening (Gold, 2002; Nonacs & Cohen, 1998). By this visit, many of the symptoms of PPD have begun to occur and mothers have begun to settle into a more normal psychosocial routine following delivery (Gold, 2002). Health care providers should be cognizant of the fact that mothers may not bring up depression on their own. Beck (2002) states that many mothers choose to suffer in silence rather than admit to their feelings, being ashamed and embarrassed. “The stigma associated with being depressed after childbirth was another source of concern that at times prevented women from seeking help” (Beck, 2002, p. 468). This stigma may be especially daunting to women in rural areas due to the lack of anonymity in rural culture (Lee, 1998).

A number of formal screening tools have been used to screen for postpartum depression. In the past, general depression scales have been used to screen for PPD. An example of a general depression scale used to screen for postpartum depression is the Beck Depression Inventory-II (BDI-II). While the BDI-II is closely correlated with the DSM-IV definition of depression, it lacks specificity for depression connected with childbirth (Beck & Gable, 2001). Postpartum researchers have found that many somatic complaints of depression can also be caused by normal changes following childbirth, so use of the BDI-II may give false positive results (Cox, Holden & Sagovsky, 1987).

The Edinburgh Postnatal Depression Scale (EPDS) was developed as a more specific tool and has been used successfully to identify PPD. The EPDS is a 10-item self-report scale that can be completed in about 10 minutes. While more specific for PPD than the BDI-II, some considered the EPDS to be flawed because it has no questions that directly relate to the distinctive context of “new motherhood” (Beck & Gable, 2001, p. 244). In order to create a tool related more to the postpartum context, the Postpartum Depression Screening Scale (PDSS) was developed (Beck & Gable, 2001).

The PDSS (see Appendix G) is a 35-item screening scale assessing each of seven dimensions of postpartum depression as identified by Beck’s (1993) “Teetering on the Edge” theory. Women are asked to respond to statements that describe how they may be feeling following the birth of their babies by circling the number that corresponds to how strongly they agree (5) or disagree (1) with each statement. Women are asked to circle the answer that best describes how they have felt during the previous two weeks (Beck & Gable, 2001).

Postpartum Depression Interventions and Treatment

Interventions for PPD include pharmacologic interventions, supportive interpersonal and cognitive therapy, psychosocial support through support groups, and complimentary therapies. Electroconvulsant therapy has proven effective for mothers with severe PPD (Andrews-Fike, 1999). In severe cases of postpartum depression, especially in mothers who are at risk of suicide, inpatient hospitalization may be required (Nonacs & Cohen, 1998).

Pharmacologic

Pharmacologic treatment has proven to be an effective intervention in PPD. Women treated pharmacologically should be treated with a similar dosage and duration of treatment as those with depression not associated with pregnancy (Gold, 2002; Nonacs & Cohen, 1998). A thorough risk-benefit assessment is important when antidepressant medications are considered. Using a team approach, the risks and benefits should be presented to the woman and her partner or support person (Gold, 2002, Nonacs & Cohen, 1998; Spinelli, 1998).

Candidates for pharmacological intervention who are breastfeeding should be physically healthy, with physically healthy full-term infants. Because antidepressant medications are metabolized by the liver, breastfed pre-term newborns and very young neonates may have a greater risk for detectable serum levels of medications and their metabolites (Wisner, Perel, & Findling, 1996). Pharmacologic treatment can be a difficult choice for mothers who feel torn between breastfeeding and medication (Gold, 2002).

Mizri and Siverts, as quoted by the Wisner et al. (1996) study, suggest that the risk of mother-infant separation and ultimate cessation of breastfeeding upon hospitalization outweighs the risk associated with medications.

Spinelli (1998) states that not enough information has been provided by recent pharmacological intervention trials for assurance of safety. The United States Food and Drug Administration (FDA) has not approved psychotropic medications for use during lactation or pregnancy, and there is not yet a consensus about the safety of such use (Fishel, 2004). When antidepressants are needed postpartally, Gold (2002) recommends the selective serotonin reuptake inhibitors (SSRI) as first-line treatment. Gold also recommends the adjunctive use of a benzodiazepine in cases that include symptoms of anxiety. Appleby, Warner, Whitton, and Faragher (1997) found the use of fluoxetine to be effective in treating PPD. However, these study results also indicated that there was no significant difference in response between fluoxetine use and cognitive-behavioral counseling. It should also be noted that the Wisner et al. (1996) study found fluoxetine in substantial serum levels in a six-week-old nursing infant.

Cooper and Murray (1997) also point out that more than half of those invited to participate in the fluoxetine study declined to participate, citing a “reluctance to take medication” (p. 98), and the researchers projected that the role of fluoxetine or other antidepressants could be limited by this reluctance on the part of mothers. Although the risk of infant exposure to antidepressant medications appears to be low, long-term effects are unknown (Gold, 2002; Nonacs & Cohen, 1998). The majority of data available for antidepressant use during pregnancy have relied on animal studies, case reports, and

retrospective surveys, with no controlled trials (Diket & Nolan, 1997; Llewellyn et al., 1997). However, one study published in 1997 found no differences in development, behavior or global Intelligence Quotient (IQ) in preschool children whose mothers had taken either tricyclic medications or fluoxetine during pregnancy (Nulman et al., 1997).

Since hormone levels are in a state of dramatic change during pregnancy and after childbirth, it would be reasonable to assume that hormonal therapy might be helpful in treating PPD (Andrews-Fike, 1999). However, evidence regarding hormonal interventions has been nonconclusive. (Andrews-Fike, 1999; Gold, 2002; Nonacs & Cohen, 1998). Women in one study (Sichel, Cohen, Robertson, Rutterberg, & Rosenbaum, 1995) who had a history of postpartum psychosis were given prophylactic estrogen following childbirth. These women were found to have only a 9% rate of relapse. (Sichel et al., 1995). A 1996 double-blind, placebo-controlled study (Gregoire, Kumar, Everitt, Henderson, & Studd, 1996) reported transdermal estrogen to be an effective treatment for women with severe PPD but acknowledged that further studies are required. Gold (2002) strongly recommends prophylactic treatment for women at high risk because of severe PPD (p. 33).

Psychological

A psychological treatment option is Interpersonal Psychotherapy (IPT). Interpersonal Psychotherapy conceptualizes depression as having three components: symptom formation, social functioning, and personal contributants. Using a manual developed specifically for this type of therapy, a trained professional counselor leads one-hour sessions that usually run from 12-16 weeks and focus on problematic

relationship areas (“Interpersonal Psychotherapy,” n.d.; Wood et al., 1997). Emphasis is placed on interpersonal relationships relating to role changes that accompany parenthood rather than on the depression itself.

Recent research has found that women receiving IPT were significantly more likely to have a reduction in symptoms and recover from PPD than women who did not receive IPT treatment (O’Hara, Stuart, Gorman, & Wentzel, 2000; Stanton et al., 2002). Participating in a 12-session course significantly improved women’s symptoms and ability to function (Wood et al., 1997). Interpersonal Psychotherapy can also be initiated during pregnancy for women who are considered at high risk (Nonacs & Cohen, 1998; Spinelli, 1998). A United Kingdom study (Cooper & Murray, 1997) found that three brief home- based visits using counseling techniques were effective at speeding the recovery rate for women suffering from PPD.

Psychosocial.

Psychosocial interventions such as support groups have been reported as effective (Beck, 1993; Nonacs & Cohen, 1998). Beck (2002) states that support group attendance can give mothers a sense of hope through the realization that they are not alone. Support groups for couples can teach coping strategies and offer encouragement. They also give couples an opportunity to express needs and fears in a nonjudgmental environment (Fishel, 2004).

The Women’s Health Concerns Clinic in Ontario, Canada, offers treatment using a nurse-run support system. Wood et al. (1997) reported results of focus groups in which women voiced appreciation for information and validation through nurse telephone

support. The women in the focus groups also expressed a positive reaction to the inclusion of their partners in treatment plans.

Complimentary

Women may seek complimentary therapies or alternatives to traditional western medicine for medical conditions. Complimentary therapies for PPD include acupuncture, acupressure, aromatherapy, lavender tea, therapeutic touch, massage, relaxation techniques, reflexology, and yoga. Women using herbal remedies for depression should be cautioned about their use during pregnancy and breastfeeding (Fishel, 2004).

Summary

Although PPD has been studied since the late 1950s, it remains largely undiagnosed and untreated in the primary care setting. Prevalence has been difficult to ascertain because of a disparity in the definition for onset. The review of literature reveals a reported prevalence between 7% and 26%. Risk factors for PPD are multiple, primarily psychological and situational, combined with the physiologic changes that take place due to childbirth.

Symptoms of PPD are similar to those of generalized depression, with the addition of symptoms such as guilt and anxiety, which seem to be specific to the postpartum period. Symptoms are exacerbated by the fatigue and stress of caring for a newborn.

Postpartum depression has been shown to interfere with maternal role attainment and, when untreated, can have a profound effect on women's lives, even years after the

birth of a child. The most common long-term effects on women found in the literature review included suicide attempts, dangerous lifestyle choices and premature death.

Postpartum depression creates emotional and financial stress on the family unit. The review of literature revealed that PPD has negative effects on relationships between mothers and their partners, with partners sometimes feeling blamed or neglected during the illness. Postpartum depression has been shown to cause problems with family integration. Postpartum depression has also been shown to cause the partners of affected women to withdraw emotionally from the relationship.

Postpartum depression has a negative effect on the important early relationship between mother and infant. Within the context of PPD, this relationship has a negative correlation with the infant's cognitive, emotional and social development and the mother's PPD. Studies have also shown a positive correlation between mothers with PPD and incidents of child abuse and neglect.

Three screening tools have been used to identify PPD. The Beck Depression Inventory (BDI) was developed in 1961 and revised in 1996 (Beck Depression Inventory II) by Beck. The Edinburgh Postnatal Depression Scale (EPDS) was developed in 1987 by Cox, Holden and Sagovsky (cited in Beck & Gable, 2001, p. 244). The newest and

most specific tool is the Postpartum Depression Screening Scale, developed by nurse researcher Beck and educator Gable (Beck & Gable, 2000).

Interventions and treatments developed for PPD are pharmacological, psychological and psychosocial. Pharmacological intervention has been effective for PPD, but a careful risk/benefit analysis must be undertaken and discussed with the mother and her partner prior to implementation. Interpersonal Psychotherapy can also assist in relieving symptoms of PPD during a 6-12 week course. Support groups for women, as well as for couples, have also been found to be effective. Early intervention is important, as delayed intervention can lead to chronic depression and debilitation in affected women.

CHAPTER 3

METHODOLOGY

Introduction

The research method chosen for this study was the descriptive method. The purpose of this study was to find the incidence of postpartum depression in southeastern Montana. A descriptive study is the ideal method to capture a picture of the incidence of postpartum depression at one particular time.

This chapter is divided into four major sections. The first section will describe the sample used in this study. A description of the instrument used will come next, followed by a section describing the method of collecting the data. The chapter concludes with an explanation of how the data will be analyzed.

Sample

The sample for this study was selected from the population of women in southeastern Montana who were had given birth during the previous four to six weeks. The sample was chosen due to accessibility, convenience, and appropriate timing to collect the most accurate data. Women were surveyed at health care providers' offices at their four or six week postpartum visit.

One of the practices that provides prenatal and delivery care to women in southeastern Montana declined to participate in the study. The health care providers of

this practice verbalized a concern for legal issues if a participant were to act on her depressive symptoms following participation in the study. A contributing factor to the concern of the health care providers of this practice was that they only provide care from the prenatal period through the initial six weeks following delivery. They would not be able to personally follow up participants to make certain adequate care for postpartum depression was received. This practice does not currently do a formal postpartum depression screen during the four or six week postpartum visit and discharges patients from care at six weeks post-delivery. One provider in the practice stated that it would be better not to have knowledge of a woman's depression than to make that diagnosis at the termination of the woman's care.

Sample Size. A sample size of 16 women was chosen for this study. The first 17 women who met the criteria for inclusion were invited to participate. One woman who met the criteria declined to participate. Criteria for inclusion included being four to six weeks post-delivery of a live full-term infant, having the ability to read and write English, and being 18 years of age or older.

Protection of Human Rights

Prior to obtaining permission from the Montana State University-Bozeman Human Subjects Committee, the researcher was required to complete the National Institutes of Health (NIH) online tutorial: "Human Participant Protections: Education for Research Teams." This tutorial covered common concepts and issues involved in the protection of human subjects, including the principles of bioethics and legal standards.

After completing the tutorial, the researcher was issued a certificate of completion (see Appendix A) and submission of a copy of this certificate was required as part of the application for approval from the Montana State University-Bozeman Human Subjects Committee.

Permission was obtained from the Montana State University-Bozeman Human Subjects Committee and the Institutional Review Board (IRB) of the local data collection site to complete this study. The researcher also obtained approval from the health care providers whose patients were subjects of the research study.

Informed consent was obtained from all participants in the form of the Subject Information Sheet for Participation in Human Subjects Research at Montana State University-Bozeman (see Appendix B). All individuals invited to participate in the study were given a subject information sheet prior to participating in the study. The subject information sheet (see Appendix D) also gave invited participants information about postpartum depression (PPD) and included a statement urging them to discuss this issue with their health care provider. The subject information sheet also informed invited participants that a risk to participating in the study was that they might become aware of experiencing postpartum depressive symptoms. All invited participants were also given two informational brochures about PPD that included resources available (see Appendix D).

The subject information sheet also explained that results of individual screening tools might be made available to the health care provider of each participant following her completion of the screening instrument. The subject information sheet also contained

information about how screening tools would be coded and interventions that had been made, to protect the privacy of participants. Invited participants were also informed that their participation would be considered voluntary, that there were no benefits to be gained by participation in the study, and that it was in no way associated with their health care providers or the ability to obtain health care services.

Instrumentation

Tool Selection. The Postpartum Depression Screening Scale (PDSS) was chosen to collect data because it was developed from the “Teetering on the Edge” theory of postpartum depression, which is also the framework used for this study. The PDSS was also chosen due to ease of administration, conciseness of the tool, and ability to detect postpartum depression as described by the diagnostic criteria of the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*. Copies of the Postpartum Depression Screening Scale were purchased from the publisher for use in this study.

Tool Description. The Postpartum Depression Screening Scale (PDSS). The PDSS was developed based on the following definition of postpartum depression:

Postpartum depression is a mood disorder that can begin any time during the first year after delivery. Loss of control of emotions, thought processes, and actions is the basic problem of this experience. Symptoms may include a withdrawal of positive emotions, inability to concentrate, insecurity, loneliness, anxiety, difficulty sleeping and/or eating, guilt and/or shame, obsessive thinking,

emotional roller coaster, and contemplating harming oneself (Beck & Gable, 2001, p. 243).

The PDSS is a Likert-type self-report instrument consisting of 35 statements about the way a woman may feel following the birth of her baby. The results of a participant's responses to the items are added together to constitute the total score. This total score has a possible range of 35 to 175 and is intended to assess the severity of a participant's symptoms. A participant's screening score of 80-175 is considered a positive screen for major postpartum depression. This positive screen is not considered diagnostic for major postpartum depression as defined by the DSM-IV, but it indicates a high probability that the participant does have the disorder.

The 35 PDSS items relate to one of seven symptoms found to be significant for women with PPD. These can also be scored individually to determine severity of symptoms and include the following, along with the cutoff scores for a positive screen for each symptom:

1. Sleeping/Eating Disturbances, 14 or higher
2. Anxiety/Insecurity, 15 or higher
3. Emotional Lability, 15 or higher
4. Mental Confusion, 14 or higher
5. Loss of Self, 13 or higher
6. Guilt/Shame, 13 or higher

The seventh category of symptoms, Suicidal Thoughts, has a much lower cutoff score due to the serious implications of positive responses in this category. Any score of

5 or higher in the category of Suicidal Thoughts is considered elevated and should be followed up with appropriate diagnostic interview and intervention to prevent danger to the participant or others.

Tool Performance. The term sensitivity is used to address the ability of the tool to identify true cases of postpartum depression. Specificity, on the other hand, refers to the tool's ability to exclude women who do not have postpartum depression. Changing the cutoff score as to what constitutes a positive screen for postpartum depression will change the sensitivity and specificity of the tool. The Postpartum Depression Screening Scale, when using the cutoff score of 80 or greater, has been found to have a sensitivity score of 94% and a specificity score of 98% in detecting major depression (Beck & Gable, 2001, p. 242). These scores were significantly higher than either the Edinburgh Postnatal Depression Scale (EPDS) or the Beck Depression Inventory-II (BDI-II). When compared with the EPDS and the BDI-II in a study that used all three tools, the PDSS had the greatest sensitivity and specificity scores for determining the incidence of postpartum depression (Beck & Gable, 2001).

Data Collection

Data was collected using the Postpartum Depression Screening Scale (PDSS) and scoring booklets, which were purchased from Western Psychological Services. A copy of the tool is included in Appendix G. The PDSS was administered to women at their four to six week postpartum health visit. Demographic information on income age, education, race/ethnicity, marital status, history of depression, number of pregnancies, number of

biological children, vaginal/cesarean birth, and feeding method of infants was also gathered as part of the PDSS (see Appendix F).

When participants who met the inclusion criteria arrived at the health care provider's office for their four to six week postpartum health visit, the receptionist gave them a copy of the coded invitation to participate and the survey tool. Implied consent was assumed for participants who returned the completed survey.

The coded invitation to participate was offered to invited participants for later reference should they decide to withdraw their information from the study. Completed surveys were then given to the investigator to score. The investigator was in a private area of the office and at no time had contact with participants. Surveys were scored by the investigator while the participants were still onsite during their health care visit.

A survey record sheet (see Appendix J) was given to office receptionists to track the coded number of survey participants. These sheets were destroyed by the office staff at the end of each research day and were used to communicate scores to participants' physicians. If a survey response indicated the participant was positive for major postpartum depression or a danger to self or others, results were given immediately to the participant's physician. If a survey score was not high enough to indicate major postpartum depression but did reveal significant symptoms of postpartum depression, this information was also given to the health care provider, along with information about

which symptoms were especially problematic for the participant. All invited participants were also given two informational brochures on PPD (see Appendix B).

Completed surveys were then tabulated and analyzed using the Epi Info software from the Center for Disease Control and Prevention (CDC). Epi Info is used for managing databases for public health surveillance and other tasks, as well as general database and statistics applications.

Summary

The sample population used in this study consisted of 16 women who were visiting their health care provider's office for a postpartum visit. All participants spoke and read English, were over 18 years of age and had delivered a live, full-term infant in the four to six weeks prior to the beginning of the survey.

The study was designed to protect the human rights of participants. The subject information sheet was given to all invited participants, as well as two brochures about postpartum depression. Individual anonymity was assured through the method of data collection and approval was obtained by both Montana State University-Bozeman Human Subjects Committee and the Institutional Review Board (IRB) of the local data collection site to complete this study. The researcher also obtained approval from the health care providers whose patients were subjects of the research study.

CHAPTER 4

RESULTS

Introduction

The purpose of this study was to survey the incidence of postpartum depression in southeastern Montana. Sixteen women who were from four to six weeks post delivery of a live healthy full-term infant were surveyed using the Postpartum Depression Screening Scale (PDSS). A score of 60-79 indicated significant symptoms of postpartum depression. A score of 80 or greater qualified as a positive screen for major postpartum depression.

Description of Sample

The mean age of the sample was 31 (SD = 4.18) with the range of ages from 24-39 years old. For the highest level of education received, one participant was a high school graduate, seven had some college, and eight participants had four-year college degrees. Fourteen of the participants were Caucasian, one participant was Asian and one participant chose not to fill out the race portion of the demographic data. Fifteen of the participants were married and one was single. Seven of the women had a previous history of depression and nine did not. Five participants were primiparas and ten were multiparas. Participants had between one and seven children. Thirteen participants gave birth vaginally, and three gave birth by cesarean section delivery. All 16 participants

gave birth to singletons. Six of the participants breastfed their infants, six formula fed, and four participants used a combination of breastfeeding and formula feeding.

Scores

Of the 16 women surveyed, 8 had PDSS scores consistent with normal adjustment. Five women surveyed had PDSS scores consistent with significant symptoms of postpartum depression, and three women had PDSS scores that indicated a positive screen for postpartum depression (see Table 4-1).

Table 4-1. PDSS Frequency of Survey

<u>PDSS Score Stratified</u>	<u>Frequency</u>	<u>Percent</u>
Normal Adjustment (PDSS < or 59)	8	50.0%
Positive Screen for major PPD (PDSS Total 80+)	3	18.8%
Significant Symptoms of PPD (PDSS Total = 60-79)	5	31.3%
Total	16	100.0%

Five of the 16 participants had screening scores that indicated positive scores for significant symptoms of postpartum depression. The symptoms of postpartum depression that these five participants screened for positively included anxiety, emotional lability, mental confusion, guilt and loss of self.

Summary

Three participants' screening scores indicated a positive screen for major postpartum depression. An additional five participants had scores indicating that they were experiencing significant symptoms of postpartum depression. The final eight participants' scores indicated normal adjustment. The small sample size makes generalization of these scores to the population of southeastern Montana impossible;

however, if they could be generalized, these results could have significant impact on the perception of incidence of postpartum depression in this area.

CHAPTER 5
RESEARCH FINDINGS, CONCLUSIONS, LIMITATIONS AND
RECOMMENDATIONS

Introduction

The first part of this chapter presents a discussion of the findings of this study. Conclusions drawn from the findings are presented next, followed by a discussion of the limitations of the study and suggestions for future research and practice. The chapter concludes with a summary of the research presented in this paper.

Research Findings

This study was based on the substantive theory of postpartum depression, “Teetering on the Edge,” developed by Beck in 1993. In developing this theory, Beck maintained that women experiencing postpartum depression go through a series of stages, which consist of encountering terror, dying of self, struggling to survive, and regaining control. The stages are comprised of specific symptoms experienced and voiced by women experiencing postpartum depressive illness.

The research tool used for this study was the Postpartum Depression Screening Scale (PDSS), which was developed by Beck and Gable (2000), based on Beck’s substantive theory of postpartum depression. This tool has been found to be highly reliable (coefficient alpha of 0.97 for the PDSS Total Score and coefficients ranging from

0.83 to 0.94 for the seven symptom content scales) and both highly sensitive and specific for screening postpartum depressive illness (Beck & Gable, p. 35, 2002).

A convenience sample of 16 postpartum women was used. All participants in this study were from 4 to 6 weeks postpartum, were over 18 years of age, were able to speak and read English, and had delivered live, full-term infants.

PDSS Total Scores and Symptoms Content Scores

The first part of the data analysis consisted of calculating the participants' Postpartum Depression Screening Scale (PDSS) scores for the PDSS Total and the symptom content scores. This was done using the Scoring Worksheet (see Appendix H). Scores from responses pertaining to seven dimensions of postpartum depressive symptoms were totaled and these totals were then added together to make up the PDSS Total Score. The PDSS Total Score has a possible range of 35-175. This range provided a guide to the severity of participant's postpartum depression symptoms.

The seven symptom dimensions assessed by the PDSS were sleeping/eating disturbances, anxiety/insecurity, emotional lability, mental confusion, loss of self, guilt/shame, and suicidal thoughts. Responses that pertained to these dimensions were totaled. A range of responses to each dimension was provided to interpret the severity of a specific postpartum depressive symptom experienced by a participant.

Conclusions and Comparisons to the Review of Literature

Incidence

The purpose of this study was to survey the incidence of postpartum depression (PPD) in southeastern Montana. There is evidence that many women do not report symptoms of postpartum depression to their health care provider. The review of literature suggested using a formal screening tool as a more effective approach to screening for postpartum depression than using information gathered through history and physical by the health care provider. Three of 16 (19%), participants' PDSS response totals scored within the range that indicated a positive screen for major postpartum depression. This percentage was consistent with results from the review of literature for incidence of PPD within the United States of 7%-26%.

The review of the literature also revealed variations among studies of the results for incidence of PPD. While the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV) defines postpartum depression as having onset within four weeks of delivery, many researchers have observed a positive correlation between depression and childbirth even with onset of depression as late as six to twelve months after delivery (Beck, 1998; Gold, 2002; Spinelli, 1998). Most epidemiologic studies reflect this broader definition of time of onset.

In order to obtain the most accurate incidence of postpartum depression, participants should not be screened prior to completion of the second week following

delivery. Evidence has also shown that PPD may occur any time from two months to one year following childbirth (Andrews-Fike, 1999).

Risk Factors

The review of literature included several risk factors for postpartum depression (PPD) that were included in the demographic information collected by the screening tool. These risk factors included education, race/ethnic group, marital status, history of depression, history of treatment for depression, number of pregnancies, and vaginal/cesarean birth.

Education Level. Fifteen participants had completed some college. Only one participant completed only high school. The Berenson, Breitkopf, and Wu (2003) study found women who had only a high school education were 9% more likely to have significant depressive symptoms than women with even some college. No other study in the review of literature addressed education level as a risk factor. Berenson et al. also found that women with a low income or who scored low on a self-esteem scale had an increased incidence of PPD. These characteristics may also have a relationship to education level. This retrospective study of 4726 low-income women from Texas found 30% to have symptoms of postpartum depression. They concluded that economically challenged women have a 10% higher risk of postpartum depression than those who are financially secure. A meta-analysis of postpartum depression studies (Beck, 2001) found six studies that demonstrated low self-esteem as a significant predictor of PPD. This study did not gather specific data about self-esteem.

Race/Ethnicity. Fourteen of 16 participants were Caucasian, one was Asian, and one did not respond. The small sample size of this study makes it impossible to generalize results and compare with other study results regarding race/ethnicity.

Marital Status. All participants in this study were married. Of the Berenson et al. study participants who were either married or partnered, 17.8% were identified as having moderate or severe postpartum depression, compared to 23.6% of the single, no-partner women identified as having moderate or severe PPD. Marital status was statistically significant ($P = < .01$).

History of Depression/Treatment for Depression. Leopold and Zostnick (2003) reported a previous episode of depressive illness or a prior episode of PPD as predisposing factors for a subsequent episode of PPD. The screening tool used for this study did not include a question about previous episodes of PPD; however, the demographic information gathered did include a question about a previous history of depression (see Appendix F). Seven of the 16 participants in this study reported a previous episode of depression affirmatively. It is of interest that another woman reported a negative history of depression but had been treated for depression. Five of the seven women with a history of depression (71%) had total scores that fell within the range of a positive screen for major postpartum depression. These results would support findings in the review of literature that indicate history of depression as a predictor of postpartum depression (Beck, 2002; Cooper & Murray, 1997).

Number of Pregnancies. The literature review noted that closely spaced pregnancies may be predictive of postpartum depression. The time between pregnancies was not determined in this study. Participants were asked how many times they had been pregnant. Ten of the 16 women had been pregnant more than once. Of the 10 women who had been pregnant more than once, 6 women's survey responses (60%) either indicated a positive screen for major postpartum depression or significant symptoms. This study supports the seminal study of Kendal et al. (1987), which reported that 60.9% of mothers with postpartum psychiatric diagnoses were multigravidas.

Vaginal/Cesarean Births. All three of the study participants who had a positive screen for PPD gave birth vaginally. None of the participants who gave birth by Cesarean section screened positively for PPD. In contrast, the Kendal et al. (1987) study reported a significantly positive correlation between women who delivered infants by Cesarean delivery and a postpartum psychiatric diagnosis.

Conclusions

Three of 16 women surveyed in this study had screening scores that were positive for major postpartum depression. Another five of the women surveyed had positive scores for significant symptoms of postpartum depression. These symptoms included anxiety, emotional lability, mental confusion, guilt and loss of self. The participants of this study were patients of a private obstetrical practice that limits care primarily to women who

have health care insurance. All participants were married, and 15 of 16 had some level of higher education.

At this time, few health care providers in southeastern Montana formally screen women for postpartum depression. The literature review showed formal screening at the appropriate time as much more accurate than history and physical alone (Bagedahl-Strindlund & Borjesson, 1998; Cooper & Murray, 1997). One large health care facility in the area is formally screening for postpartum depression but not utilizing their screening tool at the optimal time for accurate diagnosis. The other large health care facility does not have a formal screening program at this time but does give women information about postpartum depression in written discharge instructions from the hospital.

A small nonrandom sample of 16 postpartum women is not representative of postpartum women in southeastern Montana. Therefore, the results cannot be generalized. Contemplating the population from which this sample was drawn gives one pause for concern. Eight of 16 participants in this insured, partnered, educated, financially stable, live-birth delivering, over age 18 population screened positive for either postpartum depression or significant symptoms of postpartum depression. How much higher would the incidence of PPD be in a population of uninsured, non-partnered, low education level, lower income, under-18 year olds?

Limitations

A small random sample of 16 participants cannot be generalized to the postpartum women of southeastern Montana. As previously discussed, the sample was drawn from a relatively low-risk population and might have shown an incidence rate

lower than a more diverse population. Women who are unable to access obstetrical services due to finances or lack of insurance were not included in this study. Only one non-Caucasian participant was included in this sample.

Another limitation is that using a quantitative tool misses the richness of qualitative responses. As with any self-reported response survey, responses may not be totally accurate. A further limitation of this study is its inability to track the pattern of incidence of postpartum depression over time.

A third limitation of this study was human subjects restrictions that prevented the researcher from having contact with participants for clarification purposes. The Postpartum Depression Screening Scale was intended by its developers to be administered by health care providers as they were providing health care to postpartum women. The health care provider could obtain clarification from the participant whose scores were equivocal. It is possible that participants whose survey responses indicated significant symptoms of postpartum depression but whose scores were not high enough to qualify as major postpartum depression may have had different results following a diagnostic interview.

Recommendations

Research. Future research should include a replication of this study using a larger sample size from a more diverse population base. Research should also be done to compare and contrast rural and urban populations. The population of southeastern Montana is a mixture of rural and urban residents. One wonders if isolation and distance

to health care resources for rural women would change the incidence of postpartum depression.

It would be interesting to determine whether or not a condition similar to PPD occurs in women following adoption of a newborn. This research could test the potential hormonal connection.

Health care providers should be surveyed to determine knowledge of the symptoms, effects and interventions for PPD. Researchers may then know where educational efforts would be best implemented to improve provider awareness of the need for screening and treatment.

Clinical Practice. Health care providers need to screen for postpartum depression. Studies in the review of literature indicated that using a screening tool is more effective than asking if a woman is having symptoms during the history and physical (Bagedahl-Strindlund & Borjesson, 1998; Cooper & Murray, 1997). Instead of asking about PPD during the history and physical, health care providers could formally screen all postpartum women for postpartum depression. Health care providers also need to be made aware that many women will not bring up symptoms of depression. Using a screening tool may facilitate discussion about PPD symptoms with new mothers.

Of the screening tools most frequently used in the United States, the Postpartum Depression Screening Scale (PDSS) is the most sensitive and the most specific. The PDSS gives health care providers information about the specific postpartum depression symptoms a woman may be feeling following the birth of her baby (Beck & Gable, 2001). This study demonstrated that while some women may not screen positive for PPD,

they may nonetheless be troubled by significant symptoms. These postpartum women could benefit from targeted interventions.

Another important implication for health care providers is appropriate timing for the screening process. Research has indicated that it is advantageous to screen for high-risk conditions during pregnancy (Joseffson et al., 2001). Studies have shown a positive correlation between severity of symptoms and duration of depression to the length of delay in obtaining adequate treatment (Beck, 2001; Nonacs & Cohen, 1998). Other research has shown that women whose depression remained unresolved for longer periods had a significantly higher percentage of partners reporting dissatisfaction in the marriage even two years after the initial study (Fishel, 2004). The Viinamaki et al. (1997) study demonstrated that women with PPD symptoms 24 months following delivery also were more likely to abuse alcohol, tobacco and drugs than women who did not experience PPD.

Four to six weeks postpartum is an effective time to screen for the majority of women. Three months after delivery is the time frame when new onset of symptoms will reach the highest point (Andrews-Fike, 1999). Since new mothers in the United States currently have their only postpartum health visit four to six weeks following delivery, a health care provider might consider phoning new mothers to determine their psychological status three months after delivery.

Screening prior to discharge from the hospital after delivery is too early to be effective. Screening too early may lead to a perception of a lower incidence than is true. Falsely negative results for postpartum depression during this time frame may contribute to a misunderstanding by health care providers of the widespread incidence of postpartum depression. This could also contribute to a false sense of security on the part of health care providers, resulting in missed diagnoses and intervention.

Health care providers need to apply individualized targeted interventions for each patient. Some new mothers may benefit from pharmacological intervention. Whenever medications are prescribed, the provider needs to inform the mother about the risk/benefit ratio of medications. The decision to use pharmacological intervention takes on another dimension if the mother is breastfeeding.

Partners of women could be involved in this discussion as well. Women who develop symptoms of postpartum depression may receive earlier intervention if their partners are educated to recognize signs of depression and the significance of those signs. Partner involvement may also lessen feelings of neglect and withdrawal. All childbearing families could be educated about symptoms, risk factors, preventative measures and where to obtain assistance (Boyer, 1990). If families are educated, prophylactic measures may be considered for women who are at highest risk. An educated family could also be more likely to seek treatment for postpartum depression, if it were to occur. Women could be more likely to seek help for themselves if they understood the potential consequences of unresolved depression on themselves, their children and their partners.

A multidisciplinary effort could achieve the best results for women at risk for PPD. Primary care providers and professionals, including pediatricians, would need to collaborate for optimum outcomes. While a woman's obstetrical health care provider might not see her at the peak time frame for developing symptoms, pediatricians could be educated to add postpartum depression screening to well-child visits.

Tragic incidents such as those publicized by the media in the last few years should make health care providers aware of the critical need to treat mothers with postpartum depression promptly and effectively. Proper diagnosis and treatment may prevent the desperation that drives women like Andrea Yates to end the lives of their children. While postpartum psychosis is relatively rare, even the milder forms of postpartum depression can have devastating, life-altering effects on mothers, their partners and families. Health care providers could significantly impact the amount of suffering women and families face through prompt screening, diagnosis and treatment.

Summary

The purpose of this study was to determine the incidence of postpartum depression in southeastern Montana. Analysis of the data revealed that 3 of 16 participants had screening scale scores within the positive range for major postpartum depression. Another five participants had scores consistent with being troubled by significant symptoms of postpartum depression. All participants in the study had a relatively low-risk profile for predisposing factors of postpartum depression.

Clinical implications of this study are that health care providers could improve

rates of detection and treatment for women in southeastern Montana by using a formal screening tool at the appropriate time for screening. A further clinical implication is that by using a tool that identifies specific postpartum depression symptoms a woman may experience, a health care provider could design specific interventions to improve the outcome for that woman.

These results, if generalized to the larger population of southeastern Montana, could indicate an incidence higher than the national rate of 7%-26%. Further research with a larger sample size is needed to determine the true incidence of postpartum depression in southeastern Montana.

Primary care providers and professionals, including pediatricians, could collaborate for optimum outcomes and perhaps prevent tragedies such as have been publicized in the last decade. A multidisciplinary effort could achieve the best outcome for women in southeastern Montana who are at risk for PPD, for their families and for their children

LIST OF REFERENCES

REFERENCES

- Andrews-Fike, C. (1999). A review of postpartum depression. *Primary Care Companion, Journal of Clinical Psychiatry, 1*, 9-14.
- Appleby, L., Mortensen, P. B., & Faragher, E. B. (1998). Suicide and other causes of mortality after post-partum psychiatric admission. *British Journal of Psychiatry, 173*, 209-211.
- Appleby, L., Warner, R., Whitton, A., & Faragher, B. (1997). A controlled study of fluoxetine and cognitive-behavioral counseling in the treatment of postnatal depression. *British Medical Journal, 314*, 932-936.
- Bagedahl-Strindlund, M., Borjesson, K. M. (1998). Postnatal depression: A hidden illness. *Acta Psychiatrica Scandinavica, 98*, 272-275.
- Beck, C. T. (1993). Teetering on the edge: A substantive theory of postpartum depression. *Nursing Research, 42*(1), 42-48.
- Beck, C. T. (1995). The effect of postpartum depression on maternal-infant interactions: A meta-analysis. *Nursing Research, 44*(5), 298-304.
- Beck, C. T. (1998). A checklist to identify women at risk for developing postpartum depression. *Journal of Obstetrical Gynecological and Neonatal Nursing, 27*, 39-46.
- Beck, C. T. (2001). Predictors of postpartum depression: An update. *Nursing Research, 50*(5), 275-285.
- Beck, C. T. (2002). Postpartum depression: A metasynthesis. *Qualitative Health Research, 12*(4), 453-472.
- Beck, C. T., & Gable, R. K. (2000). Postpartum depression screening scale: Development and psychometric testing. *Nursing Research, 49*(5), 272-282.
- Beck, C. T., & Gable, R. K. (2001). Further validation of the postpartum depression screening scale. *Nursing Research, 50*(3), 155-164.
- Beck, C. T., & Gable, R. K. (2002). *Postpartum depression screening scale (PDSS) manual*. Los Angeles: Western Psychological Services.

- Berenson, A. B., Breitkopf, C. R., & Wu, Z. H. (2003). Reproductive correlates of depressive symptoms among low-income minority women. *Obstetrics and Gynecology Clinics of North America*, 102(6), 1310-1317.
- Bergant, A. M., Heim, K., Ulmer, H., & Illmensee, K. (1999). Early postnatal depressive mood: Associations with obstetric and psychosocial factors. *Journal of Psychosomatic Research*, 46(4), 391-394.
- Boyer, D. B. (1990). Prediction of postpartum depression. *NAACOG's Clinical Issues in Perinatal and Women's Health Nursing*, 1(3), 359-368.
- Bozoky, I., & Corwin, E. J. (2001). Fatigue as a predictor of postpartum depression. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 31(4), 436-443.
- Cohn, J. F., Matias, R., Tronick, E. Z., Connell, D., & Lyons-Ruth, K. (1986). Face-to-face interactions of depressed mothers and their infants. In E. Z. Tronick & T. Field (Eds.), *Maternal depression and infant disturbance, new directions for child development, no. 34* (pp. 31-45). San Francisco: Jossey-Bass.
- Cooper, P. J., & Murray, L. (1997). Prediction, detection and treatment of postnatal depression. *Archives of Disease in Childhood, The Journal of the Royal College of Paediatrics and Child Health*, 77, 97-99.
- Cox, J. L., Holden, J. M., & Sagovsky, R. (1987). Detection of postnatal depression—development of the 10-item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry*, 150, 782-786.
- DeJoseph, J. F. (1997). A feminist analysis of women's depression during the childbearing years. *Issues in Mental Health Nursing*, 18, 511-522.
- Diagnostic and statistical manual of mental disorders* (4th ed.). (1994). Washington, DC: American Psychiatric Association.
- Diket, A. L., & Nolan, T. E. (1997). Anxiety and depression: Diagnosis and treatment during pregnancy. *Obstetrics and Gynecology Clinics of North America*, 24(3), 535-559.
- Elliot, S. A., Leverton, T. J., Sanjack, M., Turner, H., Cowmeadow, P., Hopkins, J., et al. (2000). Promoting mental health after childbirth: A controlled trial of primary prevention of postnatal depression. *British Journal of Clinical Psychology*, 39, 223-241.
- Evans, J., Heron, J., Francomb, H., Oke, S., & Golding, J. (2001). Cohort study of depressed mood during pregnancy and after childbirth. *BMJ*, 323(7307), 257-260.

- Evins, G. G., Theofrastous, J. P., & Galvin, S. L. (2000). Postpartum depression: A comparison of screening and routine clinical evaluation. *American Journal of Obstetrics and Gynecology, 182*, 1080-1082.
- Field, T. (1986). Models for reactive and chronic depression in infancy. In E.Z. Tronick & T. Field (Eds.), *Maternal depression and infant disturbance, new directions for child development, no. 34* (pp. 47-60). San Francisco: Jossey-Bass.
- Fishel, A. H. (2004). Mental health disorders and substance abuse. In D. L. Lowdermilk & S. E. Perry (Eds.), *Maternity & women's health care* (pp. 960-982). St Louis: Mosby.
- Fontaine, K. R., & Jones, L. C. (1997). Self-esteem, optimism and postpartum depression. *Journal of Clinical Psychology, 53*(1), 59-63.
- Fowles, E. R. (1996). Relationships among prenatal maternal attachment, presence of postnatal depressive symptoms and maternal role attainment. *Journal of the Society of Pediatric Nurses, 1*, 75-82.
- Georgiopoulos, A. M., Bryan, T. L., Wollan, P., & Yawn, B. P. (2001). Routine screening for postpartum depression. *The Journal of Family Practice, 50*(2), 117-122.
- Gold, L. (2002). Postpartum disorders in primary care: Diagnosis and treatment. *Primary Care, 29*(1), 27-41.
- Gregoire, A. J., Kumar, R., Everitt, B., Henderson, A. F., & Studd, J. W. (1996). Transdermal oestrogen for treatment of severe postnatal depression. *The Lancet, 347*, 930-933.
- Hendrick, V., Altshuler, L. L., & Suri, R. (1998). Hormonal changes in the postpartum and implications for postpartum depression. *Psychosomatics, 39*(2), 93-101.
- Herrick, H. (2002). *Postpartum depression: Who gets help?* (Statistical Brief No. 24). North Carolina Department of Health and Human Services, Division of Public Health.
- Hickey, A. R., Boyce, P. M., Ellwood, D., & Morris-Yates, A. D. (1997). Early discharge and risk for postnatal depression. *Medical Journal of Australia, 167*, 244-247.

- Hobfoll, S. E., Ritter, C., Lavin, J., Hulsizer, M. R., & Cameron, R. P. (1995). Depression prevalence and incidence among inner city pregnant and postpartum women. *Journal of Consulting and Clinical Psychology, 63*(2), 445-453.
- Huang, Y., & Mathers, N. (2001). Postnatal depression: Biological or cultural? A comparative study of postnatal women in the UK and Taiwan. *Journal of Advanced Nursing, 33*(3), 279-287.
- Interpersonal psychotherapy*. (n.d.) Retrieved May 1, 2004, from <http://www.interpersonalpsychotherapy.org>
- Josefsson, A., Berg, G., Nordin, C., & Sydsjo, G. (2001). Prevalence of depressive symptoms in late pregnancy and postpartum. *Acta Obstetrica et Gynecologica Scandinavica, 80*(3), 251-255.
- Kendell, R. E., Chalmers, J. C., & Platz, C. (1987). Epidemiology of puerperal psychoses. *British Journal of Psychiatry, 150*, 662-673.
- Kulin, N. A., Pastuszak, A., Sage, S. R., Schick-Boschetto, B., Spivey, G., Feldkamp, M., et al. (1998). Pregnancy outcome following maternal use of the new selective serotonin reuptake inhibitors. *JAMA, The Journal of the American Medical Association, 279*(8), 609-610.
- Lee, H. L., (1998) Lack of anonymity. In H. L. Lee (Ed.), *Conceptual basis for rural nursing* (pp. 76-88). New York: Springer Publishing Company.
- Leopold, K. A., & Zoschnick, L. B., (2003). *Women's primary health grand rounds at the University of Michigan: Postpartum depression*. Retrieved November 2, 2003, from the OBGYN.net website: <http://www.obgyn.net/default.asp?page=Leopold>
- Logsdon, M. C., McBride, A. B., & Birkimer, J. C. (1994). Social support and postpartum depression. *Research in Nursing and Health, 17*, 449-457.
- Llewellyn, A. M., Stowe, Z. N., & Nemeroff, C. B. (1997). Depression during pregnancy and the puerperium. *Journal of Clinical Psychiatry, 58*(suppl 15), 26-32.
- Luoma, I., Tamminen, T., Kaukonen, P., Laippala, P., Puura, K., Salmelin, R., et al. (2001). Longitudinal study of maternal depressive symptoms and child well-being. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*(12), 1367-1374.
- Maley, B. (2002). Creating a postpartum support group. *AWHONN Lifelines, 6*(1), 62-65.
- Mauthner, N. S. (1998). "It's a woman's cry for help": A relational perspective on

- postnatal depression. *Feminism & Psychology*, 8(3), 325-355.
- Mauthner, N. S. (1999). "Feeling low and feeling really bad about feeling low": Women's experiences of motherhood and postpartum depression. *Canadian Psychology/Psychologie Canadienne*, 40, 143-161.
- McLennan, J., Kotelchuck, M., & Cho, H. (2001). Prevalence, persistence and correlates of depressive symptoms in a national sample of mothers of toddlers. *Journal of the American Academy of Child and Adolescent Psychiatry*, 40(11), 1316-1323.
- Misri, S., Kostaras, X., Fox, D., & Kostaras, D. (2000). The impact of partner support in the treatment of postpartum depression. *The Canadian Journal of Psychiatry*, 45, 554-558.
- Murray, Lynne. (1992). The impact of postnatal depression on infant development. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 33, 543-561.
- Murry, L., Fiori-Crowley, A., & Hooper, R. (1996). The impact of postnatal depression and associated adversity on early mother-infant interactions and later infant outcome. *Child Development*, 67(5), 2512-2526.
- Newport, D. J., Wilcox, M. M., & Stowe, Z. N. (2001). Antidepressants during pregnancy and lactation: Defining exposure and treatment issues. *Seminars in Perinatology*, 25(3), 177-190.
- Nicolson, P. (1999). Loss, happiness and postpartum depression: The ultimate paradox. *Canadian Psychology/ Psychologie Canadienne*, 40, 162-178.
- Nonacs, R., & Cohen, L. S. (1998). Postpartum mood disorders: Diagnosis and treatment guidelines. *The Journal of Clinical Psychiatry*, 59(suppl 2), 34-40.
- Nulman, I., Rovet, L., Stewart, D. E., Wolpin, J., Gardner, H. A., Jochen, G. W., et al. (1997). Neurodevelopment of children exposed in utero to antidepressant drugs. *The New England Journal of Medicine*, 336(4), 258-262.
- O'Connor, T. G., Hawkins, N., Dunn, J., Thrope, K., Golding, J., et al. (1998). Family type and depression in pregnancy: Factors mediating risk in a community sample. *Journal of Marriage and the Family*, 60, 757-770.
- O'Hara, M. W., Schlechte, J. A., Lewis, D. A., & Varner, M. W. (1991). A controlled prospective study of postpartum mood disorders: Psychological, environmental, and hormonal factors. *Journal of Abnormal Psychology*, 100(1), 63-73.
- O'Hara, M. W., Stuart, S., Gorman, L. L., & Wentzel, A. (2000). Efficacy of

- interpersonal psychotherapy for postpartum depression. *Archives of General Psychiatry*, 57(11), 1039-1045.
- O'Hara, M. W., & Swain, A. M. (1996). Rates and risk of postpartum depression—a meta-analysis. *International Review of Psychiatry*, 8, 37-54.
- Panzarine, S., Slater, E., & Sharps, P. (1995). Coping, social support, and depressive symptoms in adolescent mothers. *Journal of Adolescent Health*, 17, 113-119.
- Pitt, B., (1968). “Atypical” depression following childbirth. *British Journal of Psychiatry*, 114, 1325-1335.
- Preski, S., & Walker, L. O. (1997). Contributions of maternal identity and lifestyle to young children’s adjustment. *Research in Nursing & Health*, 20, 107-117.
- Ray, K. L., & Hodnett, E. D. (2002). Caregiver support for postpartum depression (Cochrane Review). In *The Cochrane library*, 2. Oxford: Update Software.
- Righetti-Veltima, M., Conne-Perreard, E., Bousquet, A., & Manzano, J. (1998). Risk factors and predictive signs of postpartum depression. *Journal of Affective Disorders*, 49(3), 167-180.
- Sharp, D., Hay, D. F., Pawlby, S., Schmucker, G., Allen, H., & Kumar, R. (1995). The impact of postnatal depression on boys’ intellectual development. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 36, 1315-1336.
- Sichel, D. A., Cohen, L. S., Robertson, L. M., Ruttenberg, A, & Rosenbaum, J. F. (1995). Prophylactic estrogen in recurrent postpartum affective disorder. *Biological Psychiatry*, 38, 814-818.
- Spinelli, M. G. (1998). Antepartum and postpartum depression. *The Journal of Gender-Specific Medicine*, 1(2), 33-36.
- Stanton, A. L., Lobel, M., Sears, S., & DeLuca, R. S. (2002). Psychosocial aspects of selected issues in women’s reproductive health: Current status and future directions. *Journal of Consulting and Clinical Psychology*, 70(3), 751-770.
- Stein, A., Gath, A., Bucher, J., Bond, A., Day, A., & Cooper, P. J. (1991). The relationship between post-natal depression and mother-child interaction. *British Journal of Psychiatry*, 158, 46-52.
- Straub, H., Cross, J., Curtis, S., Iverson, S., Jacobsmeyer, M., Anderson, C., et al. (1998). Proactive nursing: The evolution of a task force to help women with postpartum depression. *MCN, The American Journal of Maternal/Child Nursing*, 23(5). 262-

265.

- Stuart, S., Couser, G., Schilder, K., O'Hara, M. W., & Gorman, L. (1998). *The Journal of Nervous and Mental Disease*, 186(7), 420-424.
- Taylor, V. (1996). The cradle falls: Postpartum illness and the contradictions of motherhood. In *Rock-a-by baby: Feminism, self-help, and postpartum depression* (pp. 24-58). New York: Routledge.
- Tod, E. (1964). Puerperal depression: A prospective epidemiological study. *Lancet*, 17, 1264-1266.
- US Census Bureau. (2000). *Yellowstone County quick facts*. Retrieved April 25, 2004, from <http://quickfacts.census.gov/qfd/states/30/30111.html>
- Viinamaki, H., Niskanen, L., Pesonen, P., & Saarikoski, S. (1997). Evolution of postpartum mental health. *Journal of Psychosomatic Obstetrics and Gynaecology*, 18, 213-219.
- Wintz, C. J. (1999). Difficult decisions: Women of childbearing age, mental illness and psychopharmacologic therapy. *Journal of the American Psychiatric Nurses Association*, 5(1), 5-14.
- Wisner, K. L., Gelenberg, A. J., Leonard, H., Zarin, D., & Frank, E. (1999). Pharmacologic treatment of depression during pregnancy. *Journal of the American Medical Association*, 282(13), 1264-1269.
- Wisner, K. L., Perel, J. M., & Findling, R. L. (1996). Antidepressant treatment during breast-feeding. *American Journal of Psychiatry*, 9, 1132-1137.
- Wisner, K. L., Perel, J. M., Peindl, L. S., Hanusa, B. H., Findling, R. L., & Rapport, D. (2001). Prevention of recurrent postpartum depression: A randomized clinical trial. *Journal of Clinical Psychiatry*, 62(2), 82-86.
- Wood, A. F., Thomas, S. P., Droppleman, P. G., & Meighan, M. (1997). The downward spiral of depression. *MCN, The American Journal of Maternal/Child Nursing*, 22, 308-316.

APPENDICES

APPENDIX A

NIH COMPLETION SHEET



Completion Certificate

This is to certify that

Valerie Kent

has completed the **Human Participants Protection Education for Research Teams** online course, sponsored by the National Institutes of Health (NIH), on 03/16/2003.

This course included the following:

- key historical events and current issues that impact guidelines and legislation on human participant protection in research.
- ethical principles and guidelines that should assist in resolving the ethical issues inherent in the conduct of research with human participants.
- the use of key ethical principles and federal regulations to protect human participants at various stages in the research process.
- a description of guidelines for the protection of special populations in research.
- a definition of informed consent and components necessary for a valid consent.
- a description of the role of the IRB in the research process.
- the roles, responsibilities, and interactions of federal agencies, institutions, and researchers in conducting research with human participants.

National Institutes of Health
<http://www.nih.gov>

APPENDIX B

PERMISSION TO USE HUMAN SUBJECTS



INSTITUTIONAL REVIEW BOARD

For the Protection of Human Subjects

308 Leon Johnson Hall
 P.O. Box 173080
 Montana State University
 Bozeman, MT 59717-3080
 Telephone: 406-994-4411
 FAX: 406-994-4398
 E-mail: wwami@montana.edu

Chair: Mark Quinn
 406-994-5721
mquinn@montana.edu
Administrator:
 Stephen Guggenheim
 406-994-4411
awmsg@montana.edu

MEMORANDUM

.....

TO: Valerie Kent

FROM: Mark Quinn, Ph.D. *Mark Quinn Ph.D.*
 Chair, Institutional Review Board for the Protection of Human Subjects

DATE: April 21, 2004

SUBJECT: *A Survey of Postpartum Depression in Southeastern Montana* [VK042104]

Thank you for submitting the revisions and clarifications requested by the Institutional Review Board. This proposal is now approved for a period of one-year.

Please keep track of the number of subjects who participate in the study and of any unexpected or adverse consequences of the research. If there are any adverse consequences, please report them to the committee as soon as possible. If there are serious adverse consequences, please suspend the research until the situation has been reviewed by the Institutional Review Board.

Any changes in the human subjects aspects of the research should be approved by the committee before they are implemented.

It is the investigator's responsibility to inform subjects about the risks and benefits of the research. Although the subject's signing of the consent form, documents this process, you, as the investigator should be sure that the subject understands it. Please remember that subjects should receive a copy of the consent form and that you should keep a signed copy for your records.

In one year, you will be sent a questionnaire asking for information about the progress of the research. The information that you provide will be used to determine whether the committee will give continuing approval for another year. If the research is still in progress in 3 years, a complete new application will be required.

INSTITUTIONAL REVIEW BOARD OF BILLINGS

SERVING

Billings Interhospital Oncology Project
Deaconess Billings Clinic
Healthsouth Surgery Center of Billings
Hematology Oncology Centers of North America, P.C.

Montana Cancer Consortium
Montana Health Research Institute
Northern Rockies Cancer Center
Orthopedic Associates, P.C.

Other Independent Investigators
St. Vincent Healthcare
Yellowstone Neurosurgical Associates, P.C.

April 13, 2004

Valerie Kent RN BSN, P.I.
304 Mountain View
Laurel MT 59044

Dear Ms. Kent,

Expedited review and approval is issued by me today, April 13, regarding revised referral instructions on the following survey study:

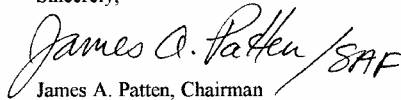
ST. VINCENT HEALTHCARE / MONTANA STATE UNIVERSITY – BOZEMAN SCHOOL OF NURSING
04.11 (MSU-Bozeman/SVH) A Survey of Postpartum Depression in Southeast Montana

A referral pathway for Sites #1 and #2 was corrected to instruct that a researcher who finds a completed survey to indicate major postpartum depression should notify the appropriate healthcare provider and/or staff as soon as possible.

(The IRB of Billings assumes that the healthcare providers and/or staff will act on any such information in a manner appropriate to the situation.)

A copy of the approved revised page is attached.

Sincerely,



James A. Patten, Chairman
Institutional Review Board of Billings

Attachment: Replacement page for "Referral Pathway Sites #1 and #2"

The Institutional Review Board Of Billings is in compliance with the regulations of the Food and Drug Administration effective July 27, 1981, and all amendments thereto, contained in Title 21 of the Code of Federal Regulations, Parts 30 and 36.

• (406) 245-8528 • Fax: (406) 245-5904 •
• 1020 North 27th Street, Suite 120 • Billings, Montana 59101-0760 •

A Survey of Postpartum Depression in Southeastern Montana

APPROVED

APR 13 2004

IRB of Billings

8. **Survey Record Sheets will be destroyed by office staff at the end of each research day.**

**REFERRAL PATHWAY
SITES #1 and #2**

If a survey response indicates participant is positive for major postpartum depression (PDSS Total \geq 80), then:

Researcher notifies appropriate healthcare provider and/or staff as soon as possible.

(For example, notification may go to OBGYN or family practice doctor or staff.)

APPENDIX C

LETTER TO DATA COLLECTION SITE

304 Mountain View
Laurel, MT 59044
(406)628-4757
Email: vknkds@aol.com

March 1, 2004

In regards to: A Survey of Postpartum Depression in Southeastern Montana

Dr. Douglas T Ezell
2520 17th West
Billings, MT 59102

Dear Dr. Ezell,

Enclosed, please find information regarding my graduate research project entitled "A Survey of Postpartum Depression in Southeastern Montana." If you and your partners approve, I'd like to begin data collection sometime later this month, after the project gets final approval from both the Billings IRB and the university's Human Subjects Committee.

I am enclosing the consent form for participants, the research procedure that was developed for OB/GYN Associates, and a copy of the referral pathway in case a participant's survey responses indicate major postpartum depression or suicidal ideation. I am also enclosing a copy of the research tool and the brochures that would be made available to all invited participants in the survey.

I would be happy to meet with you to offer more information or answer questions at any time.

Respectfully yours,
Valerie Kent, RN, BSN

APPENDIX D

SUBJECT INFORMATION SHEET

SUBJECT INFORMATION SHEET
FOR
PARTICIPATION IN HUMAN RESEARCH AT
MONTANA STATE UNIVERSITY-BOZEMAN

Project title: A Survey of Postpartum Depression in Southeastern Montana

Dear Study Participant,

You are being invited to participate in a study of postpartum depression because you gave birth to a baby four to six weeks ago. This study is being conducted by Valerie Kent, RN, BSN, a student in the Family Nurse Practitioner program at Montana State University-Bozeman. The results of the study may help researchers to obtain a better picture of postpartum depression in your community.

If you agree to participate, you will be asked to respond to a list of 35 statements describing ways you might be feeling after the birth of your baby. The survey will take about ten minutes to complete. Returning the survey will be considered consent to participate.

I would encourage you to ask questions of the researcher at any time during your participation in the study. After completing the survey, please return it to the person who gave it to you. Your survey will be scored while you are in the office today. The results will be given to your healthcare provider.

The only risk involved in participation in this study is that you may become aware of emotions of sadness. If you do become aware of these feelings, please discuss them with your healthcare provider as soon as possible. Please feel free to keep the two informational brochures attached to this consent, even if you decide not to participate in the study. You are free to decline to participate in the study and your healthcare provider is not connected to the study. The study is not being funded by any outside source and there will be no cost to you to participate.

Your participation in this study may be of benefit to you by giving your healthcare provider information about your feelings at this time.

The researcher will treat your identity with professional standards of confidentiality. The information obtained in this study may be published in medical journals, but your identity will not be revealed. Surveys will be coded by number. You will be given a copy of the code number of your survey. Should you decide at a later time that you do not wish to participate, you may call (406) 628-4757, or you may write to the researcher below and request that your survey be withdrawn.

Valerie Kent, RN, BSN
304 Mountain View, Laurel, MT 59044

Additional questions about the rights of human subjects can be answered by the Chairman of the Human Subjects Committee, Mark Quinn, (406) 994-5721

APPENDIX E

POSTPARTUM DEPRESSION BROCHURES
GIVEN TO INVITED PARTICIPANTS

Suggestions for taking care of yourself during the postpartum period

Even if you are unable to sleep, try to rest when the baby sleeps. Your body has worked hard to create the baby you delivered, and your body needs to recover.

Eat healthfully. Avoid 'junk food' and try to eat recommended servings of fruits, vegetables and grains daily. Avoid caffeine, alcohol and sugary drinks, opting for water instead.

Try to exercise regularly. Physical activity releases endorphins in the brain, resulting in a 'natural high'.

Ask for and accept help. Realize that there are no perfect mothers, and that everyone needs help from time to time. Also remember that others are unable to read your mind, but are often willing to help in any way possible. Concrete suggestions ("please wash and put away the baby's laundry") will ensure that you are getting the help you want the most.

Avoid stress when possible. For example, if you know the news broadcast on the radio will upset you, put in some favorite music or change the station.

Take time for your relationship. Try doing things you enjoyed doing 'pre-baby' together.

Make regular 'dates' with yourself. Schedule time for you to go to the park, get your nails done, take a walk, or whatever it is that soothes you. As a mother you give of yourself seemingly constantly. You need time to 'replenish the well' so that you can feel healthy and more relaxed.

Online Support for Postpartum Mood Disorders



www.ppdsupportpage.com

This brochure created by
The Online Postpartum Support Group
Visit us on the web at:

[Http://www.ppdsupportpage.com](http://www.ppdsupportpage.com)

The Online Postpartum Support Group does not offer professional medical assistance. Rather, we are a support community comprised of mothers who have experienced all degrees of postpartum mood disorders, as well as family and friends of women with postpartum mood disorders. Our members are from all walks of life and all over the globe. We welcome you to join us for support and friendship.

For more brochures or further information regarding this website, please email:

Tonya@ppdsupportpage.com

Postpartum mood disorders are real.
They are treatable.

You will not feel this way forever.

Ask questions. Seek help.

You are not alone.

What is a Postpartum Mood Disorder?

A postpartum mood disorder is a mental health disorder striking within the first year of giving birth. All women of childbearing age should be aware that a PPMD can strike any woman after delivery regardless of whether you are a first time mother or have had previous pregnancies.

Could I have a postpartum mood disorder?

The *baby blues* affects up to 80 percent of all new mothers, with onset usually between 3 and 14 days postpartum. Symptoms may last only a few days or weeks. These symptoms may include feeling tense, anxious, or exhausted, alternating between joy and sadness, an inability to concentrate and a lack of energy. Twenty percent of women with baby blues will go on to develop postpartum depression.

Postpartum depression affects up to 25 percent of new mothers. Symptoms can be exhibited right away or several months after delivery. Prior incidents of PPD puts a woman at a .50 to 80 percent higher risk of recurrence. Symptoms may include chronic crying, panic attacks, anxiety, sadness, compulsiveness, rapid weight loss or gain, sleep problems, a feeling of detachment from the baby, anger, excessive fear for the baby's health and safety, and frightening thoughts.

Postpartum psychosis, which is believed to affect only one to two new mothers in 1,000, can occur very soon or a couple of weeks after giving birth. In addition to symptoms of baby blues or PPD that may be apparent, a woman with PPP may also experience severe or rapid mood swings, extreme fatigue, hyperactivity, confusion, incoherent statements,

thoughts of harming self or baby, losing touch with reality, hallucinations and/or irrational thoughts, and delusional thinking. It is believed that PPP results in a suicide rate of five percent, and an infanticide rate of four percent. Women suffering from PPP can 'cycle' rapidly, going from lucid to irrational quickly. PPP requires immediate medical intervention.

Women in the postpartum period may also experience *panic disorder* and/or *obsessive compulsive disorder*. Panic disorder can manifest with symptoms such as terror, racing or pounding heart, chest pains, dizziness, nausea, shortness of breath, hot or cold flashes, and irrational fears. People experiencing panic attacks often go to the emergency room, fearing they are having a heart attack. Obsessive behaviors are hallmarked by unwanted ideas or impulses that flood the mind. Fears about safety and hygiene and an unremitting drive for perfection are common. Compulsions are actions a person feels she must take, such as repetitive hand washing, repeating, and constantly rearranging objects. Postpartum onset of OCD can also include a visual 'loop' of something horrible happening, unwanted thoughts about harming or killing the baby, and tremendous repulsion about having these thoughts.

Treatments of these illnesses may require medication, psychotherapy and, in extreme cases such as PPP, hospitalization.

What can I do if I suspect I have a PPMD?

The first thing you should do is contact your doctor, who may refer you to a psychiatrist and/or therapist. If your doctor advises medication, don't be afraid to try it. For many women with PPMDs medication is a helpful and necessary treatment. Don't berate yourself if you do require medication. It can help.

Where can I find out more about Postpartum Mood Disorders?

There are several good books available on postpartum mood disorders and clinical depression. Here is a brief list of recommended titles:

Women's Moods : What Every Woman Must Know About Hormones, the Brain, and Emotional Health by Deborah Sichel, M.D. and Jeanne Watson Driscoll, M.S., R.N., C.S. (Quill)

The Postpartum Husband: Practical Solutions for living with Postpartum Depression by Karen Kleiman, MSW (Klibris)

This Isn't What I Expected by Karen Kleiman, MSW, and Valerie Roskin, M.D. (Bantam Books)

Shouldn't I Be Happy: Emotional Problems of Pregnant and Postpartum Women by Shaila Mistri, M.D. (Simon and Schuster)

There are also several organizations that offer information, support and advice, including:

Postpartum Support International
927 North Kellogg Avenue Santa Barbara, CA 93111
1-805-967-7636

Depression after Delivery, Inc.
91 East Somerset St., Raritan, NJ 08869-2129
1-800-944-4PPD

Postpartum Depression
The National Women's Health Information Center
The Office on Women's Health - US Department of Health and Human Services
1-800-994-WOMAN

Reaching out for the proper help is an important step toward recovery. If you are experiencing the symptoms described in this brochure, do not continue to suffer in silence. Share your concerns with your health care professional and get in touch with us.

DEPRESSION AFTER DELIVERY, INC.

HISTORY

Depression After Delivery, Inc. is a national, nonprofit organization founded in 1965 by Nancy Berchtold after experiencing her own postpartum complications.

Nancy, joined by others affected by postpartum complications, and professionals interested in public and professional education, began the journey down the road to awareness, hope, recovery, and prevention. Following national recognition on *The Phil Donahue Show* and *The Oprah Winfrey Show*, D.A.D. took on a life of its own.

PURPOSE

The organization was formed to provide support for women with postpartum depression. It has expanded its focus to include education, information, and referral for women and families coping with mental health issues associated with childbearing, both during pregnancy and postpartum.

D.A.D., Inc. also promotes awareness of these issues to all sectors of the community and advocates for the well-being of women and their families.

When you reach out to us, we will send you information on pregnancy and postpartum disorders, a professional referral list, and a list of our volunteer telephone contacts and support groups.

MISSION

Universal Awareness of Mood and Anxiety Disorders Surrounding Pregnancy and Childbirth

If you wish to receive a free information packet or to receive more of these brochures, please call the following number and leave your name and address.

Information Request Line: 1-800-944-4PPD

Copyright 2003, Depression After Delivery, Inc.

D.A.D., Inc. Membership
Members receive our biannual newsletter *Hear! Strings!*
and membership fees are due on an annual basis

I would like to become a General Member. Enclosed is \$30.00.

I am a physician or allied health care professional interested in becoming listed as a professional resource for D.A.D., Inc. Please send me a professional information packet/application. (Professional Members- \$100.00)

I want to help D.A.D., Inc. continue providing free information, education, support and resources to those in need. Enclosed is \$_____ for use where the need is greatest.

(All donations are tax deductible)

NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

MAIL TO: Depression After Delivery, Inc., 91 East Somerset St., Raritan, NJ 08869

For Office Use Only



Helping Women Deal With Feelings Surrounding
Pregnancy and Childbirth Since 1985.

Pregnancy and Postpartum Mood Disorders

Are you pregnant?

Have you had a baby in the past year?

Have you miscarried?

Are you feeling sad, nervous, worried, or scared?

You Are Not Alone! We Can Help!

Depression After Delivery, Inc.

91 East Somerset Street, Raritan, NJ 08869

Information Request Line: 1-800-944-4PPD

www.depressionafterdelivery.com

Support ♦ Education ♦ Information ♦ Referral

Postpartum distress may also include obsessive compulsive features. **Postpartum Obsessive Compulsive Disorder (OCD)** can occur for the first time in women following childbirth, if a woman has a history of OCD, her symptoms may intensify. Symptoms include:

- **intrusive, repetitive thoughts (including thoughts of harming the baby)**
- **avoidance behavior (i.e. avoiding the baby to alleviate intrusive thoughts)**
- **anxiety**
- **depression**

These thoughts are often scary and are perceived as being out of character for the woman experiencing them.

Postpartum Psychosis

Postpartum psychosis is the most severe and, fortunately, the rarest postpartum reaction. It occurs in about 1 in 1,000 women, usually within the first three weeks after the birth. Symptoms are very exaggerated. The woman will experience a break with reality which may include the experience of hallucinations and/or delusions. Other symptoms may include severe insomnia, agitation, and bizarre feelings and behavior. Postpartum psychosis is a serious emergency and requires immediate medical help.

Antepartum Disorders

Although you may be familiar with terms such as "baby blues" and "postpartum depression" as they apply to the time period after childbirth, some women experience these symptoms during pregnancy, following a miscarriage, or termination of pregnancy, as well as, after childbirth.

Who Is Affected?

Any woman who is pregnant, had a baby within the past year or so, miscarried, or recently weaned a child from breast feeding can be affected, regardless of how many previously uncomplicated pregnancies and/or postpartum adjustments she has had. Most women have never experienced anything like this at any other time in their lives.

What Causes These Mood & Anxiety Disorders?

We are not 100% sure. There are multiple causes for mood and anxiety disorders - hormonal imbalance, stress, isolation, etc.... Currently, hormones are receiving attention in the search for causes of pregnancy and postpartum mood and anxiety disorders. Researchers have suggested that the rapid changes in levels of hormones such as estrogen, progesterone and thyroid appear to have a strong effect on women's moods.

Treatment

Treatment for these disorders varies, depending on the type and severity of symptoms. **All of the symptoms, from the mild to the most severe, are temporary and treatable with skilled professional help and support.**

A woman experiencing any of the symptoms described in this brochure should contact her health care professional. She should have a complete medical evaluation, including a thyroid screening.

The "ideal" treatment plan includes:

- **medical evaluation (to eliminate physiological causes such as thyroid)**
- **psychiatric evaluation**
- **psychotherapy**
- **participation in a support group for emotional support and education**



During pregnancy and following the birth of a baby, a wide range of emotions are possible. Often there are the expected feelings of excitement and joy, along with feelings of anxiety and worry.

Mothers may also feel overwhelmed, uncertain, and frustrated. Being pregnant can be difficult. Caring for an infant is hard work. Regardless of how prepared you were or how much you looked forward to your pregnancy and your baby's birth, this time may include some unexpected "highs" and "lows". Time, patience, and support from family and friends are all helpful during this period of adjustment.

Sometimes, in spite of help and support, women may feel bewildered and concerned about themselves. These more confusing emotions are classified in the following ways:

Baby Blues

"The baby blues" is an extremely common reaction occurring in the first few days after delivery, usually appearing suddenly on the third or fourth day. Fifty to 75% of all new mothers experience this feeling of letdown after the emotionally charged experience of birth. Symptoms may include crying for no apparent reason, impatience, irritability, restlessness and anxiety. This is the most common, and least severe, and the most well known of the postpartum reactions. Symptoms of the blues are briefly unpleasant and usually disappear on their own, sometimes as quickly as they came.

Postpartum Depression

At least one in ten new mothers experience various degrees of postpartum depression. Postpartum complications can occur within days of the delivery or appear gradually, sometimes up to a year or so later. Symptoms may include:

- **sluggishness, fatigue, exhaustion**
- **sadness, depression, hopelessness**
- **appetite and sleep disturbances**
- **memory loss**
- **overconcern for the baby**
- **uncontrollable crying, irritability**
- **lack of interest in the baby**
- **guilt, inadequacy, worthlessness**
- **fear of harming the baby**
- **poor concentration, confusion**
- **exaggerated highs and/or lows**
- **lack of interest in sex**

A woman suffering from postpartum depression will usually experience several of the above symptoms ranging from mild to severe. She may experience "good" days and alternating "bad" days. Although postpartum depression does not take the same form for every woman, all of the symptoms can be equally distressing and often leaves the woman feeling ashamed, guilty and isolated.

Some women may not feel depressed, but may feel very anxious.

Postpartum anxiety and/or panic disorder is characterized by:

- **intense anxiety and/or fear**
- **rapid breathing**
- **fast heart rate**
- **sense of doom**
- **hot or cold flashes**
- **chest pain**
- **shaking**
- **dizziness**

APPENDIX F

POSTPARTUM DEPRESSION SCREENING SCALE
DEMOGRAPHIC INFORMATION SHEET

Please complete the following information:

Name (or ID number): _____

Age: _____ years

What is the highest education you have earned?

- Less than high school graduate
- High school graduate
- Some college
- Four-year college degree or more

What is your race/ethnic group?

- White
- Black or African American
- Hispanic or Latino
- Asian
- American Indian or Alaskan Native
- Native Hawaiian or other Pacific Islander

Other (please specify) _____

What is your marital status?

- Single
- Married
- Partnered
- Divorced
- Separated
- Widow

Other (please specify) _____

Do you have a previous history of depression? Yes No

Have you ever been treated for depression
(psychotherapy or medication)? Yes No

How many times have you been pregnant? _____

How many biological children do you have? _____

For your most recent birth:

What type of delivery did you have? Vaginal Cesarean

What was the date of your baby's birth? _____

How are you feeding your baby?

- Bottle feeding
- Breast-feeding
- Combination

PDSS

**AUTOSCORE™
FORM**

Cheryl Tatano Beck, D.N.Sc.,
and Robert K. Gable, Ed.D.

Published by
WESTERN PSYCHOLOGICAL SERVICES
12031 Wilshire Boulevard
wps Los Angeles, CA 90025-1251
Publishers and Distributors

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APPENDIX G

POSTPARTUM DEPRESSION SCREENING SCALE

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

Strongly Disagree
Disagree
Neither Agree
nor Disagree
Agree
Strongly Agree

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

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

During the past 2 weeks,

- 1.....2.....3.....4.....5..... 1. I had trouble sleeping even when my baby was asleep.
 - 1.....2.....3.....4.....5..... 2. I got anxious over even the littlest things that concerned my baby.
 - 1.....2.....3.....4.....5..... 3. I felt like my emotions were on a roller coaster.
 - 1.....2.....3.....4.....5..... 4. I felt like I was losing my mind.
 - 1.....2.....3.....4.....5..... 5. I was afraid that I would never be my normal self again.
 - 1.....2.....3.....4.....5..... 6. I felt like I was not the mother I wanted to be.
 - 1.....2.....3.....4.....5..... 7. I have thought that death seemed like the only way out of this living nightmare.
- Stop here if you were asked to complete only the Short Form.**
- 1.....2.....3.....4.....5..... 8. I lost my appetite.
 - 1.....2.....3.....4.....5..... 9. I felt really overwhelmed.
 - 1.....2.....3.....4.....5..... 10. I was scared that I would never be happy again.
 - 1.....2.....3.....4.....5..... 11. I could not concentrate on anything.
 - 1.....2.....3.....4.....5..... 12. I felt as though I had become a stranger to myself.
 - 1.....2.....3.....4.....5..... 13. I felt like so many mothers were better than me.
 - 1.....2.....3.....4.....5..... 14. I started thinking that I would be better off dead.
 - 1.....2.....3.....4.....5..... 15. I woke up on my own in the middle of the night and had trouble getting back to sleep.
 - 1.....2.....3.....4.....5..... 16. I felt like I was jumping out of my skin.
 - 1.....2.....3.....4.....5..... 17. I cried a lot for no real reason.
 - 1.....2.....3.....4.....5..... 18. I thought I was going crazy.
 - 1.....2.....3.....4.....5..... 19. I did not know who I was anymore.
 - 1.....2.....3.....4.....5..... 20. I felt guilty because I could not feel as much love for my baby as I should.
 - 1.....2.....3.....4.....5..... 21. I wanted to hurt myself.
 - 1.....2.....3.....4.....5..... 22. I tossed and turned for a long time at night trying to fall asleep.
 - 1.....2.....3.....4.....5..... 23. I felt all alone.
 - 1.....2.....3.....4.....5..... 24. I have been very irritable.
 - 1.....2.....3.....4.....5..... 25. I had a difficult time making even a simple decision.
 - 1.....2.....3.....4.....5..... 26. I felt like I was not normal.
 - 1.....2.....3.....4.....5..... 27. I felt like I had to hide what I was thinking or feeling toward the baby.
 - 1.....2.....3.....4.....5..... 28. I felt that my baby would be better off without me.
 - 1.....2.....3.....4.....5..... 29. I knew I should eat but I could not.
 - 1.....2.....3.....4.....5..... 30. I felt like I had to keep moving or pacing.
 - 1.....2.....3.....4.....5..... 31. I felt full of anger ready to explode.
 - 1.....2.....3.....4.....5..... 32. I had difficulty focusing on a task.
 - 1.....2.....3.....4.....5..... 33. I did not feel real.
 - 1.....2.....3.....4.....5..... 34. I felt like a failure as a mother.
 - 1.....2.....3.....4.....5..... 35. I just wanted to leave this world.

APPENDIX H

POSTPARTUM DEPRESSION SCREENING SCALE
SCORING SHEET

SCORING WORKSHEET

	SLP	ANX	ELB	MNT	LOS	GLT	SUI								
1.....2.....3.....4.....5..... 1.	<input type="text"/>														
1.....2.....3.....4.....5..... 2.		<input type="text"/>													
1.....2.....3.....4.....5..... 3.			<input type="text"/>												
1.....2.....3.....4.....5..... 4.				<input type="text"/>											
1.....2.....3.....4.....5..... 5.					<input type="text"/>										
1.....2.....3.....4.....5..... 6.						<input type="text"/>									
1.....2.....3.....4.....5..... 7.							<input type="text"/>	<input type="text"/>							
1.....2.....3.....4.....5..... 8.	<input type="text"/>														
1.....2.....3.....4.....5..... 9.		<input type="text"/>													
1.....2.....3.....4.....5..... 10.			<input type="text"/>												
1.....2.....3.....4.....5..... 11.				<input type="text"/>											
1.....2.....3.....4.....5..... 12.					<input type="text"/>										
1.....2.....3.....4.....5..... 13.						<input type="text"/>									
1.....2.....3.....4.....5..... 14.							<input type="text"/>								
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1.....2.....3.....4.....5..... 21.							<input type="text"/>								
1.....2.....3.....4.....5..... 22.	<input type="text"/>														
1.....2.....3.....4.....5..... 23.		<input type="text"/>													
1.....2.....3.....4.....5..... 24.			<input type="text"/>												
1.....2.....3.....4.....5..... 25.				<input type="text"/>											
1.....2.....3.....4.....5..... 26.					<input type="text"/>										
1.....2.....3.....4.....5..... 27.						<input type="text"/>									
1.....2.....3.....4.....5..... 28.							<input type="text"/>								
1.....2.....3.....4.....5..... 29.	<input type="text"/>														
1.....2.....3.....4.....5..... 30.		<input type="text"/>													
1.....2.....3.....4.....5..... 31.			<input type="text"/>												
1.....2.....3.....4.....5..... 32.				<input type="text"/>											
1.....2.....3.....4.....5..... 33.					<input type="text"/>										
1.....2.....3.....4.....5..... 34.						<input type="text"/>									
1.....2.....3.....4.....5..... 35.							<input type="text"/>								
	SLP	+	ANX	+	ELB	+	MNT	+	LOS	+	GLT	+	SUI	=	PDSS Total

SHORT
TOTAL

APPENDIX I

POSTPARTUM DEPRESSION SCREENING SCALE
SCORING INTERPRETATION SHEET

PDSS

SUMMARY SHEET

Cheryl Tatano Beck, D.N.Sc.,
and Robert K. Gable, Ed.D.

Client name (or ID number): _____

Today's date: _____

Published by
WESTERN PSYCHOLOGICAL SERVICES

wps 12031 Wilshire Boulevard
Los Angeles, CA 90025-1251
Publishers and Distributors

INC Score

If INC ≥ 4 , this woman may have had difficulty reading or understanding the PDSS, or may have had problems paying attention to the questionnaire from start to finish. Please see chapter 3 of the PDSS manual for more details on how to interpret the PDSS when INC ≥ 4 .

not scored for PDSS Short

PDSS Total

Short Total

INTERPRETIVE RANGES FOR PDSS TOTAL AND SHORT TOTAL

Positive Screening for Major Postpartum Depression (PDSS Total ≥ 80)

This woman should be referred as soon as possible to a mental health professional for further evaluation and treatment. If there is indication of danger to self (e.g., elevation on the PDSS Suicidal Thoughts content scale) or danger to others, the woman should be referred immediately for a psychiatric evaluation.

Significant Symptoms of Postpartum Depression (PDSS Total = 60–79; PDSS Short Total ≥ 14)

This woman may need to be referred for a mental health evaluation, depending on other factors (see chapter 3 of the manual for more details on how to make this decision). If no referral is made, this woman needs to be educated about postpartum depression and to be provided with guidelines about what to do if her symptoms worsen. If Short Total ≥ 14 , the full-length PDSS should be administered.

Normal Adjustment (PDSS Total ≤ 59 ; PDSS Short Total ≤ 13)

This woman does not need to be referred for mental health evaluation at this time. She may nevertheless benefit from education about postpartum depression.

SYMPTOM CONTENT PROFILE for PDSS Short, skip to SUI interpretive suggestions

SLP Score

Sleeping/Eating Disturbances

If SLP ≥ 14 , this woman is reporting significant disturbance in her normal appetite and/or sleeping habits. SLP ≤ 13 indicates little or no disturbance in appetite and/or sleep.

ANX Score

Anxiety/Insecurity

If ANX ≥ 15 , this woman is endorsing a high level of anxiety symptoms, which may include psychomotor agitation and feeling overwhelmed and/or isolated. ANX ≤ 14 indicates little or no problem with anxiety.

ELB Score

Emotional Lability

If ELB ≥ 15 , this woman is reporting that her emotions are unstable, and she may be irritable and/or subject to frequent crying spells. ELB ≤ 14 indicates little or no problem with emotional instability.

MNT Score

Mental Confusion

If MNT ≥ 14 , this woman is endorsing problems with mental confusion, as well as difficulties controlling her thought processes and sustaining attention on tasks. MNT ≤ 13 indicates little or no confusion or disturbance in attention.

LOS Score

Loss of Self

If LOS ≥ 13 , this woman is reporting changes in aspects of her personal identity. That is, she perceives herself as strange or abnormal, in comparison to the way she was prior to giving birth. LOS ≤ 12 indicates little or no change in the woman's perception of herself.

GLT Score

Guilt/Shame

If GLT ≥ 13 , this woman is endorsing significant feelings of guilt and/or shame for not measuring up to her own standards of "good mothering." GLT ≤ 12 indicates that the woman has little or no guilt or shame regarding her performance as a mother.

SUI Score

Suicidal Thoughts

If SUI ≥ 6 (or if Item 7 on PDSS Short is rated 2 or higher), this woman may be entertaining thoughts of harming herself. The clinician should interview the woman regarding her level of suicidality. **Whenever this questioning yields confirmation of suicidal thoughts, the woman must be evaluated immediately by a mental health professional.**

Short Item 7

Be sure to consult chapter 3 of the PDSS manual for complete information about how to interpret this questionnaire.

APPENDIX J

SURVEY RECORD SHEET
FOR DATA COLLECTION SITE

SURVEY RECORD SHEET

CODE NUMBER:

MD:

PARTICIPANT NAME:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

OFFICE RECORDS ONLY. THIS SHEET TO BE DESTROYED AT THE END OF EACH BUSINESS DAY.