



Postpartum Depression: A Nurse's Guide

A clinical review of the risks, consequences, and treatments.

ABSTRACT: Despite extensive research, the etiology behind postpartum depression (PPD) remains a mystery. Experts have theorized about various potential risk factors, including hormonal fluctuations, genetics, prior history of depression, low socioeconomic status, adolescent pregnancy, and certain personality traits. This article provides foundational information about PPD, reviewing the risk factors for and the consequences of this mood disorder. Postpartum blues and postpartum psychosis are briefly discussed for context, although they differ from PPD. Screening and treatment options are explained, and nursing implications for practice are presented.

Keywords: postpartum depression, postpartum screening, risk factors, treatment

Pregnancy and the transition to motherhood constitute a major life event, one that is inherently stressful. It affects a woman's biopsychosocial well-being, making her vulnerable to mood disorders such as postpartum depression (PPD). PPD is a debilitating condition characterized by such feelings as extreme sadness, anxiety, despair, irritability, anger, indifference, loss of pleasure, and hopelessness.^{1,2} Changes in eating, sleeping, and cognitive focus are common. PPD has profound consequences, affecting the mother, the baby, and the family. The mother may have difficulty performing even the simplest tasks; in more severe cases, there may be detachment from the baby.³

In a recent meta-analysis of 291 studies conducted in 56 nations, the global pooled prevalence of PPD was 17.7%.⁴ In the United States, the Centers for Disease Control and Prevention (CDC) has reported a prevalence rate of 13%.⁵ Yet, despite years of extensive research, the etiology behind PPD is still unknown. This does not lessen nursing's responsibility to prevent, or at least minimize, the

crippling effects of PPD through education, screening, and referral. Because postpartum blues and postpartum psychosis have symptoms that overlap with those of PPD, initial assessment can be challenging. The following section aims to help readers make the distinction.

POSTPARTUM BLUES AND POSTPARTUM PSYCHOSIS

Postpartum blues, also called "baby blues," is considered an adjustment disorder⁶; of the postpartum mood disorders, it's the least life altering. It frequently occurs in first-time mothers about two to three days after delivery and typically lasts less than two weeks.^{6,7} Reported prevalence rates vary. One systematic review of 26 studies involving women from Europe, Asia, Africa, and the Americas found an overall global prevalence of 39%, with rates as high as 76% in some countries.⁸ In the United States, the American Psychiatric Association (APA) indicates that prevalence may be as high as 70%.⁹

While the exact cause of postpartum blues is unknown, it appears to be precipitated by the stress of new motherhood. In the first days after child-

birth, mothers often experience an emotional let-down compounded by physical discomfort. They may feel overwhelmed, anxious, exhausted, “teary,” and irritable as they adjust to parenthood. They must adjust to body changes, breastfeeding demands, changes to the partner relationship, and loss of personal time; self-care often becomes a low priority.⁶ A poor-quality relationship, lack of adequate social support, and sleep deprivation may also be contributing factors.¹⁰ Nursing responsibilities include educating mothers and their partners on the signs and symptoms of postpartum blues, explaining that it’s a common condition, and encouraging them to seek further evaluation if symptoms worsen or persist beyond two weeks. The condition generally doesn’t require medical treatment, and symptoms resolve with family and peer support.¹

Postpartum psychosis, in contrast, is the most serious of postpartum mood disorders. Approximately one to two women out of 1,000 experience this.¹¹ Onset is typically sudden, with symptoms arising within the first few hours to weeks after delivery, although this time frame lacks clear consensus.^{11,12} The disorder is characterized by psychotic symptoms such as delusional thinking and visual and auditory hallucinations, and is considered a psychiatric emergency.¹³ Paranoid thoughts, such as believing that people want to hurt them or their baby, are also common.

Often there is a mood component. Some new mothers experience elation, racing thoughts, and elevated energy despite insomnia.^{12,13} Others experience depression, anxiety, and feelings of hopelessness and worthlessness.¹³ A mixed presentation with rapid mood changes can occur. In one study, women who had experienced postpartum psychosis reported initial feelings of “unexpected and extreme distress” in stark contrast to expected joy.¹⁴ Many participants felt profound fear and guilt, as they perceived themselves to be failing their infant and family. Delays in the recognition of their illness or access to treatment and support worsened their distress and adversely affected their recovery. If postpartum psychosis is suspected, the patient should be referred for psychiatric consult immediately.

RECOGNIZING PPD

As Beck has noted, “postpartum depression” is often used as a catchall phrase for various postpartum mood disorders.¹⁵ Nurses must be able to distinguish and recognize PPD. In the APA’s *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*, PPD shares the same diagnostic criteria as

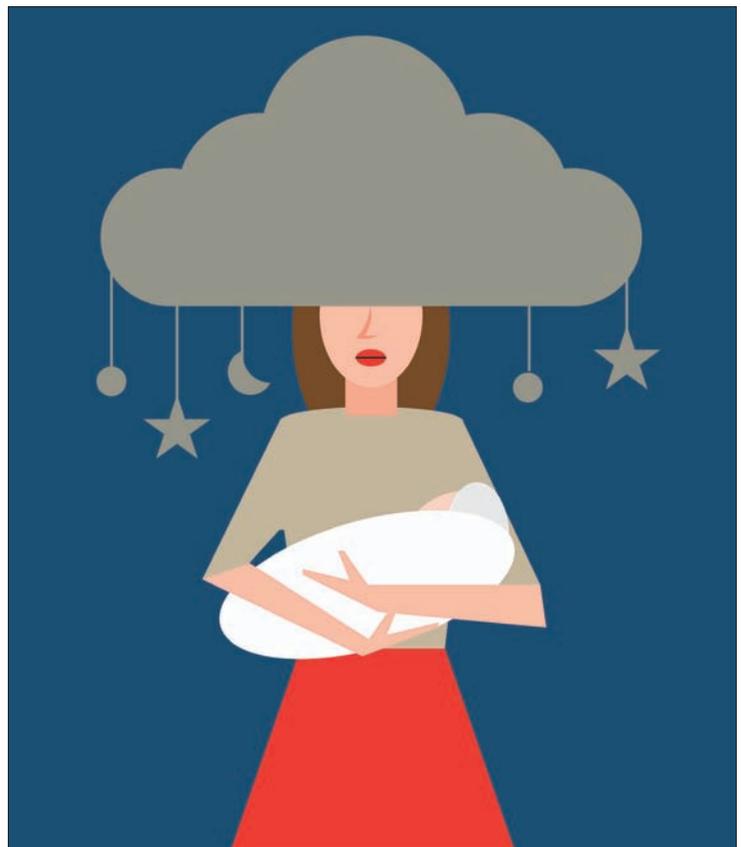


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major depressive disorder, with the added specifier that mood symptoms occur during pregnancy or within four weeks of delivery.¹ (Because symptom onset in pregnancy is common, the term “peripartum depression” is sometimes used.) During that time, at least five of eight key symptoms lasting for at least two weeks must be present, with at least one of these symptoms being depressed mood or diminished interest and pleasure in activities. Both must be present most of the day, every day. (For the complete list of symptoms and their clinical manifestations, see Table 1.)¹ Symptoms cause clinically significant distress or impairment in social and occupational functioning, and are not associated with other medical conditions.

Assessment can be challenging for the nurse, especially since some PPD symptoms overlap with those seen in postpartum blues, early postpartum psychosis, and certain other medical conditions. Differential diagnosis should be a consideration. For example, if depressed mood and fatigue are presenting symptoms, it’s important to rule out other possible causes such as anemia, diabetes, or thyroid disease. Similarly, agitation, poor concentration,

Table 1. Symptoms and Clinical Manifestations of Major Depression¹

Symptoms	Clinical Manifestations
Depressed mood	Sadness, hopelessness, crying episodes, sensations of physical “leadenness,” irritability, anger
Diminished interest or pleasure in activities	Loss of interest in things once enjoyed, such as hobbies; withdrawal from family and friends; loss of sexual desire
Weight changes	Reduction or increase in appetite, food cravings, refusing food
Sleep disruptions	Insomnia or hypersomnia
Psychomotor changes	Agitation: pacing, hand-wringing, pulling or rubbing of skin or clothing Retardation: slowed speech, thinking, body movements
Fatigue	Decreased energy, increased tiredness without physical exertion
Feelings of worthlessness	Self-blame or guilt, rumination over minor past failings
Inability to concentrate	Impaired ability to think, concentrate, or make simple decisions; difficulty with memory
Recurrent thoughts of death or suicide	Wanting not to wake up in the morning; suicidal ideation with or without a plan

and insomnia or hypersomnia can be symptomatic of substance abuse.¹ There is a clear need for more definitive ways to diagnose PPD. An understanding of the PPD risk factors unique to each patient is thus essential.

RISK FACTORS

While there is no single cause of PPD, several etiologic risk factors have been identified, including genetic variants, hormonal fluctuations, a history of depression, and certain personality traits. Other risk factors include low socioeconomic status, intimate partner violence (IPV), adolescent pregnancy, and unintended pregnancy.

Etiologic risk factors. *Genetic variants.* Variants in gene structures have been found in people with certain psychological disorders such as bipolarity and major depression, but how these variants might relate to PPD remains unclear.¹⁶ While no specific variant has been linked to PPD, there is evidence that women with a variant linked to major depression are at greater risk for developing PPD.¹⁷ This doesn’t mean that everyone with such a variant will develop major depression or PPD, but it underscores the importance of including family history as part of nursing assessment.

Hormonal fluctuations. Competing hormonal changes, both during and after pregnancy, are thought to play a role in mood shifts.⁶ During pregnancy, the placenta acts as an added endocrine gland, producing massive levels of progesterone and estradiol. These hormones, which are present at low levels outside of pregnancy, are needed to support the growth and development of the fetus. Upon delivery of the placenta, sharp declines in these hor-

mones have been found to cause subclinical depressive symptoms,¹⁸ and negative mood affect associated with PPD up to one month later.¹⁹ In contrast, during labor and delivery, the release of other hormones such as β -endorphins and oxytocin function to create a feeling of euphoria.²⁰ β -endorphins also help to manage the pain of labor and oxytocin stimulates infant bonding.²⁰

History of depression. There is evidence that a history of depression is predictive of PPD. In one study, researchers explored postpartum affective disorder (a broader category that includes PPD) in primiparous women with no prior psychiatric history who went on to deliver a second child.²¹ They found that those who experienced postpartum affective disorder after their first pregnancy were at greater risk for PPD than those who experienced postpartum affective disorder after their second pregnancy, which speaks to the importance of timely recognition. In another study, investigators examined postpartum women with a history of depression occurring before their first pregnancy.²² Compared with controls without such history, the women with a prior history of depression were 20 times more likely to develop PPD. And another study explored the impact of depression present during late-term pregnancy.²³ The findings showed that prenatal depression was a strong predictor of PPD, suggesting that women with prenatal depression are at greater risk for developing PPD than those without such depression.

Personality traits. There is some evidence that certain traits may either cause or predispose one to postpartum blues,¹⁰ as well as PPD. In particular, researchers have focused on neuroticism (as

opposed to emotional stability) as a personality trait associated with PPD. People with this trait are prone to anxiety, apprehension, depression, frustration, irritability, and impulsivity.²⁴ In one study, researchers found that women who developed depressive symptoms at six weeks postpartum scored significantly higher on a scale testing for neuroticism than did those with no symptoms.²⁵ Although the above-named feelings and behaviors are normal and common, for some women they may signal something more serious.

Other risk factors. *Low socioeconomic status* is linked to chronic stressors such as low income, inadequate education, and poor housing. It seems likely that a woman with a newborn who must also cope with substandard living conditions may be at increased risk for depression.²⁶ Studies examining socioeconomic status in women of diverse racial and ethnic populations and women from resource-constrained countries have reported education, income, employment, and marital status as contributing factors.^{27,28} In one study, at three months postpartum, women with four socioeconomic risk factors (low monthly income, less than a college education, unmarried, unemployed) were 11 times more likely to have clinically elevated depression scores than women without such risk factors.²⁹ A poor marital relationship has also been identified as a moderate predictor of PPD.³⁰

IPV. More than one in three women (36.4%) in the United States experience some form of IPV during their lifetime, and one in four (25.1%) report that IPV has lasting impact.³¹ There is evidence that for pregnant and postpartum women, one result may be depression. One small study of 301 postpartum women found that self-reported IPV was strongly associated with PPD—regardless of socioeconomic status.³² In that study, IPV was linked to a 10% increase in PPD scores on the Edinburgh Postnatal Depression Scale (EPDS). A larger study of more than 52,000 postpartum women yielded similar results.³³ Thus screening for IPV is critically important.

Adolescent pregnancy. There has been scant research on PPD in adolescents, despite evidence that PPD is more prevalent in this population than in adult women.³⁴ Some risk factors—preexisting depression, abuse, lower socioeconomic status, and limited social support—appear to be similar in both populations.³⁴ But there are important differences. As Johnson has stated, pregnancy during adolescence “confounds the struggle to identify oneself as an individual” and interferes with normal teenage activities.³⁵ The focus shifts from self-development needs to those of the developing fetus; this is demanding for an adolescent who herself is still maturing physically and psychologically. Moreover, pregnant teens may feel isolated and alone, or face

stigmatization. The use of an Internet-based depression intervention in this population has been shown to improve willingness to seek treatment.³⁶ Understanding the uniqueness of this population is vital.

Unintended pregnancy. The CDC defines an unintended pregnancy as one that is either unwanted (no children or no more children are desired) or mistimed (occurs earlier than desired).³⁷ A study by Kost and Lindberg found that, compared with intended pregnancies, unintended pregnancies were less likely to be recognized early.³⁸ Thus these mothers were less likely to receive early prenatal care and more likely to have low-birth-weight infants. Studies have found that women who have unintended pregnancies are at greater risk for postpartum depressive symptoms.^{39,40} Higher rates of postpartum depressive symptoms have also been demonstrated in women whose partners don’t want the pregnancy.⁴¹

*Inadequate partner support,*⁴² *traumatic birth experience,*⁴³ and *infant neonatal ICU admission*⁴¹ are also thought to be risk factors for PPD.

CONSEQUENCES OF PPD

PPD has major consequences for mothers, and the effects ripple outward to babies and partners. For the mother, every aspect of life may be affected as her psychological health worsens.³ Her ability to care for and bond with her baby suffers, and this in turn can cause delays in the infant’s development. Overwhelmed partners may feel neglected and resentful of the baby.⁴⁴ Partner relationships are adversely affected.

Effects on the mother. In a seminal 1992 study, Beck investigated the lived experience of seven mothers with PPD.⁴⁵ Their experiences included a felt loss of self, loss of control over thoughts and emotions, and intense fear and guilt. Becoming suicidal, one mother said she felt “on the verge of throwing my son at my husband”; another reported feeling “trapped . . . [with] no way out of this hell.” Unable to care for themselves, several questioned how they could ever care for their babies. They longed for sleep, but racing thoughts about being a bad mother prevented this. In 2020, Beck expanded the focus to explore how 31 mothers with PPD used metaphors to describe its effect on their interactions with their infants.⁴⁶ Eight metaphors for PPD were identified. Among these were PPD as “a thief . . . who stole the happiness and love” they’d envisioned having with their babies, and as “a wall” they had to put up between themselves and their babies in order to survive. Some women, experiencing irritability and anger, likened PPD to “an erupting volcano” and were terrified of what they might do if they “exploded.” Beck’s work, along with that of others, offers nuanced insights into the profound impact of PPD on mothers.

Suicide is a particularly devastating consequence of PPD, and is among the leading causes of maternal death, especially during the first year postpartum.^{47,48} Mothers immersed in depression may see death as the only way out of their unbearable suffering.⁴⁵ In one study of more than 22,000 pregnant and postpartum women, Kim and colleagues examined the incidence of and risks for suicidal ideation, using the EPDS.⁴⁹ Suicidal ideation was reported in 3.8% of the participants, with similar predictors seen in both groups; suicidal ideation was also more common in women with a preexisting psychiatric disorder than in those without. Other predictors included being nonwhite, non-English speaking, publicly insured, and nonpartnered.

Effects on the baby. PPD affects the mother-child relationship, and this can have serious long-term health, developmental, and behavioral consequences for the child.⁵⁰ Prenatal and postpartum depressive symptoms hinder mother-child interactions and bonding.^{3,51} Depressed mothers have been found to show less warmth and sensitivity toward their infants, and to be less well attuned.³ They are also more likely to discontinue breastfeeding earlier,³ resulting in the loss of all the associated mutual health benefits. Babies of mothers with PPD have been shown to have problems eating and sleeping,⁵² which can lead to more serious problems such as failure to thrive. The child may experience significant delays in cognitive, language, and motor development.³

Depressed mothers are also more likely to engage in less healthy, more risky practices with their infants, compared to nondepressed mothers. For example, they are less likely to place their infant in the recommended back-to-sleep position or use a car seat, and they are more likely to smoke.³ Worst-case scenarios, while rare, include instances in which mothers have self-reported either shaking or smothering their babies.⁵³ PPD has been identified as a risk factor for these behaviors.⁵³

Effects on the partner. Although research regarding PPD has traditionally focused on mothers, fathers can also develop PPD. A recent meta-analysis found an overall paternal prevalence rate of 8.4%,⁵⁴ and more researchers are now studying paternal or partner PPD. There is evidence that if a new mother has prenatal depressive symptoms or PPD, her partner will be at increased risk for PPD.^{44, 55,56} Paternal PPD shares some similarities with maternal PPD, but is distinct. In one study, Eddy and colleagues investigated the lived experience of 27 fathers with PPD.⁴⁴ Among the identified themes were being overwhelmed, experiencing neglect in the partner relationship, and feeling resentful of the baby. Fathers reported feeling “constantly on the edge of bursting into tears,” and pressured to conform to gender expectations. Some struggled to

concentrate at work and felt challenged in their ability to support the family. In another study, risk factors such as unemployment or financial stress, poor partner relationships, and sleep deprivation were significantly associated with paternal postpartum depressive symptoms.⁵⁵ While a full review of paternal PPD lies beyond the scope of this article, it's important to include it in developing postpartum health services.

Effects on the partner relationship. If one or both partners develops PPD, it's likely to affect their relationship. At first there may be a “dismissal” phase, in which couples do not openly discuss their emotional struggles and concerns with each other.⁵⁷ One result is that each feels a lack of support from the other. Feeley and colleagues studied 30 mothers with PPD and their partners, and found that most couples expressed a need for earlier, more comprehensive education on depression and its symptoms.⁵⁸ Partners often felt unprepared for the possibility of PPD, and that their needs were neglected. As one partner said,

Follow-up, it's for mother and baby. The hospital, it is mother-child, not mother-father or family. All the emphasis is on the woman. . . . The father, he's an important person because he is the one accompanying, he is the one encouraging, he sees the tears, and he does everything. . . . There is nothing for men.

When both partners feel burdened and inadequately supported during the transition to parenthood, especially if they can't talk about it openly with one another, the relationship is likely to suffer.

SCREENING FOR PPD

The detection of PPD can be challenging. Depressive symptoms such as fatigue, weight change, sleep disturbances, and an inability to focus are often misinterpreted as part of normal adjustment to parenthood. Indeed, these symptoms are common when one is caring for a newborn. In 2016, the U.S. Preventive Services Task Force recommended universal screening for depression for all adults.⁵⁹ Given the number and wide variety of risk factors for PPD, screening is imperative for pregnant and postpartum women.

Several instruments are available for PPD screening. These are based on self-report and use Likert-type scales. One of the most widely used tools is the EPDS.⁶⁰ Others include the Postpartum Depression Screening Scale,⁶¹ the Beck Depression Inventory (BDI),⁶² and the Patient Health Questionnaire 9 (PHQ-9).⁶³ A shortened version of the PHQ-9, the PHQ-2, poses just the first two questions, asking whether the person has either felt depressed and hopeless or been unable to feel pleasure during the

past two weeks.⁶⁴ Answering yes to either question prompts further evaluation using the PHQ-9.

Overall, these four instruments have demonstrated good reliability. The EPDS and the PHQ-9 are recognized for their brevity, taking about five minutes to complete. It should be noted that the PHQ-9 and the BDI weren't designed to measure prenatal depression or PPD. See Table 2⁶⁰⁻⁶³ for descriptions and comparison of these four tools.

The American College of Obstetricians and Gynecologists (ACOG) recommends initial screening for potential mood disorders during the first trimester, with subsequent screenings extending through the "fourth" trimester (the period from birth to three months after birth).⁶⁵ The American Academy of Pediatrics (AAP) further recommends maternal PPD screening during well-baby visits at one, two, four, and six months postpartum.⁶⁶ Adherence to this practice has been shown to reduce depression rates,⁶⁷ as well as to improve treatment response and symptom remission.⁶⁸

TREATMENT

Timely and appropriate treatment is crucial to managing PPD. Treatment can include psychotherapy, medication, or both, as well as alternative therapies. Of note, if a mother shows signs of depression during pregnancy or has PPD risk factors (or both), psychotherapy and alternative therapies should be considered early and continued postpartum. Depending on the severity of symptoms, the same holds true for pharmacological intervention.

Psychological interventions. Two evidence-based, short-term psychotherapeutic approaches have been used to treat perinatal depression or PPD: interpersonal therapy and cognitive behavioral therapy (CBT).

Interpersonal therapy is a form of psychotherapy that focuses on the relational context in which depressive symptoms occur.^{69,70} The goal is to improve the quality of a patient's interpersonal relationships and social functioning. Klerman and colleagues describe interpersonal therapy as addressing

Table 2. Comparison of Four Scales Used in PPD Screening

Tool	Scale and Number of Items	Screening Focus	Dimensions Measured	Cronbach α
BDI ⁶²	4-point scale, 21 items	Depth of depression; not specific to PPD	Mood, pessimism, sense of failure, lack of satisfaction, guilty feeling, sense of punishment, self-hate, self-accusations, self-punitive wishes, crying spells, irritability, social withdrawal, indecisiveness, body image, work inhibition, sleep disturbances, fatigability, loss of appetite, weight loss, somatic preoccupation, loss of libido	0.86
EPDS ⁶⁰	4-point scale, 10 items	Depression after childbirth	Inability to laugh, inability to look forward to things with enjoyment, unnecessary self-blame, feeling anxious or worried for no reason, feeling scared or panicky for no reason, feeling overwhelmed, sleeping disturbances, feeling sad or miserable, crying episodes, thoughts of self-harm	0.87
PDSS ⁶¹	5-point scale, 35 items along 7 dimensions	Detection of PPD	Sleeping and eating disturbances, anxiety or insecurity, emotional lability, cognitive impairment, loss of self, guilt or shame, suicidal ideation	Range: 0.83 (sleeping and eating disturbances) to 0.94 (loss of self)
PHQ-9 ⁶³	4-point scale, 9 items	Severity of depression; not specific to PPD	Little interest or pleasure in activities, feeling down or hopeless, sleeping or eating disturbances, fatigue, feeling like a failure, trouble concentrating, hypo- or hyperactivity, suicidal ideation	0.89 (primary care patients); 0.86 (obstetrics-gynecology patients)

BDI= Beck Depression Inventory; EPDS = Edinburgh Postnatal Depression Scale; PPD = postpartum depression; PDSS = Postpartum Depression Screening Scale; PHQ-9 = Patient Health Questionnaire 9.

Note: Cronbach α is a measure of reliability (internal consistency); scores above 0.7 generally indicate high reliability.

“four common problems—grief and loss, role disputes, role transition, and interpersonal deficits—that are associated with the onset of depression.”⁶⁹ Strategies may include helping mothers to develop social support networks, improve interpersonal communication, resolve conflicts, and manage the transition to motherhood.⁷⁰ Interpersonal therapy has been shown to reduce the likelihood of PPD.⁷⁰

CBT combines elements of cognitive therapy and behavioral therapy. The former teaches patients to identify and challenge distorted thinking, while the latter teaches them ways to modify unwanted behaviors. *CBT* focuses on circumstances and emotions in present time; the therapist frames “emotional disorders within the realm of everyday experience and suggest[s] familiar problem-solving techniques.”⁷¹ One systematic review concluded that *CBT* reduced PPD symptoms and increased the likelihood of remission.⁶⁸ But another literature review concluded that findings were variable.⁷⁰

Pharmacological treatment may be warranted and ideally is used in conjunction with psychotherapy. Several medications are available.

Selective serotonin reuptake inhibitors (SSRIs) are the first-line medications prescribed in the treatment of PPD, and include paroxetine (Paxil), citalopram (Celexa), escitalopram (Lexapro), sertraline (Zoloft), and fluoxetine (Prozac). The neurotransmitter serotonin helps to regulate various processes, including mood, appetite, and sleep. SSRIs work by blocking the reabsorption of serotonin into nerve cells, thereby increasing its levels in the brain. SSRIs are often prescribed to treat major depression, and there is some evidence they may be effective in treating PPD.⁷² Small amounts of these drugs have been found to transfer during breastfeeding, with infant sleep disturbances and irritability as the most common side effects. That said, SSRIs are not contraindicated during breastfeeding. According to the widely recognized Hale’s Lactation Risk Categories, which assigns drugs risk levels from 1 (L1) “compatible” to 5 (L5) “hazardous,” the SSRIs are rated L2 “probably compatible.”⁷³ L2 drugs “have been studied in a limited number of breastfeeding women without an increase in adverse effects in the infant; and/or the evidence of a demonstrated risk that is likely to follow [such use] . . . is remote.”⁷³ Nevertheless, parents should be informed about the risks and benefits of taking SSRIs, and the mother’s psychological condition and the physical and emotional benefits of breastfeeding weighed.⁷²

Serotonin and norepinephrine reuptake inhibitors (SNRIs) are generally prescribed if SSRIs aren’t effective. The most common SNRIs include desvenlafaxine (Pristiq), duloxetine (Cymbalta), and venlafaxine (Effexor). These drugs work by blocking the reabsorption of the neurotransmitters serotonin and norepinephrine into nerve cells.⁷⁴ SNRIs are catego-

rized as L3 “probably compatible” with breastfeeding, with very limited data to support their use.⁷³ Thus these drugs are not recommended as first-line treatment of PPD in breastfeeding mothers. They should only be given if the potential benefit outweighs the potential risk to the infant. Another less commonly used antidepressant is bupropion (Wellbutrin), a norepinephrine and dopamine reuptake inhibitor, which is also classified as L3.⁷³

One of the newest drugs used to treat PPD is brexanolone (Zulresso). This is the first drug to be approved by the U.S. Food and Drug Administration specifically for the treatment of PPD.⁷⁵ Brexanolone is a formulation of the endogenous steroid allopregnanolone,⁷³ which is a metabolite of progesterone, a hormone known to decrease rapidly after delivery.¹⁸ This medication is given intravenously over 60 hours and has a rapid onset of action.⁷⁶ Brexanolone is excreted in low levels in breast milk; because safety data are limited, it’s categorized as L3.⁷³

Less commonly, supplementation with omega-3 fatty acids and with vitamin D has been studied for their potential to reduce or prevent perinatal depressive symptoms.⁷⁷ Estradiol delivered via transdermal patch, a hormone-based form of contraception, may also have potential.⁷⁸ More research is needed to support the use of these less conventional entities.

Alternative therapies. Women subscribing to alternative therapies such as yoga, aromatherapy, meditation, and massage have described their experiences as transformational.⁷⁹ Used in conjunction with traditional medicine, alternative therapies have been found to alleviate stress, anxiety, and depression in women both during and after pregnancy.⁷⁹ For instance, lavender has long been used in aromatherapy and as a tea for treating sleep disturbances and fatigue; one study found that lavender tea enhanced mother–infant bonding.⁸⁰ A trial of a mindfulness meditation intervention found that it effectively reduced participants’ self-reported postpartum stress and depression.⁸¹ Exercise-based interventions,⁸² acupuncture,⁸³ and infant massage⁸⁴ have been explored for their potential to prevent or alleviate PPD, but the results were inconclusive.

Other therapies. Repetitive transcranial magnetic stimulation, a relatively new technique used in treating major depression, may have potential for the treatment of PPD.⁸⁵ It involves placing a high-intensity magnetic coil on the scalp and delivering rapidly changing magnetic field pulses; this affects electrical activity in the cortical neurons, which in turn can improve mood. Electroconvulsive therapy, a procedure done under general anesthesia, involves applying several electrodes to the scalp through which small electric currents are passed, intentionally triggering a brief seizure. This method is thought to alter brain chemistry and has been

shown to reverse symptoms of major depression.⁸⁶ Although more research specific to women with PPD is needed, both techniques have shown effectiveness in small studies.^{85, 87}

RECOGNIZING PPD ALONG THE CARE CONTINUUM

Nurses are well positioned to screen and assess for PPD, seeing mothers in various settings as they transition from prenatal to perinatal and postpartum care. These include community and clinic settings, obstetric and pediatric offices, acute care hospitals, schools, birthing centers, and even primary care providers' offices. Nurses in obstetric offices or clinics and birthing centers have opportunities to interact with mothers before delivery. The mother's medical history, personality traits, and socioeconomic background can be assessed and baseline behaviors documented. While this information is invaluable and will continue to inform postpartum care, such care usually ends by six weeks after delivery. As noted above, both ACOG and the AAP recommend extending it through at least the fourth trimester.^{65, 66}

Maternal-child health nurses typically first encounter mothers at the time of admission for labor and delivery. During this hospitalization, a comprehensive biopsychosocial assessment is imperative. Maternal mood and infant bonding can be observed. Moreover, hospitalization affords nurses the chance to educate mothers on PPD and other mood disorders. For example, tearful episodes can be symptomatic of postpartum blues or something more serious. Although PPD doesn't generally present overtly during the first few days after delivery, it can. If there are concerns regarding a mother's mental health status, referrals should be made in preparation for discharge.

Pediatric care offices and clinics afford opportunities for nurses to screen and assess for PPD. Postpartum mothers can be evaluated for PPD at each regularly scheduled well-baby visit.⁶⁷ By observing a mother's verbal and nonverbal interactions with her baby, nurses can evaluate mother-child bonding. Women may present for postpartum care at primary care offices or clinics or may be there for other reasons such as an unrelated illness or a health assessment. As Baratieri and Natal have noted, the focus in these settings tends to be on the infant⁸⁸; but with awareness, nurses in these settings can refer women with suspected PPD for further evaluation. School nurses might recognize the symptoms of depression in pregnant or postpartum adolescents, and can provide emotional support as well as appropriate referral.³⁵

Care coordination nurses or social workers can play a crucial role by acting as liaisons with public health nurse agencies. As one meta-synthesis of 14 studies reported, "a combination of individualized, flexible home visits, phone consultations, and clinic-

based appointments [were] instigated by public health nurses to meet the needs of women who experience perinatal mental health problems."⁸⁹ Such events offer additional checkpoints for screening and, when indicated, referral for further evaluation and treatment.

NURSING IMPLICATIONS

It's likely that PPD is significantly underreported, and thus undertreated, because of the stigma attached to being diagnosed with mental illness during what "should" be a happy time.⁹⁰ This can be compounded in low-income women who often feel stigmatized already and face financial barriers in seeking health care.⁹¹ A lack of knowledge about PPD and reluctance to use psychotropic medications during breastfeeding may also prevent mothers from seeking help.⁷³ Nurses can begin to address these and other barriers through patient education, screening, and referral. First and foremost, nurses can demystify postpartum mood disorders by letting women know they are not alone, are not to blame, and can get better.⁶⁶

Patient education. A lack of understanding that PPD is a mood disorder with risk factors, consequences, and treatments will limit a mother's ability to recognize symptoms and seek treatment.⁹² Education is foundational and has been shown to reduce EPDS scores.⁹³ It can provide mothers with essential knowledge as well as open a dialogue about stigma. And it is vital throughout the care continuum.

During prenatal visits, childbirth classes, and even preadmission facility tours, nurses can offer anticipatory guidance by informing mothers and their partners about PPD risk factors, symptoms, and treatment options. Teaching should include the hormonal changes that can impact mood both during and after pregnancy. After delivery, in preparation for discharge, use of the teach-back technique can help mothers and partners to retain what they've learned. The postdischarge phone call affords further opportunity for reinforcement. Once the mother, baby, and partner transition to outpatient services, pediatric offices and home visits become avenues for educational support. Brochures and websites can provide further education (see *Resources for Nurses and Patients*).

Assessment and screening. Nursing assessment of PPD involves collecting both objective and subjective data to evaluate the mother's psychological state. Given the multiple risk factors for PPD, a thorough biopsychosocial assessment must be performed. Symptoms and clinical manifestations of major depression, along with any family or personal history of depression, should be documented. Socioeconomic barriers such as financial constraints, lack of transportation, and lack of child care should also be noted. All maternal vulnerabili-

Resources for Nurses and Patients

Websites

National Child and Maternal Health Education Program: Moms' Mental Health Matters

www.nichd.nih.gov/ncmhhep/initiatives/moms-mental-health-matters/moms

National Institute of Mental Health: Perinatal Depression

www.nimh.nih.gov/health/publications/perinatal-depression/index.shtml

National Library of Medicine: Drugs and Lactation Database (LactMed)

www.ncbi.nlm.nih.gov/books/NBK501922/?report=classic

Office on Women's Health; Postpartum Depression

www.womenshealth.gov/mental-health/mental-health-conditions/postpartum-depression

Postpartum Support International

www.postpartum.net

Books

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ties need to be recognized to ensure timely intervention and referral.

Objective assessment includes screening for PPD using a valid and reliable tool, such as those discussed above. Scores should be discussed with the mother and her potential risk explained. Subjective assessment begins with actively listening to the mother's perceptions and expectations of parenthood, including any expressions of anxiety or depression, and evaluating her risk of PPD. The nurse also observes the mother's nonverbal behaviors and mood, both alone and with her partner. After delivery, the nurse may observe mother-child bonding, another indicator of maternal mental status.

Referral and support. There are several potential referral pathways. First, nurses can help women who screen positive for PPD by securing appointments with a primary care physician or clinic and by initiating referrals to hospital care coordinators and public health nurses.⁸⁹ Further referral to psychiatric services for psychotherapy or close monitoring of psychotropic medications (or both) may also be warranted.⁹⁴

Nurses can also follow up by phone with depressed mothers to ensure successful engagement, appropriate treatment, and follow-through. Adolescents might respond better to text messages. Advanced practice nurses with psychiatric mental health training can provide treatment in collaboration with mental health care providers.⁹⁵

Transition to motherhood is difficult, but nurses can lend support by

- encouraging mothers to express their fears and concerns.
- helping mothers plan daily activities and self-care, including diet, sleep, and exercise.
- assessing mothers' support networks and suggesting ways these people can be involved.
- encouraging mothers to maintain friendships and other social connections.
- helping mothers find ways to take time for themselves.

PRACTICE BARRIERS AND RECOMMENDATIONS

PPD is unique among mental health disorders in that "it occurs within a limited timeframe following a very concrete event (i.e., childbirth), and it is preceded by an equally definable experience (i.e., pregnancy) during which women are in regular contact with the health care system."⁹⁶ This offers multiple opportunities for PPD screening and prevention. Yet barriers to doing so exist.

One reason is that inpatient and outpatient services often have dissimilar assessment and screening practices and don't use the same tools. But screening tools vary regarding which domains are measured and how results are scored; for optimal individualized care, consistency matters. The choice of tool should not be left to individual provider preference.

Although it's a huge undertaking, some health care systems have successfully implemented universal PPD assessment and screening programs.⁹⁷ Using a standardized tool and schedule, such programs can make referrals based not only on a positive screening result (as determined by a cutoff score), but also on risk factors.^{97,98} At least one such program was nurse led, sparked by the concerns of a single nurse.⁹⁸ Collaborative, multidisciplinary efforts among nurses, physicians, social workers, mental health providers, public assistance programs, and advocacy organizations are vital to successful implementation.^{97,98} Integrating electronic health records across settings will also facilitate success.

Research. Despite extensive research on PPD, knowledge gaps remain. For one, PPD and major depression have a shared definition. Some symptoms, such as fatigue, insomnia, food cravings, and difficulty concentrating, are normal during pregnancy and don't necessarily indicate a mood disorder. A concept analysis (a means of clarifying ambiguous concepts and allowing more precise definitions) of PPD might be useful in developing a tool better suited to capturing its essence. A clearer definition of PPD would also help nurses and other providers to better distinguish it from other postpartum mood disorders.

Thus far most studies of maternal PPD have involved women in heterosexual couples. Further

investigation into PPD in same-sex partnerships and blended families is warranted, as is research in populations that face significant health care disparities, such as people with low socioeconomic status and racial and ethnic minorities. PPD in adolescents has also been understudied.

Other areas that warrant more research include how SSRIs and other drugs used to treat PPD might affect breastfeeding mothers and their infants. Currently the number of studies in this area is limited. More robust prevalence data are needed to provide a better understanding of demographic factors. To that end, a recent meta-analysis included only studies that used one tool, the EPDS, and used similar cutoff scores for PPD diagnosis.⁴ This approach revealed cross-national differences in PPD prevalence more accurately. The effects of interpersonal therapy and CBT on PPD requires further research, as do alternative therapies. Lastly, there has been scant research conducted among maternal-child health nurses with regard to PPD. Learning more about their experiences will clarify what they and other nurses need in terms of education and resources.

Nursing education. Nurses need to have a better understanding of PPD if prevention efforts are to succeed. Education on PPD must begin in our schools of nursing and continue through orientation and mentorship programs as nurses enter practice. To ensure knowledge retention and learn about new research, nurses should attend annual competency training or continuing education seminars. In one study, although nurses had a basic knowledge of PPD, they were unaware of postpartum blues as a different disorder, and thus confused the two.⁹⁹ Another study found that perinatal nurses were more apt to provide PPD education to patients when they were more knowledgeable about it.¹⁰⁰

CONCLUSIONS

Although its etiology remains unclear, PPD is a major depression, contingent on childbirth, and multifactorial in its development. It adversely affects not only mothers and their infants, but also their partners and families. If we are to reduce its prevalence, nurses from all disciplines must be aware, knowledgeable, and involved in its prevention and treatment. ▼

For seven additional nursing continuing professional development activities on the topic of postpartum depression, go to www.nursingcenter.com.

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