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Postpartum Depression Screening: A Modernized and Evidence-Based Approach

Among the United States' population, depression has become a common and costly burden. According to a report by the World Health Organization (2001), depression has been identified as one of the leading causes of disability in the U.S., accounting for the greatest number of years lived with disability among all diseases. In addition to the debilitating nature of this disease, it has been estimated that depression costs the U.S. between \$30 billion and \$50 billion annually due to lost productivity costs and direct medical expenses (Gjerdingen & Yawn, 2007). This growing public health issue affects nearly one in ten U.S. adults (CDC); women are at a more elevated risk for depression than their male counterparts, with rates as high as 25 percent (Gjerdingen & Yawn, 2007). Women within their first year of childbirth are especially susceptible to depressive episodes. Gjerdingen and Yawn (2007) report up to 20 percent of new mothers suffer from depression sometime during the postpartum course, making postpartum depression the most common medical problem women face after delivery.

Postpartum depression is considered a major depressive disorder. It is distinct from a condition referred to as the "baby blues", which is a short-lasting state of anxiety or sadness experienced by up to 80 percent of women shortly after giving birth (Collingwood, 2010). In comparison to the "baby blues", symptoms of postpartum depression are more severe and persist for a longer duration of time. Criteria from the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition, (DSM-IV) for postpartum depression requires the woman to have five or more of the following symptoms for at least two weeks: psychomotor agitation or retardation, fatigue, insomnia or hypersomnia, changes in appetite, decreased concentration, feelings of worthlessness or guilt, and suicidality. In addition, the

woman must have at least one of the following symptoms: depressed mood or loss of interest or pleasure in activities (as cited in Beck, 2006). Diagnosing postpartum depression based on these defined symptoms is often challenging, because women typically experience changes in sleep patterns, appetite, and energy levels after delivery. Similar symptoms between a depressed postpartum woman and one newly entering motherhood can make it difficult for a health care professional to confidently make a diagnosis. For this reason, Collingwood (2010) indicates that fewer than half of postpartum depression cases are detected.

Undiagnosed, and therefore untreated cases of postpartum depression, can often lead to adverse outcomes for the mother and her child. Compared to non-depressed mothers, mothers with postpartum depression are less affectionate and responsive toward their infants (Beck, 2006). Mother-infant interactions are often characterized by withdrawal, disengagement, or hostility (Pearlstein, Howard, Salisbury, & Zlotnick, 2009). New mothers with postpartum depression “are also less likely to engage in preventative health measures for their babies, such as regular use of a car seat and breastfeeding” (Freeman et. al., 2005) (Pearlstein et. al., 2009).

Maternal postpartum depression has consistently shown to have detrimental short and long-term effects on children’s emotional, behavioral, and cognitive development. In a study performed by Murray and colleagues, 18-month-old infants, whose mothers had suffered from postpartum depression two months after delivery, scored lower on cognitive tests than infants of mothers who were not depressed (1996). Sharp and colleagues found that this trend toward poorer cognitive development continues into the preschool years. In their study of four-year-old toddlers, the children of mothers who had suffered from postpartum depression scored significantly lower on verbal, perceptual, and motor tests than did the

children of non-depressed mothers (1995). In their longitudinal study, Galler et. al. found that maternal postpartum depression continues to have long-term effects on child cognitive development. In their study, 11-year-old children, of mothers who had reported symptoms of postpartum depression, scored significantly lower on high school entrance examinations than did the adolescents of non-depressed mothers (2004).

Postpartum depression has also been shown to affect children's emotional and behavioral development. Harmful emotional and behavioral effects are evident in children as young as three months. Studies have shown that infants of women with postpartum depression have a higher incidence of fussiness and excessive crying, sleep issues, and temperamental problems (Pearlstein et. al., 2009). These detrimental behavioral effects of postpartum depression have also been shown to persist into the pre-adolescence years. Hay and colleagues (2003) report more violent behavior among school-aged children of mothers with postpartum depression.

In response to the staggering statistics and consequences associated with postpartum depression, this paper will focus on the significance of this issue to the profession of nursing, as well as identifying upstream factors related to maternal depression after childbirth. In addition, current screening methods will be examined and suggestions for a standardized screening protocol will follow.

Significance to Nursing Practice

As a significant population-based health problem, depression among postpartum women must be addressed within the nursing profession. According to the American Nurses Association (ANA) Code of Ethics (2010), the profession is committed toward promoting

and protecting the health and safety of individuals, groups, and communities. Based on their commitment, nurses strive to identify and eliminate factors that lead to a decline in the health of a population (ANA, 2010). With an increasing prevalence of depression among women shortly after delivery and the associated negative consequences, nurses have a commitment toward resolving this issue and improving the health of this population group.

Nurses have the ability to significantly impact the issue of postpartum depression. Since nursing exists throughout the healthcare system, nurses are present in a variety of settings used by affected women. They work in the following settings where they have contact with mothers in their first postpartum year: hospitals, pediatric health care offices, obstetrical/gynecological offices, and visiting nurse services. Because nurses are present in the environments where affected women frequently visit during the first postpartum year, these nurses are able to impact the care that these women receive and bring about positive outcomes for both the mother and her infant. Specifically, nurses working in the pediatric setting are ideally situated to identify and detect at risk mothers (Sheeder, Kabir, & Stafford, 2009). Sheeder, Kabir, and Stafford (2009) make this argument because most mothers interact more frequently with their pediatric nurses than any other health care professional during the first year after birth. Due to the frequency of contact that these nurses have with mothers during this vulnerable time, a trusting and open relationship may develop. A relationship of this type can facilitate the discussion and therefore the identification of maternal depression.

Positioned at the forefront of this issue, nurses also possess the skills that make them assets in providing care to these vulnerable women and their families. As a core nursing responsibility, nurses are able to perform detailed assessments of their patients.

Pediatric nurses are well positioned to assess or screen for symptoms of postpartum depression (Meadows-Oliver, 2012). Frequent contacts with the mother allow the nurse to identify baseline behaviors and perceive any unusual changes in these behaviors. Nurses also focus on strategies to promote health and prevent disease (American Association of Colleges of Nursing [AACN], 2008). Emphasizing health promotion strategies such as psycho-education, diet, exercise, and access to services may help in the prevention of postpartum depression or at least minimize symptoms. Nurses also possess the ability to therapeutically communicate with patients. Listening in a nonjudgmental manner may encourage these women to open up and discuss their depressive feelings (Meadows-Oliver, 2012). As empathetic beings, nurses can also provide support, hope, and respect for these women.

Besides providing care to affected mothers, nurses can also take part in the larger movement to determine best practice standards for the detection and treatment of postpartum depression. Currently, there is a lack of standardized, evidence-based practices in relation to screening techniques in our nation. However, the AACN (2008) continues to recognize the use of evidence-based practices as a core responsibility of the nurse. Based on this, nurses have the ability and responsibility to conduct research and implement primary evidence-based strategies for early and accurate detection of postpartum depression.

Analysis of Upstream Factors

As part of the detection process for postpartum depression, nurses need to analyze upstream factors that may contribute to the problem. As complex as this issue is, several upstream factors including environmental, psychosocial, economic, and developmental/biological factors have been identified and will be discussed.

Environmental

The home environment, as well as the circumstances that surround new mothers, are highly indicative of postpartum depressive symptoms. A meta-analysis performed by Beck (2001) indicates several environmental upstream factors in the development of postpartum depression, including experiencing difficulties with childcare, having a child with temperamental problems, and enduring a high stress level. Experiencing a stressful life event while pregnant can also predict the onset of postpartum depression. For example, the experience of Hurricane Katrina in 2005 led to an increase in the prevalence of postpartum depression among women residing in the area (Ehrlich et. al., 2010). In their study, Ehrlich et. al. (2010) determined that the loss of resources as a result of this highly stressful life event predicted depression. More specifically, intangible loss of resources such as time for enough sleep, family stability, and free time exacerbate stress after delivery and contribute to depression (Ehrlich et. al., 2010).

The family environment is another important factor in the onset of postpartum depression. A nurturing and stable family environment that fosters communication, support, acceptance, love, and safety decreases the incidence of psychological distress after delivery (Bielinski-Blattmann et. al., 2009). Individual relationships within the family can also contribute to postpartum depression. Specifically, the quality of marital relationships must be considered. Conflict between parents can predict maternal depression. Continuous exposure to marital conflict often leads women to feel alone and emotionally insecure about the relationship, which can exacerbate depressive symptoms (Beck, 2001).

Psychosocial

According to the meta-analysis performed by Beck (2001), psychological predictors of postpartum depression can include low levels of self-esteem, prenatal depression, prenatal anxiety, and having a history of depression. Psychological factors such as these are among the strongest predictors of maternal depression after birth.

Besides the psychological factors that can contribute to postpartum depression, certain social upstream factors have been shown to intensify depressive symptoms. Social stigma related to postpartum depression may impede vulnerable women from seeking treatment, often leading to undiagnosed cases. As a time of supposed joy, women are discouraged from voicing negative feelings (Bozoky & Corwin, 2002). Instead, new mothers are expected to adapt to motherhood without any difficulties. For some women, however, this may not be the case. Fear of social stigma toward depression, let alone depression after the birth of a child, may deter a women from disclosing depressive thoughts, leading to a further deterioration of mental health.

Vulnerable mothers who fear rejection by the community tend to feel alone or disconnected. The Mental Health Foundation reports that loneliness can often bring about depressive symptoms in new mothers (as cited in Griffin, 2010). Perceived lack of support and isolation can thus increase the risk of postpartum depression. The lack of a religion may impact the development of maternal depression as well. Cornah (2006) found poor faith-community support networks to be upstream factors of mental illness in postpartum women.

Economic

Economic factors can also impact the incidence of postpartum depression. Specifically, lower socioeconomic status (SES) and marital status have been linked to

depression among new mothers (Beck, 2001). In her meta-analysis, Beck (2001) found that unmarried women who have low household incomes are particularly susceptible to depression following childbirth. They may experience numerous stressors such as financial hardships, especially when accounting for additional costs related to having a child. Furthermore, these single mothers of low SES may have fewer resources available to them to help with the transition into motherhood (Beck, 2001).

Budget cuts for national and state mental health services may further lead to undiagnosed and therefore untreated cases of postpartum depression. Michigan specifically had a decrease of \$24.5 million dollars for mental health expenditure from 2009 to 2011 (NAMI, 2011). The National Alliance on Mental Illness (NAMI) documented that deep cuts to mental health services have led to significant reductions in both hospital and community services for vulnerable individuals with serious mental illness (2011). These cuts reduce vital services for women living with postpartum depression. Low-income, vulnerable mothers will soon experience additional budget cuts in other programs, such as WIC. It is predicted that WIC will endure a \$500 million dollar cut for the 2013 fiscal year (Neuberger & Greenstein, 2013). A budget cut of this size may lead to the exclusion of some low-income mothers, who rely on governmental programs like WIC for food for their children. The exclusion of new mothers within these types of programs may significantly impact the incidence of postpartum depression.

Developmental/Biological

Biological changes that occur after the birth of a child may dispose a woman to depression. Normal changes in hormonal levels after delivery result in alterations in sleep

patterns and quality. Pearlstein and colleagues (2009) report that decreasing levels of progesterone within the first postpartum month can consequently lead to insomnia.

Fluctuations in progesterone levels have been associated with decreased sleep efficiency and increased slow wave sleep, which may dispose vulnerable women to develop postpartum depression (Pearlstein et. al., 2009).

Developmental upstream factors may lead to higher rates of depression among adolescent mothers. Birkeland, Thompson, and Phares (2005) report that adolescent mothers are twice as likely to develop depression as adult mothers. The transition into motherhood is often characterized by extreme psychological, social, and biological changes, which may be especially difficult for adolescent mothers to adjust to. Adolescent girls already struggle with identity issues, low levels of self-esteem and confidence, poor body images, and role confusion (Birkeland et al., 2005). Integrating the additional changes associated with motherhood during this extreme time of vulnerability may amplify emotional distress, increasing the likelihood of depression.

Political

Political factors also play a significant role in the practice of postpartum depression screening across the nation. In some countries such as Great Britain, PPD screening is a standard universal practice (Cohen, 2010). In the United States, however, the practice of PPD screening is highly variable, leaving a large proportion of mothers with no screening at all. Considering the high prevalence of this disorder, and the devastating effects it causes, most would agree that screening should be just as universal as other perinatal tests, such as the standard 28-week assessments required of all pregnant women. For this to happen, state

governments would have to become involved. In 2006, New Jersey introduced the Postpartum Depression Law (State of New Jersey Department of Health, 2012). This piece of legislation made history by being the first in the United States to require mandatory PPD screening for women who just gave birth. Unfortunately, in the past 7 years, a mere two states-Illinois and West Virginia-have followed suit by enacting similar laws (Postpartum Support International, 2010). While other states have passed legislation supporting PPD education and awareness, as a nation the USA falls vastly short of the ideal universal PPD screening for all mothers. Until each state enacts a policy which legally mandates the practice of PPD screening for new mothers, there will always be mothers who do not receive any screening at all.

Current Practice

Despite rising awareness of the deleterious effects of depression in new mothers, the US Department of Health and Human Services states that up to 50% of cases of PPD go undetected (2007). Cost-effective, evidence-based tools are readily available to healthcare providers, yet these tools are widely under-utilized. The following section will discuss the most commonly used screening tool, and the current practices of PPD screening in the hospital and primary care setting.

Edinburg Scale

The most commonly used tool for detecting PPD in new mothers is the Edinburgh Postnatal Depression Scale (EPDS). This is a self-reporting questionnaire comprised of ten items. Women are asked to respond according to how they have felt in the past 7 days. They may respond with any number 0-3, allowing for a maximum of 30 points. A score of 9-11 is

suggested to indicate ‘possible depression’. Anything higher is indicative of ‘probable depression’ (Gibson, Mckenzie-McHarg, Shakespeare, & Gray, 2009).

During the mid 1980s the need to create a depression screening tool unique to pregnant women was becoming increasingly evident (Cox & Holden, 2003). Existing scales were inaccurate and not useful in identifying depression in a population of childbearing women. The three scales most commonly used at this time were the State of Anxiety and Depression (SAD) scale, the Beck Depression Inventory (BDI), and the General Health Questionnaire (Cox & Holden, 2003). Items on these scales were inappropriate for childbearing women, as the symptoms addressed were often normal for this population. For example, weight gain, breathlessness, tachycardia, and sleep difficulties are all related to the physiological changes associated with pregnancy, causing these scales to produce a high incidence of “false positives”. Researchers searched for data regarding the most common qualities of women affected by PPD and developed a new scale based on these factors. In 1987, the Edinburgh Postnatal Depression Scale was publicized as an early screening measure for to identify women with increased risk for PPD (Cox & Holden, 2003).

The EPDS has provided an effective screening tool for healthcare providers serving childbearing women. It is low cost, easy to administer, and screening can be performed in 5 minutes or less. Evidence has also indicated that it is superior to other screening scales in place. For example, one study revealed that EPDS detected individuals with major depression with a sensitivity of 95% (Boyd & Somberg, 2005). In comparison, the Beck Depression Inventory (BDI) performed with a sensitivity of only 68%. For sensitivity and specificity, studies indicate a 95% confidence interval (Eberhard-gran, Askild, Tambs, Opjordsmoen, & Samuelson, 2011).

The EPDS should not be mistaken for a diagnostic tool. It can only identify women with an increased risk for PPD. These women must then be referred for further evaluation and care. Diagnostic instruments are time-consuming to administer, and in practice, health care providers are unlikely to utilize these with all postnatal women. This screening instrument is significantly less time-consuming and more convenient. Providers are encouraged to use this as a first-line identification tool so that the women who need the help can be connected with appropriate resources.

Hospital Practices

Currently there is no national standard for PPD screening in hospitals. Whether or not any screening takes place is generally based upon the discretion of individual hospital policy-makers. Unfortunately, validated screening tools are not often used.

Nancy Roberts, a nurse in Michigan, has pioneered the practice PPD screening throughout hospitals in the state. Through grant-funding, she initially designed a screening program for Spectrum Health's Butterworth Hospital in Grand Rapids (Strek, 2008). This program entails an initial risk assessment, in which mothers are asked to respond "yes" or "no" to 10 simple statements designed to indicate risk factors associated with PPD. If the patient is identified as high risk, she is asked to complete the Edinburgh Postnatal Depression Screening Tool and is counseled by nurses with special education on the subject. Social work is consulted, primary care providers are notified, and a plan is developed to meet the patient's needs. Any patient who indicates high risk is also called 3-6 weeks after discharge. This program is the first of its kind in Michigan, and has effectively been instituted in several hospitals throughout the state. Despite the progress she has made, Nancy estimates that of the

90 birthing hospitals in Michigan, only about half utilize the screening process (N. Roberts, personal communication, February 12, 2013). To effectively screen all mothers, state government involvement would be necessary.

Screening in outpatient settings

Every year, more than 400,000 infants are born to mothers who are depressed, making perinatal depression the most under-diagnosed obstetric complication in America (O'Keefe, 2010). A significant barrier preventing providers from screening for PPD in the outpatient settings is lack of knowledge of PPD and the tools available. One study of providers revealed that only 70.2% consistently screened for PPD at postpartum gynecologic examinations. Furthermore, only 18% of those providers used a tool designed specifically for PPD (Seehusen, Baldwin, Runkle, & Clark, 2005). Symptoms of PPD may not present until weeks after giving birth. To effectively identify women affected by this disorder, primary care providers must be involved in the screening process.

Implementation of a Universal Screening Protocol

Clearly, there is a need for the implementation of a universal, standardized screening protocol for the detection of postpartum depression. Screenings performed in the hospital shortly after birth are often done too early to detect a diagnosis, as symptoms of depression typically occur after discharge from the hospital. The postpartum visit at six weeks provides another opportunity for depression screenings. However, women typically interact with their obstetric health professional once during the first postpartum year, limiting the time to obtain a complete history and determine baseline behaviors. Furthermore, the highest prevalence rate of depression cases occurs at 2 and 6 months after birth (Liberto, 2012). Therefore it can

be assumed that optimal screening and detection would take place during this time frame. Due to the frequency of visits to the pediatric health care setting during the first year postpartum, screening for maternal postpartum depression should take place in this environment. Screening for maternal depression at pediatric well-child visits has been reported in the literature as a reliable and feasible time to perform such measures (Liberto, 2012). Although the rate of current screening for postpartum depression in primary care settings is well below 50 percent, universal screenings in the pediatric setting is gaining support and showing evidence of success (Gjerdingen & Yawn, 2007).

Feasibility and Benefits

According to current literature, screening for postpartum depression at well-child checkups has been shown to be feasible and generally well accepted by new mothers. Over the first postpartum year, pediatricians and pediatric nurses typically see new mothers between four and six times (Tam, Newton, Dern, & Parry, 2002). Regular interactions between new mothers and pediatric health care professionals provide numerous opportunities to screen for postpartum depression. Gjerdingen & Yawn (2007) report that screening for depression during pediatric visits improves the rate of detection, from 1.6 percent to 8.5 percent. Feinberg and colleagues (2006) found that new mothers are receptive toward screenings performed by their child's pediatric provider. In their study, 85 percent of women reported that they would feel comfortable discussing their emotional health with their child's pediatric provider (Feinberg et. al., 2006). Besides the feasibility of screening in the pediatric setting, there are numerous benefits associated with universal screenings in this environment. Higher rates of detection and treatment can help improve symptoms and resolve depression cases, enhancing the mother's ability to engage in parenthood and other

relationships (Gjerdingen & Yawn, 2007). Earlier detection and treatment of maternal depression also “provides opportunities to decrease divorce rates, improve rates of normal child development, and lower suicide and infanticide rates” (Gjerdingen & Yawn, 2007, p. 285).

Barriers

Generally, there are two types of barriers associated with screening and diagnosis in the pediatric setting, including patient-centered and provider-centered. According to Gjerdingen and Yawn (2007), patient-centered variables include social stigma, not adhering to treatment, and lack of follow-through with referrals. Tam and colleagues (2002) indicate that the fear of social stigma is the strongest variable and deters women from admitting depressive feelings. Many women are concerned that such information could be used against them and would lead others to believe they are unfit mothers (Tam et. al., 2002). Pediatricians and pediatric nurses report barriers such as insufficient time, inadequate training and knowledge, and inexperience with counseling and resources (Liberto, 2012).

Proposed Screening Protocol

In response to these identified barriers, we have formulated our own program for postpartum depression screening based on sound evidence and clinical judgment. As part of our screening process, women would be given the Patient Health Questionnaire-2 (PHQ-2) upon arrival to the pediatric clinic. The PHQ-2 involves only two questions, measuring the frequency of depressed mood and lack of pleasure in activities (Feinberg, 2006). An initial two-question screening tool is simple and brief enough for already overwhelmed mothers to complete (Freeman et. al., 2005). Women would be asked to complete the form along with

other admission forms before being seen by the pediatric provider. Mothers who answer yes to either of the questions on the PHQ-2 will undergo a more extensive assessment of risks and symptoms. The second phase of the screening process involves a more in-depth assessment of symptoms, history, functional impact, and safety. Mothers will complete the Edinburg Postnatal Depression Scale (EPDS) as part of this second phase. The pediatric provider will assess the mother's preferences for follow-up services. Follow-up services can include behavioral therapy, family intervention programs, or community-based support groups. Whichever services are offered by the provider, the process of choosing should be collaborative and involve the mother's preferences.

The third phase of the screening process should focus on education. Pediatric providers should educate mothers about the symptoms of depression and its impact on the family. Providers should also teach women effective coping strategies to help deal with emotions. The next phase involves referring women to the services that were collaboratively determined during the assessment phase. Providers can aid women in contacting services and setting up appointments. Lastly, providers should follow-up with vulnerable mothers after a few weeks. Depending on the severity of symptoms, follow-up will involve either a telephone call or a home visit by the nurse. Liberto (2012) indicates that for women with severe postpartum depression, home visitation produced a significant reduction in depressive symptoms.

In order to address the physician and patient-centered barriers, we would conduct staff training prior to implementation. Physicians and nurses would undergo training on depression symptoms, impact, screening tools, and resources and services available. That way, they will feel more comfortable and confident in addressing this issue. Therapeutic

communication with nonjudgmental language will be stressed to encourage women to share their feelings (Meadows-Oliver, 2012). Lastly, it is important for mothers to understand that other women experience the same types of feelings and symptoms. Emphasizing that these women are not alone may help them overcome feelings of guilt and shame.

Conclusion

An estimated 19 percent of new mothers experience depression during the first three months following childbirth. Left untreated, postpartum depression can have severely negative effects on the mother's health and well-being, her relationships with family members and her baby's subsequent cognitive, behavioral, and emotional development. In addition, the condition can lead to greater long-term health care and social costs. Nurses are in an ideal position to address this serious problem. They work closely with women after giving birth, and can institute measures to identify women with a high risk of PPD and get them the help they need. Research shows that screening helps to detect postpartum depression. For those affected, appropriate treatment is available, and health care providers can help facilitate access to support services.

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