The Effects of Postpartum Depression on Maternal-Infant Attachment: Recommendations for Early Assessment and Treatment

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The Effects of Postpartum Depression on Maternal-Infant Attachment: Recommendations for Early Assessment and Treatment

Abstract

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Postpartum depression (PPD) is the most common complication of the postpartum period and can have devastating consequences for the emotional attachment and bonding process between a mother and infant (Akman et al., 2008; Earls, 2010; Flykt, Kanninen, Sinkkonen, & Raija-Leena, 2010; Kendall-Tackett, 2010; Mezzacappa & Endicott, 2007; Wisner, Parry, & Piontek, 2002). Current research shows that PPD affects between 10-15% of the population with some studies ranging up to 25% (Center for Disease Control, 2008; Earls, 2010). PPD has been associated with impaired maternal-infant interactions, poor bonding, insecure attachment styles and childhood behavior problems (Beck, 1998; Dennis & McQueen, 2009; Flykt et al., 2010; Misri & Kendrick, 2008; O’Hara, 2009).
Despite a growing body of research showing the correlation between PPD and impaired attachment styles, there is a distinct lack of integration and coordination among healthcare providers as to the best treatment strategies for addressing PPD (Chaudron, Szilagyi, Kitzman, Wadkins, & Conwell, 2004; Misri & Kendrick, 2008; Yarcheski, Mahon, Yarcheski, Hanks, & Cannella, 2009).

A review of the literature was conducted to assess (a) maternal-infant attachment, (b) effects of postpartum depression on maternal-infant attachment, (c) current intervention practices, and (d) recommendations for integrative treatment strategies for PPD.

Key Words: attachment, maternal, infant, postpartum depression, treatment, interventions for postpartum depression.
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The Effects of Postpartum Depression on Maternal-Infant Attachment: Recommendations for Early Assessment and Treatment

Introduction

One of the most devastating complications of childbirth is postpartum depression (Kendall-Tackett, 2010; Mezzacappa & Endicott, 2007; O’Hara, 2009). Medical research shows that approximately 10 – 25% of women who give birth go on to experience postpartum depression (PPD) (Centers for Disease Control, 2008; Earls, 2010; O’Hara & Swain, 1996). PPD is generally understood to be a non-psychotic episode of depression which occurs within one year of childbirth (Grace, Evindar, & Stewart, 2003). PPD is defined as “an episode of non-psychotic depression according to standardized diagnostic criteria with an onset within one year of childbirth” (Grace et al., 2003, p.263). The symptoms of PPD include the criteria of depression listed in the DSM-IV with the addition of childbirth as a precipitating factor (American Psychiatric Association [DSM-IV-TR], 2000). Although PPD does not have its own diagnostic category in the DSM-IV, medical practitioners are able to diagnose it through the use of a specific code for “postpartum onset” which can be applied if the episode begins within 4 weeks of childbirth (DSM-IV-TR, 2000). PPD is not only the most frequent of post-childbirth disorders but also represents a significant public health problem, impacting mothers, children and families (Britton, 2007; Currie & Rademaker, 2004; Earls, 2010; Freeman et al., 2005; Grace et al., 2003).

There is strong clinical evidence that postnatal depression in the mother has a
markedly adverse effect on the maternal-infant bond (Beck, 1998; Feldman, 2007; Field, Healy, Goldstein, & Guthertz, 1990; Flykt et al., 2010; Misri & Kendrick, 2008). In this paper “infants” and “infancy” are defined as the time of birth up to twenty-four months of age (Sadock & Sadock, 2007). In addition, the terms “maternal bond” and “maternal attachment” are used synonymously. Attachment is defined by Bowlby (1969) as “the seeking and maintaining proximity to another individual” (p. 194). The maternal-infant bond is defined as the maternal tie from the mother to the infant (bond) and the tie from the infant to the mother (attachment) (Bowlby, 1969). This attachment is developed from the birth of the infant until around six months of age when the attachment to the mother is fully distinguished from the attachment the infant has to other individuals (Bowlby, 1969). Because the mother constitutes the majority of the infant’s social environment and mediates the infant’s interaction with the external world, an insecure or disorganized attachment between mother and infant leaves the infant vulnerable to a distorted perception of the world (Misri & Kendrick, 2008).

Medical practitioners who come in contact with mothers suffering from PPD have a variety of treatment modalities at their disposal. Treatment options include pharmacology, psychotherapy, social support and a variety of non-traditional interventions. Of concern, however, is that there is little consistency among medical professionals as to what interventions are most indicated at any given time. The purposes of this paper are to review the literature in four areas, (a) maternal-infant attachment, (b) effects of postpartum depression on maternal-infant attachment, (c) current intervention
practices, and (d) recommendations for integrative treatment strategies for PPD.

Theoretical Framework

The theoretical framework selected was attachment theory. Attachment theory originated from the work of British psychoanalyst John Bowlby (Sadock & Sadock, 2007). Bowlby’s theory of attachment has become the dominant approach to understanding the early social development of infants and the formation of children’s close relationships (Misri & Kendrick, 2008). Attachment theory suggests that internal representations of the infant’s primary bonds are developed within the first two years of life (Bowlby, 1969; Misri & Kendrick, 2008). These patterns of attachment and self-regulation remain consistent over time and continue to influence how an individual interprets social stimuli throughout their lifespan (Misri & Kendrick, 2008).

According to Bowlby, there are four primary attachment styles: secure, insecure-anxious/ambivalent, insecure-anxious/avoidant, and insecure-disoriented/disorganized (Misri & Kendrick, 2008). Research has shown mothers who are suffering from PPD are less likely to have a secure attachment style and therefore more likely to have impaired attachment with their infants (Akman, et al., 2008; Feldman, 2007; Field et al., 1990; Flykt et al., 2010; Misri & Kendrick, 2008). Attachment disrupted by maternal PPD creates a mechanism by which children are at risk for developmental disturbances, eventually leading to increased risk for problems throughout childhood (Beck, 1998; Feldman, 2007; Field et al., 1990; Murray & Cooper,
1997). Through the lens of Bowlby’s attachment theory, the deficits in attachment of PPD mothers to their infants can be demonstrated.

**Literature Review**

**Methods**

A variety of electronic search engines were utilized including: Cumulative Index to Nursing and Allied Health Literature (CINAHL); PubMed; and PsychINFO. Key words in the search included: *postpartum depression, maternal-infant attachment, impact on attachment, child development, disorganized attachment, medication, breastfeeding, interpersonal therapy, cognitive behavioral therapy, exercise, the impact of social support for new mothers, and alternative treatments for depression.*

Articles identified were first screened by title and then later by abstract to exclude irrelevant articles such as those that focused on premature infants or paternal attachment. Out of 1772 articles screened, 49 were selected for review. The remaining articles were then grouped into the following categories: maternal-infant attachment (8 articles), effects of postpartum depression on maternal-infant attachment (21 articles), current intervention practices for PPD (11 articles), and recommendations for integrated treatment strategies for preventing or reducing PPD (9 articles).
Maternal-Infant Attachment

The mother-infant bond is understood in Bowlby’s pioneering work as an essential medium of human interaction (Sadock & Sadock, 2007). A healthy and secure mother-infant bond develops over time and is characterized by a reduction in the anxiety and distress of the infant (Misri & Kendrick, 2008; Sadock & Sadock, 2007). Predictable care-giving is a critical feature of early infant care, necessary for the development of a secure infant attachment to its mother (Feldman, 2007). This bond has significant consequences for the infant’s on-going development and social functioning (Misri & Kendrick, 2008; Sadock & Sadock, 2007).

With the establishment of a secure bond, infants exhibit a high level of synchrony with their mothers (Feldman, 2007). Maternal-infant synchrony facilitates infant self-regulation (Feldman, 2007). Healthy self-regulation patterns of infancy later allow the older infant and eventual child, to utilize emotional regulation in the service of attaining their goals (Cassidy, 1994). Consequently a secure and healthy mother-infant attachment is foundational for the emotional functioning of the infant as they grow into childhood and the child as they evolve into an adult.

Effects of Postpartum Depression on Maternal-Infant Attachment

Postpartum depression has a severe and deleterious effect on a new mother’s interactional patterns with her infant (Cassidy, 1994; Currie & Rademacher, 2004; Feldman, 2007; Grace et al., 2003; Kendall-Tackett, 2010; Murray, 1992; Righetti-
Mothers suffering from PPD speak to their infants less often and when speaking use a flat tone of voice (Currie & Rademacher, 2004). These low activity levels are accompanied by correspondingly low levels of affect (Currie & Rademacher, 2004). Mothers with PPD are more restricted in their range of facial expressions, depriving the infant of a normal spectrum of facial and emotional expressiveness (Weinberg & Tronick, 1998). Lack of maternal responsiveness is highly distressing to infants. Field, Fox, Pickens, and Nawrocki (1995) found elevated levels of cortisol and abnormal EEG patterns in infants interacting with minimally responsive mothers. Because mothers suffering from PPD are less responsive to their infants, these infants receive less feedback in response to their behavior and in turn become less expressive themselves (Currie & Rademacher, 2004; Field, Diego, & Hernandez-Rief, 2009; Field et al., 1990; Feldman, 2007).

Depressed mothers engage less frequently in holding or play behaviors with their infants (Currie & Rademacher, 2004; Field et al., 2009; Field et al., 1990; Kendall-Tackett, 2010). Mothers experiencing PPD are more critical and hostile towards their infant and appear less interested in the infant’s behavior (Currie & Rademacher, 2004; Goodman et al., 2008; Pearlstein et al., 2009). Depressed mothers describe the behavior of their infants in more negative terms (Currie & Rademacher, 2004; Goodman et al., 2008; Kendall-Tackett, 2010). Many mothers suffering from PPD report being overwhelmed by their childcare responsibilities (Kendall-Tackett, 2010). Moreover, depressed mothers experience high levels of guilt and anxiety for feeling overwhelmed.
by their mothering responsibilities (Kendall-Tackett, 2010). Feelings of worthlessness and guilt are clinical markers of depression and when experienced in the postpartum period interfere with the maternal-infant attachment process (DSM-IV-TR, 2000; Flykt et al., 2010).

The infants of mothers with PPD are at significantly higher risk for encountering developmental roadblocks. Infants of mothers who are suffering from PPD display lower activity levels than normal babies (Feldman, 2007; Goodman et al., 2008). They also spend more time crying and more time in a protesting state (Feldman, 2007; Field et al., 1990). Studies have shown that infants of mothers with depression demonstrate decreased motor and mental development at one year of age (Murray & Cooper, 1997). Insecure patterns of attachment and the resulting infant behaviors create poor health outcomes for infants (Misri & Kendrick, 2008).

When post-partum depression lingers and evolves into chronic depression, the well-being of the infant is even more negatively impacted. Continuing maternal depression is correlated to lower infant cognitive and psychomotor development (Cornish et al., 2005). At fifteen months of age, infants of chronically depressed mothers are less likely to walk competently (Cornish et al., 2005). Postpartum depression puts infants at an even higher risk if the mother’s depression is not adequately treated and becomes a chronic condition (Cornish et al., 2005).

Disorganized maternal-infant attachment styles at one year of age were associated with externalizing behavior problems at two years of age (Madigan, Moran, Schuengel,
Infants with depressed mothers display notably less affective sharing and are less sociable with strangers (Beck, 1998; Field et al., 1990). Their language development is also disrupted. As these infants begin to learn language, they tend to employ a more negative emotional vocabulary than infants with non-depressed mothers (Lemche, Joraschky, Klann-Delius, & Kreppner, 2007). This has led researchers to conclude that the disruption to a healthy mother-infant attachment has resulted in a more negative emotional regulation pattern for the infant (Lemche et al., 2007).

Symptoms of depression would provide a severe challenge to any individual. However, when experienced in the postpartum period, they create additional challenges for new mothers with an infant to care for and perhaps older children as well. PPD symptoms can range from mild to moderate to severe. However, any level of PPD can interfere with a healthy mother-child attachment (Cassidy, 1994; Currie & Rademacher, 2004; Feldman, 2007; Grace et al., 2003; Kendall-Tackett, 2010; Murray, 1992; Righetti-Veltema, Bousquet, & Manzano, 2003).

Current Intervention Practices

The medical practitioners who most often come in contact with mothers suffering from PPD have a variety of treatment modalities at their disposal. Treatment options which are currently available include pharmacotherapy, psychotherapy, and social support interventions. In addition, a wide variety of non-traditional treatments are now being explored.
Pharmacotherapy. When a primary care provider or family care physician is confronted with mental health issues such as depression in their patient, often the most accessible treatment at hand is to prescribe medication. This holds true in the case of physicians and other health care providers encountering symptoms of depression in new mothers (Kendall-Tackett, 2010; O’Hara, 2009). As a result, the prescription of psychotropic medications tends to be a treatment of first recourse and too often the only tool utilized from the medical toolbox.

Scientific research has shown the efficacy of selective serotonin reuptake inhibitors (SSRI) for treatment of depression (Berle et al., 2004; Stahl, 2008). This class of antidepressants is associated with a low risk of toxic effects, an important factor for a new, possibly nursing mother (Berle et al., 2004). In addition, the potential for lethal overdose is low (Stahl, 2008; Wisner, Parry, & Piontek, 2002).

Studies have shown that non-quantifiable amounts of SSRI medication, most specifically sertraline and paroxetine, are transmitted to the breastfeeding infant (Berle et al., 2004; Pearlstein et al., 2009; Wisner et al., 2002). Studies that have measured the blood serum levels of sertraline in breast-feeding infants with mothers on this medication, report that sertraline appears in non-quantifiable levels (Berle et al., 2004). This makes SSRI’s a natural treatment of choice for mothers with PPD. Because of low overall side-effects and little or no transmission to the infant, sertraline and paroxetine are first choice medications for the breastfeeding mother in need of antidepressant medication (Berle et al., 2004; Kendall-Tackett, 2010; Pearlstein et al.,
Psychotherapy. The “gold standard” of treatment for depression is prescribing antidepressants in conjunction with psychotherapy (Logsdon, Wisner, & Shanahan, 2009). There are many effective forms of psychotherapy now available. One that has been researched with mothers experiencing symptoms of PPD is Cognitive Behavioral Therapy (CBT). In a number of studies, CBT has been shown to be more effective than postpartum care with a public health nurse (Murray, Cooper, Wilson, & Romaniuk, 2003). However, the literature does not indicate that CBT is necessarily more efficacious than other forms of psychotherapy (Murray et al., 2003).

Of all the forms of psychotherapy that might best be recommended for a mother suffering from the symptoms of PPD, the literature clearly shows that Interpersonal Psychotherapy (ITP) is the most effective (O’Hara, 2009). ITP is a therapeutic modality that focuses specifically on disrupted interpersonal relationships and difficulties in role transitions (Dewan, 2004; O’Hara, 2009). Pearlstein, Howard, Salisbury and Zlotnick (2009) stated ITP is “highly pertinent to the needs of women during the postpartum period” (p. 361). This form of psychotherapy is very effective because, as the name suggests, it focuses on the importance of interpersonal relationships, including the new mother’s relationship with her infant (Mulcahy et al., 2010). It also assists the mother in acclimating to her new role, and in asking for support from her partner or others in her environment (Mulcahy et al., 2010).
Social Support. Increasing social support is a well-established practice for alleviating depression. New mothers experiencing PPD are no exception. Research on clinical depression in general has repeatedly shown a direct correlation between low social support in an individual's life and a high incidence of depression (Kendall-Tackett, 2010). A qualitative study of mothers in Canada showed that social support was significant in a woman's recovery from PPD (Letourneau et al., 2007). In this study, two types of social support were ranked as most helpful. The first was instrumental support such as help with household chores; the second was, education and information regarding postpartum depression. Overall, an increase in social support decreased anxiety in this population which was reflected in lower levels of measurable depression (Dennis & Ross, 2006; Letourneau et al., 2007).

The support or lack thereof from a husband or partner is another key factor in the onset and tenacity of PPD. Mothers are more likely to be depressed in the absence of a supportive partner (Dennis & Ross, 2006). In particular, three variables stand out including perceived social integration, the partner's encouragement to ask for help when needed and the partner's agreement on how the mother is handling infant care (Dennis & Ross, 2006). New mothers are less likely to develop symptoms of PPD if they are in a relationship with a supportive partner (Dennis & Ross, 2006).
**Breastfeeding.** Breastfeeding can provide an intimate and bonding experience for mothers and their infants. According to McCarter-Spaulding and Horowitz (2007), "Breastfeeding is an essential representation of a nurturing relationship with the new infant" (p. 11). Clearly, breastfeeding has emotional implications for the maternal-infant relationship. Many mothers suffering from PPD report that the experience of breastfeeding creates a positive intimacy and involvement with their newborn (Pearlstein et al., 2009). Despite their depression, they are able to establish emotional rapport with their infant (Jansen, Weerth, & Riksen-Walraven, 2008; Pearlstein et al., 2009).

The health benefits of breastfeeding for the infant are also well known in the medical community (Kendall-Tackett, 2010; McCarter-Spaulding & Horowitz, 2007). Increasing the rate of breastfeeding has even been established as an important public health goal (U.S. Department of Health and Human Services, Office of The Surgeon General). The World Health Organization (WHO) recommends breastfeeding infants exclusively for the first six months of life and continuing with mixed breastfeeding until one year of age (Kramer & Kakuma, 2002).

Research has shown the benefits of breastfeeding, not only for the infant but for the mother as well (Akman et al., 2008; Kendall-Tackett, 2010; Mezzacappa & Endicott, 2007; McCarter-Spaulding & Horowitz, 2007). These benefits have been attributed to the production of lactogenic hormones and the negating effect of these hormones on maternal stress (Mezzacappa & Endicott, 2007). The increase in the body’s natural stress response through a large production of hormones produced during lactation is a natural
response to attenuating the stress of a new mother (Mezzacappa & Endicott, 2007). Breastfeeding is the body’s natural way of producing hormones that help alleviate depression and reduce overall stress (Kendall-Tackett, 2010; Mezzacappa & Endicott, 2007).

Historically, breastfeeding has been seen in the medical community as a risk factor for PPD, a burden that should be relieved (Kendall-Tackett, 2010; McCarter-Spaulding & Horowitz, 2007). Many mothers report delaying or avoiding treatment for their PPD because they don’t want to be told to stop breastfeeding (Kendall-Tackett, 2010; McCarter-Spaulding & Horowitz, 2007; Pearlstein et al., 2009). Contrary to these outdated beliefs, current research is showing the benefits of encouraging breastfeeding for mothers suffering from PPD (Kendall-Tackett, 2010; McCarter-Spaulding, & Horowitz, 2007; Pearlstein et al., 2009).

**Nutritional Adjunctive Therapies.** New research is identifying a number of adjunctive therapies for depression including the use of nutritional supplements (Freeman, 2009; Kendall-Tackett, 2010; Rees, Austin, & Parker, 2005; Sadock & Sadock, 2007). Several nutritional supplements have been identified in the literature as beneficial in the treatment of depression (Kendall-Tackett, 2010; Rees et al., 2005; Sadock & Sadock, 2007). The change in our food sources and diet are having an impact on our physical and mental health (Freeman, 2009; Kendall-Tackett, 2010).

Specifically, Omega-3 fatty acids, Vitamin D, and SAM-E are indicated for the treatment of depression (Freeman, 2009; Kendall-Tackett, 2010; Rees et al., 2005).
These supplements have an excellent track record as adjunctive therapy for treatment of depression and have demonstrated little to no safety risk (Freeman, 2009; Kendall-Tackett, 2010; Rees et al., 2005). These supplements are classified as dietary supplements as they are traditionally found in our diets and environment (Sadock & Sadock, 2007).

Other nutritional supplements such as St. John's Wort and Kava Kava are frequently used by consumers as treatments for depression. These medications have been shown to have much larger risk for negative side-effects and interactions with other medications (Kendall-Tackett, 2010; Sadock & Sadock, 2007). These are classified as herbal supplements or herbal medication because they are derived from plants not traditionally found in our diets (Kendall-Tackett, 2010; Sadock & Sadock, 2007). The safety of these herbal medications for lactating mothers is relatively unknown (Kendall-Tackett, 2010).

**Exercise Adjunctive Therapy.** There is minimal research on the effects of exercise for women with PPD. However, a large body of research on treatments for clinical depression clearly shows that exercise is highly effective in reducing or ameliorating depression (Daley, Psychol, MacArthur, & Winter, 2007; Hassmen, Koivula, & Uutela, 2000; Sadock & Sadock, 2007). In addition, exercise is effective in reducing anxiety, improving cognitive function and increasing self-esteem (Daley et al., 2007; Hassmen, Koivula, & Uutela, 2000; Kendall-Tackett, 2010; Sadock & Sadock, 2007).
Exercise is a safe intervention for improving mood and has been shown to have relatively quick results (Hassmen et al., 2000; Kendall-Tackett, 2010; Sadock & Sadock, 2007). Exercise as an intervention can be as simple as walking and therefore is easy to implement (Daley et al., 2007; Hassmen et al., 2000; Kendall-Tackett, 2010; Sadock & Sadock, 2007). In addition, exercise is cost-effective and accessible to everyone (Hassmen et al., 2000; Kendall-Tackett, 2010; Sadock & Sadock, 2007).

Exercise prescribed in combination with some or all of the other available adjunctive treatments can serve to ameliorate the symptoms of PPD in a new mother. All healthcare professionals and the medical field overall will benefit from a comprehensive and integrated approach to the diagnosis and treatment of PPD.

**Recommendations for Integrated Treatment Strategies**

**Absence of Integrated Treatment Strategies.** The review of the current literature clearly conveys the urgent nature of postpartum depression as a compelling issue not only for mothers but also for their infants. As already indicated, PPD interferes with healthy attachment of the mother to her infant (Beck, 1998; Cassidy, 1994; Field et al., 1990; Goodman et al., 2008; Misri & Kendrick, 2008). The mother’s depression, in turn, has serious implications for the ensuing development of the infant (Cornish et al., 2005; Weinberg & Tronick, 1998). Babies born to mothers who develop PPD are at risk for delays in their cognitive and psychomotor development (Cornish et al., 2005; Weinberg & Tronick, 1998).
In light of these grim statistics, healthcare professionals face a crucial challenge: finding ways to identify mothers most at risk for PPD as well as defining the most salient strategies for the treatment of PPD in mothers who are suffering from these symptoms. These steps are crucial if a greater number of mothers are to form a healthy attachment to their infants and the emotional well-being of infants can be maximized.

One of the primary reasons that postpartum depression is not identified more quickly and treated more adequately is that healthcare professionals do not have an integrated treatment model in place to address this extremely serious mental health issue. According to Bell et al. (2002), the term “integrative medicine” is frequently defined as the joining of conventional allopathic medicine and complimentary alternative medicine (CAM). Integrative medicine is a comprehensive approach to treatment that emphasizes a holistic view of the patient and utilization of both allopathic medicine and CAM to maximize patient outcomes (Bell et al., 2002). Far too often, women who have recently given birth are left to languish with symptoms of depression that are treatable. The new mother may not even be aware she is depressed and consequently, may not seek professional help. Inevitably, this results in impairment to the mother infant bond with sometimes disastrous results (Beck, 1998; Weinberg & Tronick, 1998). Disastrous results may include cognitive impairment, delays in motor skills and impaired language development (Cornish et al., 2005; Lemche et al., 2007; Weinberg & Tronick, 1998). An integrated treatment approach to PPD may improve maternal-infant attachment and reduce these impediments to healthy infant development.
Need for Early Screening and Intervention. A powerful and effective approach to the diagnosis and treatment of PPD begins with early detection. Mothers suffering from PPD often remain undiagnosed due to the fact that many mothers do not reach out for medical care for themselves and often, attempt to conceal their depression (Beck, 2006). There is great stigma attached to mental health disorders and depression in the postpartum period. PPD is especially difficult for women because of the expectation that the presence of a new baby should make this a joyous time (Kendall-Tackett, 2010). Early detection of depressive symptoms allows for early diagnosis and consequently, an interruption to the chain of events that so often leads to the emotional damage of infants. Every healthcare professional involved in the care of pregnant women or new mothers should be encouraged to screen all new mothers for symptoms of PPD.

There are many opportunities to screen for symptoms of depression in a new mother at the pediatrician’s office (Currie & Rademacher, 2004; Earls, 2010; Freeman et al., 2005; Pearlstein et al., 2009). Because newborns visit their pediatricians many times over their first year of life, screening in the pediatric setting is an ideal opportunity for the detection of PPD (Currie & Rademacher, 2004; Earls, 2010; Freeman et al., 2005; Pearlstein et al., 2009). Mothers that request more frequent pediatrician visits as well as describing the infant in a negative context are two maternal behaviors associated with PPD (Currie & Rademacher, 2004; Pearlstein et al., 2009). Furthermore, maternal behavior and the assessment of the infant’s behavior can provide indications to the pediatrician that the mother may be struggling with PPD (Currie & Rademacher, 2004;
Pearlstein et al., 2009).

Pediatricians can also inquire about previous episodes of depression, or previous episodes of PPD in women with more than one child (Dennis & Ross, 2006). Previous episodes of depression have been demonstrated to be a powerful predictor of risk for women vulnerable to PPD (Dennis & Ross, 2006).

Screening assessment for depression can be quickly and easily done using the Edinburgh Postnatal Depression Scale (EPDS) (Beck, 2001). The EPDS has been empirically validated in several studies (Beck, 2001). This assessment tool is easy to administer and can be quickly scored by a nurse, lactation consultant or pediatrician (Currie & Rademacher, 2004).

**Assessment of Breastfeeding.** Consultations regarding lactation present an additional opportunity to screen for PPD (Kendall-Tackett, 2010; McCarter-Spaulding & Horowitz, 2007). Difficulties with breastfeeding are associated with increased stress, anxiety and feelings of guilt which may be emotions associated with PPD (McCarter-Spaulding & Horowitz, 2007). Mothers may ask for assistance with breastfeeding difficulties, thus creating an opportunity for discussion and depression screening by the lactation consultant (Kendall-Tackett, 2010; McCarter-Spaulding & Horowitz, 2007).

**Referral for Mental Health Treatment, Pharmacotherapy and Psychotherapy.** Once a new mother has been identified as having depressive symptoms, referral to a psychiatric nurse-practitioner or psychiatrist is recommended. As with any therapeutic relationship, establishing a strong therapeutic alliance is a critical element of
successful treatment (Dewan, 2004). Initially, the mental health provider must assess for risk of self-harm or potential harm to the infant and the mother; this must be done in a non-judgmental way to create a safe environment conducive to full disclosure (Dewan, 2004). Assessment of potential barriers to treatment, such as a mother’s desire to breastfeed, the stigma of mental health therapy, or lack of money for medications must be assessed at the initial visit as well.

If the severity of the depression warrants it, medication should be prescribed. Assessment of previous depressive episodes is also indicated (Dennis & Ross, 2006). The recommended first choice of available drugs for mothers who are breastfeeding is sertraline or paroxetine (Berle et al., 2004). If the mother received effective antidepressant therapy in the past, the use of that medication should be seriously considered (Kendall-Tackett, 2010). However, the safety of pharmacological treatments outside of sertraline and paroxetine is not well established for a breastfeeding mother (Berle et al., 2004). The effects of other medications on the infant is unknown and not recommended (Berle et al., 2004). If the mother is not responsive to sertraline or paroxetine, the decision to discontinue breastfeeding should be addressed. Treatment with another SSRI is possible although the current literature shows a higher rate of medication transmission to the infant (Berle et al., 2004).

Of great importance to the integrated treatment approach for PPD is listening to the client and understanding the priorities of the mother. If the mother does not want to continue pharmacotherapy because she is breastfeeding, allowing her to make an
informed decision is part of an integrated treatment plan. Ideally, provider practices will become more open to breastfeeding mothers and this will cease to be a barrier to treatment for PPD.

In conjunction with pharmacotherapy or in cases where the mother refuses medication the next most advantageous intervention is psychotherapy (O'Hara, 2009). ITP has been shown to be the most effective in addressing the needs of the woman in the postpartum period (Mulcahy et al., 2010; O'Hara, 2009). ITP specifically addresses the issues of adapting to a new role and improving interpersonal relationships (Dewan, 2004). CBT has also been demonstrated as effective, however it is not as well researched as ITP for PPD.

**Referral for Nutritional Therapies.** Nutritional supplements such as Omega-3's and Vitamin D should also be recommended by the provider and are not contraindicated in psychopharmacology or breastfeeding (Freeman, 2009; Kendall-Tackett, 2010; Rees et al., 2005; Sadock & Sadock, 2007). A baseline vitamin D level should be established before initiating supplemental therapy. Sam-E can also be recommended, although it is expensive and expense often creates a barrier to treatment.

**Referral for Exercise.** Exercise such as walking three times a week is a low cost and easily accessible adjunctive therapy. The benefits of regular exercise have been well documented in the literature (Daley et al., 2007; Hassmen et al., 2000; Kendall-Tackett, 2010; Sadock & Sadock, 2007). The results of a regular exercise program happen relatively quickly and are highly recommended especially while waiting for the
psychotropic medications to take effect.

Conclusion

Postpartum Depression constitutes a serious health issue in the United States. Healthy People 2020 identified depression as one of the top public health concerns in the United States (U.S. Department of Health and Human Services, Offices of Disease Prevention and Health Promotion). Given the magnitude of the problem, it is imperative that all medical and healthcare practitioners are equipped with an effective methodology for the screening, assessment and treatment of depression in new mothers.

The critical element in the treatment of PPD is the integration of all adjuvant therapeutic options that are prescribed by the practitioner. While providers are often familiar with psychopharmacology or psychotherapy, they may be less familiar with the use of dietary supplements and regular exercise. The underutilization of adjuvant therapies highlights the importance of making referrals to specialists that may be of benefit to mothers with PPD. More frequent screenings for signs and symptoms of PPD and the integration of multiple modalities may reduce one of the most prevalent and pervasive health issues facing new mothers and their infants.

A highly effective and integrated treatment approach to PPD includes screening, assessment, and treatment. All practitioners who treat new mothers are well advised to have a protocol in place so that every pregnant woman and new mother is adequately screened for risk factors for developing PPD. The outcomes for new mothers could be
revolutionized if healthcare professionals adequately screened all new mothers for the risk factors of depression.

A lack of information as to the devastating consequences of PPD leaves healthcare professionals ill equipped to screen, assess, diagnose and treat this population. If healthcare professionals are educated to utilize an integrated treatment approach to PPD, the result will be far fewer children with emotional difficulties due to PPD and far fewer new mothers who are handicapped through the devastating effects of PPD.
References


