



# Paternal Postpartum Depression: What Health Care Providers Should Know

Anna K. Musser, MS, RN, CPNP, Azza H. Ahmed, DNS, RN, IBCLC, PNP, Karen J. Foli, MSN, PhD, RN, & Jennifer A. Coddington, DNP, MSN, RN, CPNP

## ABSTRACT

Paternal postpartum depression (PPD) is a clinically significant problem for families that is currently underscreened, underdiagnosed, and undertreated. Maternal PPD is a well-known condition and has been extensively researched. In comparison, PPD in fathers and its potential effects on the family are not widely recognized. Studies have shown the importance of optimal mental health in fathers during the postpartum period. Negative effects of paternal PPD affect marital/partner relationships, infant bonding, and child development. To promote optimal health for parents and children, pediatric nurse practitioners must stay up to date on this topic. This article discusses the relationship of paternal PPD to maternal PPD; the consequences, signs, and symptoms; and the pediatric nurse practitioner's role in assessing and managing paternal PPD. *J Pediatr Health Care.* (2013) 27, 479-485.

Anna K. Musser, Graduate Student, Purdue University, West Lafayette, IN.

Azza H. Ahmed, Professor, Purdue University School of Nursing, West Lafayette, IN.

Karen J. Foli, Assistant Professor, Purdue University School of Nursing, West Lafayette, IN.

Jennifer A. Coddington, Clinical Assistant Professor, Purdue University School of Nursing, West Lafayette, IN.

Conflicts of interest: None to report.

Correspondence: Anna K. Musser, MS, RN, CPNP, Purdue University, 502 N University St, West Lafayette, IN 47907; e-mail: [akstrasburger@gmail.com](mailto:akstrasburger@gmail.com).

Anne K. Musser is currently a Pediatric Nurse Practitioner, Private Practice, Frankfort, IN and West Lafayette, IN. 0891-5245/\$36.00

Copyright © 2013 by the National Association of Pediatric Nurse Practitioners. Published by Elsevier Inc. All rights reserved.

Published online November 26, 2012.

<http://dx.doi.org/10.1016/j.pedhc.2012.10.001>

## KEY WORDS

Paternal depression, postpartum depression, fathers, depressed fathers

Paternal postpartum depression (PPD) is a clinically significant problem for families that is currently underscreened, underdiagnosed, and undertreated. Estimates of the incidence of paternal PPD in the literature vary widely, ranging from 4% to 25% of new fathers within the first 12 postpartum months (Goodman, 2004; Paulson, Dauber, & Leiferman, 2006; Ramchandani, Stein, Evans, O'Connor, & ALSPAC Study Team, 2005). This wide statistical variation may be due to the relative newness of this topic, inconsistent research methods, lack of standardized guidelines, and clinical heterogeneity (Paulson & Bazemore, 2010). Despite varying statistics, paternal PPD is proving to be public health concern because it is associated with increased community care costs such as primary care, psychologist contacts, mental health groups, and outpatient hospital services or utilization (Edoka, Petrou, & Ramchandani, 2011).

Current literature does not reveal a specific definition of paternal PPD; however, several studies used the maternal PPD definition to build on for defining parental PPD (Pilyoung & Swain, 2007; Schumacher, Zubaran, & White, 2008). The *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition, text revision (DSM-IV-TR) defines maternal PPD as a major depressive

Paternal postpartum depression (PPD) is a clinically significant problem for families that is currently underscreened, underdiagnosed, and undertreated.

episode with onset occurring within 4 weeks of delivery, depressed or sad mood, marked loss of interest in virtually all activities, significant weight loss or gain, insomnia or hypersomnia, psychomotor agitation or retardation, fatigue or loss of energy, feelings of worthlessness or guilt, diminished ability to think or concentrate, and recurrent thoughts of death (American Psychiatric Association, 2000). These symptoms, as well as other behaviors, may be present in depressed new fathers (Paulson & Bazemore, 2010; Pilyoung & Swain, 2007). Many studies consider paternal PPD to be depression occurring within the first 12 postpartum months, with the highest rates found at 3 to 6 months postpartum (Goodman, 2004; Nazareth, 2011; Paulson & Bazemore, 2010).

Research describes the negative effects of compromised paternal mental health, especially during the postpartum period. Paternal PPD can negatively affect infant care and bonding, is stressful to the family unit, and has been linked to later child psychopathology such as conduct and emotional disorders, hyperactivity, and anxiety and depression, as well as language delays (Paulson & Bazemore, 2010; Paulson, Keefe, & Leiferman, 2009; Ramchandani et al., 2005; Ramchandani, Stein, et al., 2008; Ramchandani, O'Connor, et al., 2008; Schumacher et al., 2008; van den Berg et al., 2009).

Traditionally, care for postpartum depression has been directed toward mothers. In the past decade, increased attention in the literature has been paid to paternal PPD, including its diagnosis, prevalence, and effects on child behavior. The body of knowledge describing the characteristics of paternal PPD, risk factors, comorbidities, effects on infants and children, and links to maternal PPD is growing. It is important for pediatric nurse practitioners (PNPs) to have up-to-date knowledge on this subject because they can play a critical role in diagnosis and management. To our knowledge, no literature currently exists that summarizes PPD and addresses the role of the PNP in its assessment and management. Therefore the purpose of this article is to highlight the relationship of paternal PPD with maternal PPD, the consequences for the family unit, signs and symptoms, and the PNP's role in assessing and managing paternal PPD.

## EFFECTS OF PATERNAL PPD

### Relationship Between Maternal and Paternal PPD

Maternal PPD is a risk factor for paternal PPD, and the incidence of paternal PPD has been correlated with maternal PPD (Goodman, 2004; Paulson & Bazemore, 2010; Nazareth, 2011). In an integrative literature review conducted by Goodman (2004), the incidence of paternal PPD during the first postpartum year ranged from 1.2% to 25% in community samples; however, this incidence increases to 24% to 50% among men whose part-

ners were experiencing PPD. Maternal PPD was the strongest predictor of paternal PPD (Goodman, 2004). This causal relationship is unclear, but male partners of depressed women reportedly feel less supported and experience fear, confusion, frustration, helplessness, anger, a disrupted family, and uncertainty about the future (Schumacher et al., 2008).

A lack of social support has been recognized as a risk factor for maternal PPD. This lack of support also may play an important role in the development of paternal PPD. Dennis and Letourneau (2007) found that depressed women were more likely to be dissatisfied with the support from their partners, believe that communication was poor, perceive their partner as uncaring, and report a decline in the affection and closeness within their relationship. A woman's inability to rely on her partner for help with the infant and household chores was another risk factor for maternal PPD. These risk factors for maternal PPD may be exacerbated when the father is also depressed, because he may be more likely to withdraw from the relationship (Kim & Swain, 2007). Mothers experiencing PPD also may increase the risk for PPD in fathers because fathers are not receiving the support they need during this time of transition (Goodman, 2004; Nazareth, 2011).

### Consequences for Infants and Children

The effects of maternal PPD on infants and children are well documented. Recently, more research has been conducted concerning the effects of paternal PPD on infant and child development and well-being. Findings document a higher risk for increased family stress, lack of bonding, increased incidence of spanking, and later child psychopathology such as emotional issues, conduct disorder, and hyperactivity (Davis, Davis, Freed, & Clark, 2011; Paulson et al., 2009; Ramchandani et al., 2005; Ramchandani, Stein, et al., 2008; Ramchandani, O'Connor, et al., 2008; van den Berg et al., 2009). This research underscores the need for screening and management of paternal PPD by the PNP to prevent negative consequences for infants and children.

The risk for negative parenting outcomes increases when both parents are depressed (Melrose, 2010). Fathers may play an important role in "buffering" their children from the effects of maternal PPD; however, this buffer is lost when the father also has PPD (Melrose, 2010). When both parents are depressed, they are more likely to view their child negatively, describe their child as below average or average, and perceive more health problems in their children (Melrose, 2010). Paulson, Dauber, and Leiferman (2006) conducted a study focusing on both the individual and combined effects of maternal and paternal PPD on parenting behaviors. The study found that the greatest negative effects on parenting behaviors occurred when both parents were depressed: infants were less likely to be put

to sleep on their backs and to have been breastfed, and they were more likely to be put to bed with a bottle. Fathers also were less likely to play outside and sing songs to their babies when both parents were depressed (Paulson, Dauber, and Leiferman, 2006).

Davis and colleagues (2011) examined the association between depression in fathers of 1-year-old children and parenting behaviors. In this study, depressed fathers were more likely to report spanking their child and were less likely to report reading aloud to their child. Interestingly, 77% of these depressed fathers reported speaking with their child's health care provider during the previous year (Davis et al., 2011). These encounters may serve as opportune times for the PNP to screen for depression and refer fathers for appropriate treatment and to provide anticipatory guidance concerning positive parenting behaviors.

In a population-based study by Ramchandani, Stein, Evans, O'Connor, and the Avon Longitudinal Study of Parents and Children (ALSPAC) Study Team (2005), fathers were screened for PPD at 8 and 21 months, and child behaviors were assessed at 3.5 years, according to three problem areas: emotional issues, conduct, and hyperactivity. Findings revealed that paternal PPD was associated with high scores in all three categories, with boys scoring higher than girls. After controlling for social class, degree of education, and maternal depression, scores still remained high for conduct problems and hyperactivity (Ramchandani et al., 2005).

Paternal PPD also appears to have long-term effects on children. The effects on later childhood psychopathology were studied by Ramchandani, Stein, O'Connor, Heron, Murray, and Evans (2008). This population cohort study used ALSPAC family data collected from the prenatal time through 7 years. The study found paternal depression at 8 weeks postpartum to be strongly associated with a psychiatric diagnosis in children at 7 years. Twelve percent of children diagnosed with attention deficit hyperactivity disorder, oppositional defiant/conduct disorder, or any anxiety or depressive disorder had depressed fathers during the postpartum period compared with 6% of children whose fathers were not depressed. Oppositional defiant/conduct disorder was the most prevalent diagnosis. Based on this literature, paternal PPD may be more specifically related to behavioral and social problems, which suggests a link between antisocial behavior and the father's possible role of socializing children (Ramchandani, Stein, et al., 2008).

Ramchandani, O'Connor, and colleagues (2008) compared the longitudinal effects of both prenatal and postnatal paternal depression on infants and children. This longitudinal cohort study also used data from ALSPAC. Fathers who were depressed both prenatally and during the postpartum period were more likely to have children diagnosed with emotional, conduct, hyperactivity, and pro-social problems at both 3.5

and 7 years. Consistent with their earlier study, boys were at a higher risk of developing conduct problems at 3.5 years (Ramchandani, O'Connor, et al., 2008).

Paulson, Keefe, and Leiferman (2009) assessed maternal and paternal depression and the subsequent language development of their child at 24 months as part of the Early Childhood Longitudinal Study-Birth Cohort (ECLS-B). Families were assessed at 9 and 24 months for parental depression, positive parenting interactions, child expressive vocabulary, and demographic and health information. Depression in both mothers and fathers at 9 months was associated negatively with parent-to-child reading. Early depression for fathers was associated with later reading to their children and later expressive vocabulary development (Paulson et al., 2009).

A study by van den Berg and colleagues (2009) that included infants only examined the link between paternal PPD and excessive infant crying in a population cohort of fathers. At 20 weeks' gestation, fathers completed a self-report questionnaire to assess psychiatric symptoms. Infant crying behavior information was then obtained at 2 months (van den Berg et al., 2009).

## ROLE OF THE PNP IN MANAGING PATERNAL PPD

The PNP plays a critical role in family health promotion in all settings, but especially in the primary care setting. PNP's are in an excellent position to prevent, educate, screen, and refer patients to appropriate resources when needed. These principles are the cornerstones of practice for PNP's.

### Prevention and Education

Anticipatory guidance may be one of the most important aspects of care for PNP's to incorporate in their practice when they are working with expectant and new parents. Dennis and Chung-Lee (2006) found that education about PPD was a major help-seeking facilitator for women, and this finding may very well hold true for men. As previously stated, paternal PPD is associated with higher community care (outpatient or primary care) costs, which demonstrates the need for more research concerning cost-effective prevention and treatment options (Edoka et al., 2011).

Goals of parent education include increasing awareness and decreasing the potential stigma associated with paternal PPD. Prenatal and obstetric examinations, expectant parent visits, the birth hospital stay, and newborn and infant well-child checkups all provide ideal opportunities for the PNP to educate *both* parents about PPD (Box 1). The PNP also may direct fathers to credible online professional resources. Involving both parents promotes managing depression as a family unit rather than limiting the focus to one parent, which may help to facilitate better engagement in treatment if needed (Nazareth, 2011). Fathers are likely

## BOX 1. Opportunities for screening, education, and prevention

### Prenatal Examinations

- Verbal discussion
- Assess for risk factors
- Brochures and handouts to take home<sup>a</sup>
- Posters in examination room

### During Birth Hospital Stay

- Include anticipatory guidance in discharge instructions
- Assess for risk factors
- Printed material to send home with parents

### Infant Well-Child Examinations

- Verbal discussion
- Assess for risk factors
- Screening (EPDS or CES-D)
- Brochures and handouts to take home<sup>a</sup>
- Posters in examination room

EPDS, Edinburgh Postnatal Depression Scale; CES-D, Center for Epidemiologic Studies Depression Scale.

<sup>a</sup>Especially if the father is not present.

aware of maternal PPD; however, they may not be aware that they are at risk for the condition themselves (Nazareth, 2011). Providing anticipatory guidance such as signs, symptoms, and risk factors may help fathers recognize their new feelings after the birth of their baby and know when to seek help. Verbal education and discussion, brochures, handouts, posters in examination rooms, and including paternal PPD in hospital discharge instructions are potential avenues for providing education or screening (Box 1).

Depending on the setting and situation, the PNP may only have the opportunity to work with the mother. The father may not be present for prenatal examinations or for infant well-child checkups when the PNP may assess for maternal PPD. In these cases, it would be important for the PNP to speak with the mother about the signs and symptoms of paternal PPD and assess for any concerns she may have about her partner. Equipped with the knowledge that both mothers and fathers may experience PPD, the mother may be able to secure assistance or further screening for her partner if symptoms are identified.

**Providing anticipatory guidance such as signs, symptoms, and risk factors may help fathers recognize their new feelings after the birth of their baby and know when to seek help.**

Common problems experienced by many fathers during the postpartum period include frustration, feeling that they do not have enough time with their infant, deterioration of their lifestyle and sexual relationship with their partner, a restricted sense of freedom, and not feeling skilled in infant care (Genesoni & Tallandini, 2009). The transition to fatherhood can be an extremely stressful time for men (Halle et al., 2008). Early symptoms to assess for include persistent feelings of powerlessness, moodiness, irritability, anxiety, frustration, and a negative perception of self (Genesoni & Tallandini, 2009). Fathers should know that they are at highest risk for depression at 3 to 6 months after the birth of the baby (Nazareth, 2011; Paulson & Bazemore, 2010).

## Assessment

### Signs and symptoms

Although no standardized guidelines currently exist, the PNP usually has several opportunities, as previously discussed, to assess both parents for depressive symptoms and risk factors for PPD. PNPs may quickly assess both parents and formally screen for symptoms if indicated, which would involve incorporating an assessment of parental mental health status into well-child examinations. Again, the greatest risk factor identified thus far for paternal PPD is maternal PPD (Goodman, 2004; Kim & Swain, 2007; Wilson & Durbin, 2010). This risk factor stresses the importance of assessing both parents for PPD.

The PNP should be aware of the identified characteristics of paternal PPD (Box 2). Paternal PPD differs from maternal PPD in several ways; the condition has a more insidious development and less obvious symptoms, which make it more challenging to identify (Kim & Swain, 2007; Wilson & Durbin, 2010). Depression in fathers tends to begin later, often after the onset of depression in mothers, with the rate increasing throughout the first postpartum year (Goodman, 2004). Fathers may withdraw from social situations and present with indecisiveness, cynicism, avoidance, anger attacks, affective rigidity, self-criticism, and irritability (Kim & Swain, 2007; Schumacher et al., 2008).

Negative parenting behaviors such as decreased positive emotions, warmth, and sensitivity and increased hostility, intrusiveness, and disengagement may be observed (Wilson & Durbin, 2010). Alcohol and drug use, increased marital conflict, and partner violence are also signs of male depression (Kim & Swain, 2007; Schumacher et al., 2008). PNPs also should be aware of somatic symptoms such as indigestion, changes in appetite and weight, diarrhea, constipation, headache, toothache, nausea, or insomnia (Kim & Swain, 2007; Schumacher et al., 2008). Depression in new fathers also may be difficult to identify because depressive symptoms may be interpreted as natural anxieties

## BOX 2. Signs and symptoms of paternal postpartum depression

- Withdrawal or avoidance (from social situations, work, or family)
- Indecisiveness
- Cynicism
- Anger attacks
- Affective rigidity
- Self-criticism
- Irritability
- Alcohol/drug use
- Increased marital conflict
- Partner violence
- Somatic symptoms (e.g., indigestion, changes in appetite and weight, diarrhea, constipation, headache, toothache, nausea, and insomnia)
- Negative parenting behaviors (e.g., decreased positive emotions, warmth, and sensitivity and increased hostility, intrusiveness, and disengagement)

*Data from Kim & Swain, 2007; Schumacher, Zubaran, & White, 2008; Wilson & Durbin, 2010.*

concerning changes in social and financial conditions (Schumacher et al., 2008).

A thorough history is an important component. When assessing paternal PPD, risk factors to look for include an established history of depression, young fathers (younger than 25 years), lower socioeconomic status, working class occupations, men belonging to step-families, partners of single mothers, inadequate support systems, and maternal PPD (Goodman, 2004; Nazareth, 2011).

### Screening recommendations and techniques

To date no diagnostic tool has been developed to exclusively screen for paternal PPD. However, the PNP may use the DSM-IV-TR criteria for depression, the Patient Healthcare Questionnaire-2 (PHQ-2), the Edinburgh Postnatal Depression Scale (EPDS), or the Center for Epidemiologic Studies Depression Scale (CES-D) to aid in the screening process (Cox, Holden, & Sagovsky, 1987; Radloff, 1977). The PNP may easily download any of these scales for free from the Internet.

The DSM-IV-TR criteria for a major depressive episode include five symptoms (from a list of nine) that must be present for at least 2 weeks (American Psychiatric Association, 2000). At least one of the symptoms must be depressed mood or loss of interest (American Psychiatric Association, 2000). Other symptoms include a significant (greater than 5%) weight loss or gain or an increase or decrease in appetite, insomnia or hypersomnia, psychomotor agitation or retardation, fatigue or loss of energy, feelings of worthlessness or inappropriate guilt, diminished concentration or indecisiveness, and recurrent thoughts of death or suicide (American Psychiatric Association, 2000).

The PHQ-2 is based on the DSM-IV-TR criteria and is a reliable tool for quickly assessing for the presence of depression in fathers (Kroenke, Spitzer, & Williams, 2003). This screening tool utilizes two screening questions based on the frequency of depressed mood and anhedonia within the past two weeks (Kroenke, Spitzer, & Williams, 2003). If the patient screens positive on the PHQ-2, the PNP may further screen with the Patient Healthcare Questionnaire-9 (PHQ-9), which features nine questions, or refer the father to appropriate mental health services (Kroenke et al., 2003).

The EPDS is a 10-item self-report questionnaire that has been validated and widely used (Cox et al., 1987). Eight questions address depressive symptoms such as laughing, enjoyment, and guilt. Two questions address anxiety symptoms such as feeling worried and panicky. The responses are scored on a scale from 0 to 3, with 3 being the highest severity of the symptom. In women, scores of 12 or more identify the possibility of a diagnosis of a depressive disorder (Cox et al., 1987). A score of 12 often is used as the cut-off score for depression in men; however, a lower cut-off score is sometimes used because of the different presentations of depression in men and women (Kim & Swain, 2007).

The CES-D short form measures symptoms such as affect, somatic symptoms, psychomotor retardation, and interpersonal activity (Radloff, 1977). The test consists of 12 items, compared with the 20 items on the full CES-D, which are scored on a scale from 0 to 3, with 3 indicating the highest severity (Radloff, 1977). A score between 10 and 14 is suggestive of moderate depression, and scores greater than or equal to 15 suggest severe depression (Radloff, 1977). As with the PHQ-2, PHQ-9, and EPDS, this tool can only be used to screen for depression and should be followed by a diagnostic evaluation.

### Management

The recognition of how to engage with men and support their needs as fathers is in its infancy (Halle et al., 2008). General evidence-based practice for treating depression in men would indicate the benefits of pharmacological or psychological therapies (Nazareth, 2011). However, the evidence for these treatments for paternal PPD and the effects on child outcomes require further study (Nazareth, 2011). For the most effective treatment plan, interventions should be focused on the suspected cause(s) of the father's depression (Box 3; Nazareth, 2011). For example, if impaired parenting is the mechanism through which paternal depression affects children, then the treatment plan should focus on enhancing positive parenting skills. If a low mood leads to poor engagement with their child, then antidepressant or cognitive behavioral therapy may be appropriate (Nazareth, 2011).

To help fathers cope with the initial stressors of becoming a new father, PNPs may suggest parenting

### BOX 3. Potential management strategies

#### Parenting Classes

##### Targeting:

- Feelings of inadequacy
- Stress
- Loss of control
- Frustration
- Low self-confidence

#### Interpersonal Therapies

##### Targeting:

- Marital/partner conflict
- Poor communication
- Poor social and emotional support

#### Cognitive Behavior Therapy

##### Targeting:

- Poor mood associated with depression

#### Pharmacological Antidepressant Therapy

##### Targeting:

- Poor mood associated with depression

Data from Dennis & Letourneau, 2007; Genesoni & Tallandini, 2009; Halle et al., 2008; Nazareth, 2011.

classes that teach ways to recognize infant needs and assist the father in learning to provide physical care to their infants, including feeding and changing diapers. Research has shown that fathers may cope by learning to “take control” of a situation. Empowering fathers to acquire baby-care skills promotes self-confidence and decreases frustration (Genesoni and Tallandini, 2009).

Social and emotional supports are also crucial components in the management of emotional distress and mental illness (Halle et al., 2008). Therefore interventions that target the couple and focus on promoting a positive partner relationship may be beneficial (Dennis & Letourneau, 2007). Some fathers believe that they have very little support beyond what is provided by their partner and even less support if their partner is also experiencing PPD (Halle et al., 2008). This situation is an opportunity for the PNP to act as another resource of support for both parents. PNPs should be accessible, open, and encourage the discussion of the new father’s feelings (Halle et al., 2008).

Dennis and Letourneau (2007) studied the effects of support and the development of PPD in women and discussed the importance of postpartum support groups. They suggested the implementation of support groups to specifically target PPD and the challenges in the postpartum period as a treatment option or form of secondary prevention (Dennis & Letourneau, 2007). The implementation of postpartum support groups for fathers may be efficacious as well.

Increasing postpartum partner support and marital satisfaction may be an important goal in implementing interventions for PPD. Matthey, Kavanagh, Howie, Barnett, and Charles (2004) found that participants experienced higher partner awareness of maternal feelings and satisfaction with sharing home and infant tasks at 6 weeks postpartum than did couples who did not participate in educational sessions that discussed hypothetical situations.

### CONCLUSION

Fathers play a critical role in their children’s development. Subsequent to studies that revealed negative effects of maternal PPD on child outcomes, research is beginning to shift toward including the mental health of new fathers. This review highlighted the prevalence of paternal PPD, its relation to maternal PPD, and signs, symptoms, and consequences; it also provided guidance for PNPs in preventing, assessing, and managing the condition. The discussion lays a foundational knowledge base for PNPs and recognizes the importance of the need for more studies in this field.

PNPs need to incorporate knowledge on this topic into practice to provide the best patient care possible. For the successful management of paternal PPD, PNPs must be up to date on current research and complete a thorough assessment. It is also important for PNPs to be aware of the resources available in their communities to ensure appropriate and timely referral. This information is needed for effective anticipatory guidance and education, screening, diagnosis, and treatment for new fathers, which will help ensure the best outcomes for some of our youngest patients and their families.

For the successful management of paternal PPD, PNPs must be up to date on current research and complete a thorough assessment.

### REFERENCES

- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Cox, J. L., Holden, J. M., & Sagovsky, R. (1987). Edinburgh postnatal depression scale (EPDS). *The British Journal of Psychiatry*, 150, 782-786.
- Davis, R. N., Davis, M. M., Freed, G. L., & Clark, S. J. (2011). Father’s depression related to positive and negative parenting behaviors with 1-year-old children. *Pediatrics*, 127, 612-618.
- Dennis, C. L., & Chung-Lee, L. (2006). Postpartum depression help-seeking barriers and maternal treatment preferences: A qualitative systematic review. *Birth*, 33(4), 323-331.
- Dennis, C. L., & Letourneau, N. (2007). Global and relationship-specific perceptions of support and the development of postpartum depressive symptomatology. *Social Psychiatry and Psychiatric Epidemiology*, 42, 389-395.

- Edoka, I. P., Petrou, S., & Ramchandani, P. G. (2011). Healthcare costs of paternal depression in the postnatal period. *Journal of Affective Disorders, 133*, 356-360.
- Genesoni, L., & Tallandini, M. (2009). Men's psychological transition to fatherhood: An analysis of the literature, 1989-2008. *Birth, 36*, 305-317.
- Goodman, J. (2004). Paternal postpartum depression, its relationship to maternal postpartum depression, and implications for family health. *Journal of Advanced Nursing, 45*(1), 26-35.
- Halle, C., Dowd, T., Fowler, C., Rissel, K., Hennessy, K., & MacNevin, R. (2008). Supporting fathers in the transition to parenthood. *Contemporary Nurse, 31*, 57-70.
- Kim, P., & Swain, J. (2007). Sad dads; paternal postpartum depression. *Psychiatry, 4*(2), 35-47.
- Kroenke, K., Spitzer, R. L., & Williams, J. B. (2003). The patient health questionnaire-2: Validity of a two item depression screener. *Medical Care, 41*, 1284-1294.
- Matthey, S., Kavanagh, D. J., Howie, P., Barnett, B., & Charles, M. (2004). Prevention of postnatal distress or depression: An evaluation of an intervention at preparation for parenthood classes. *Journal of Affective Disorders, 79*, 113-126.
- Melrose, S. (2010). Paternal postpartum depression: How can nurses begin to help. *Contemporary Nurse, 34*(2), 199-210.
- Nazareth, I. (2011). Should men be screened and treated for postnatal depression. *Expert Reviews Ltd, 11*, 1-3.
- Paulson, J. F., & Bazemore, S. D. (2010). Prenatal and postpartum depression in fathers and its association with maternal depression. *Journal of American Medical Association, 303*(19), 1961-1969.
- Paulson, J., Dauber, S., & Leiferman, J. (2006). Individual and combined effects of postpartum depression in mothers and fathers on parenting behavior. *Pediatrics, 118*, 659-668.
- Paulson, J., Keefe, H., & Leiferman, J. (2009). Early parental depression and child language development. *The Journal of Child Psychology and Psychiatry, 50*(3), 254-262.
- Pilyoung, K., & Swain, J. (2007). Sad dads. *Psychiatry, 4*(2), 35-47.
- Radloff, L. S. (1977). The CES-D scale: A self report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385-401.
- Ramchandani, P., O'Connor, T. O., Evans, J., Heron, J., Murray, L., & Stein, A. (2008). The effects of pre- and postnatal depression in fathers: A natural experiment comparing the effects of exposure to depression in offspring. *The Journal of Child Psychology and Psychiatry, 49*(10), 1069-1078.
- Ramchandani, P., Stein, A., Evans, J., O'Connor, T., & ALSPAC Study Team. (2005). Paternal depression in the postnatal period and child development: A prospective population study. *The Lancet, 365*, 2201-2205.
- Ramchandani, P., Stein, A., O'Connor, T., Heron, J., Murray, L., & Evans, J. (2008). Depression in men in the postnatal period and later child psychopathology: A population cohort study. *Journal of American Academy of Child Adolescent Psychiatry, 47*(4), 390-398.
- Schumacher, M., Zubaran, C., & White, G. (2008). Bringing birth-related paternal depression to the fore. *Women and Birth, 21*, 65-70.
- van den Berg, M., van der Ende, J., Crijnen, A., Jaddoe, V., Moll, H., Mackenbach, J., ... Verhulst, F. C. (2009). Paternal depressive symptoms during pregnancy are related to excessive infant crying. *Pediatrics, 124*(1), 96-103.
- Wilson, S., & Durbin, E. (2010). Effects of paternal depression on fathers' parenting behaviors: A meta-analytic review. *Clinical Psychology Review, 30*, 167-180.