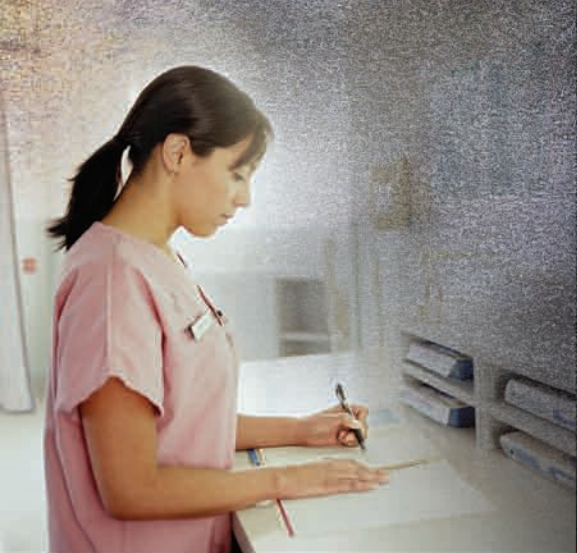




Cheryl Tatano Beck, DNSc, CNM, FAAN

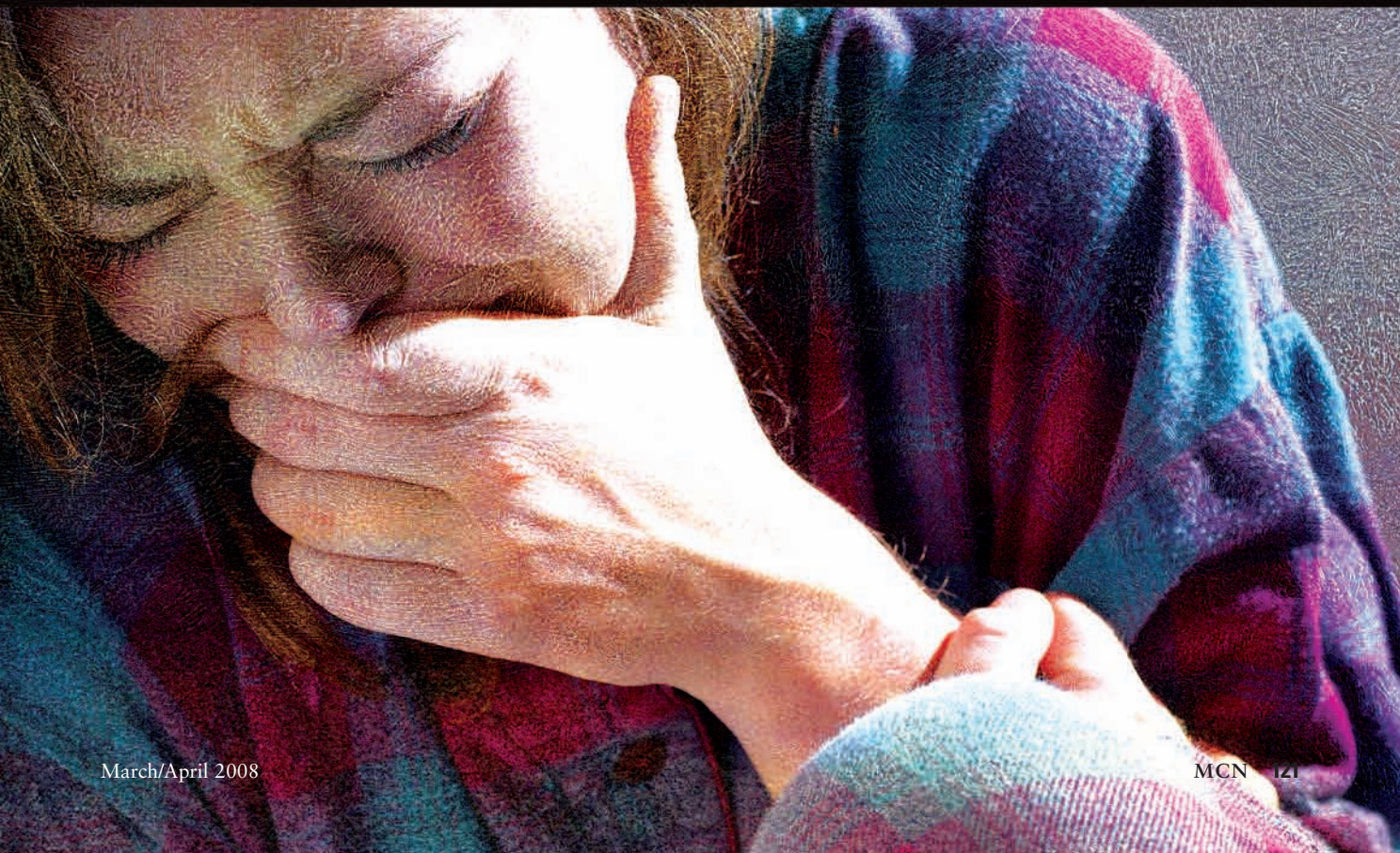
Abstract

Postpartum depression has been described as a thief that steals motherhood. It can result in tragedy and sometimes in headline-gripping maternal suicide or infanticide. Because one of the highest priorities for nursing is to continually advance the knowledge that underlies nursing practice, it is essential that we understand what nurse researchers have done to advance the knowledge base of postpartum depression. This integrative review is a two-part series for MCN that summarizes 141 postpartum depression studies conducted by nurse researchers from around the globe, including United States, Australia, Canada, China (Hong Kong, Taiwan), Finland, Iceland, Sweden, Turkey, and Malaysia. Specific areas of postpartum depression to which nurse researchers have devoted their primary attention include epidemiology, risk factors, transcultural perspectives, instrument development, screening, interventions, and mother-infant interactions.

Key Words: Postpartum depression; Postnatal depression; Postpartum mood disorders.

State of the Science on **POSTPARTUM** **DEPRESSION:**

WHAT NURSE RESEARCHERS HAVE CONTRIBUTED—PART 1



There can be little doubt that one of the highest priorities for creating an appropriate future for nursing is that of identifying, structuring and continuously advancing the knowledge that underlies the practices of professionals in the field” (Schlotfeldt, 2006, p. 13). In the 21st century, Bunkers (2006) called for the professional nurse to be a nurse scholar in order to develop a unique knowledge base from which nurses can draw to provide evidence-based nursing practice. This two-part series on the state of the science on postpartum depression (PPD) aims to help all nurses become more aware of how nurses have influenced the professional literature and practice in this area.

Postpartum depression is the most common complication of childbirth. A 2005 report by the Agency for Healthcare Research and Quality (Gaynes et al., 2005) indicated that up to 19.2% of new mothers may have either major or minor PPD in the first 3 months after birth. Tragedy can be the result of this complication, sometimes even resulting in headline-gripping maternal suicide and infanticide. This puerperal mood disorder also can have a devastating but insidious effect on mother-infant interaction during the first year of life (Beck, 1995) and can influence children’s cognitive and emotional development (Beck, 1998). PPD can strike women of all ages, even adolescents (Clemmens, 2002).

POSTPARTUM DEPRESSION IS THE MOST COMMON COMPLICATION OF CHILDBIRTH.



What contributions have nurse researchers made in advancing the knowledge base of PPD? In Part 1 of this two-part series, the following areas in which nurse researchers have contributed knowledge are addressed: epidemiology, risk factors, and transcultural perspectives. In Part 2, which will be published in the next issue of *MCN The American Journal of Maternal Child Nursing*, topics will include instrumentation/screening, interventions, mother-infant interaction, family dynamics, breastfeeding, preterm birth, biological factors, clinicians’ knowledge, and mothers’ use of health services.

How the Literature Review Was Conducted

The following databases were searched: Cinahl, PsycLit, Pubmed, Sociological Abstracts, and Web of Science. Key words such as “postpartum depression” and “postnatal depression” were used, and the search was narrowed by linking these key words with additional key words, such as research and/or

nurse, nursing. Author searches also were conducted in Web of Science with names of nurse researchers who had published studies on PPD. Databases were searched from 1982 to the present time. The review process yielded a total of 141 studies on PPD conducted and published by nurse researchers from around the globe: United States, Australia, Canada, China (Hong Kong, Taiwan), Finland, Iceland, Sweden, Turkey, and Malaysia. Both qualitative and quantitative studies were included; meta-analyses and meta-syntheses were considered research studies, but traditional literature reviews were not included. Results of the literature review are organized by specific topics under PPD, such as interventions, risk factors, and epidemiology.

The Epidemiology of Postpartum Depression

When investigating the prevalence of this crippling mood disorder, only one study by nurses was found that actually measured the prevalence of DSM-IV–diagnosed PPD (Clemmens, Driscoll, & Beck, 2004). Clemmens et al reported that 12% of their sample (150 mothers at 6 weeks postpartum) were formally diagnosed (using DSM-IV criteria) with major PPD; 19% had minor PPD. In the rest of the studies, the prevalence of postpartum depressive symptomatology was assessed rather than the actual DSM-IV diagnosis of PPD.

Studies in which nurse researchers investigated the prevalence of postpartum depressive symptoms took place in Taiwan (Chen, Kuo, Chou, & Chen, 2007; Chien, Tai, Huang, & Sheu, 2006), Turkey (Dindar & Erdogan, 2007), and Sweden (Seimyr, Edhborg, Lundh, & Sjogren, 2004), and one study looked at international rates (Affonso, De, Horowitz, & Mayberry, 2000). The remaining research occurred in the United States using such scales as the Beck Depression Inventory-II (BDI-II), Edinburgh Postnatal Depression Scale (EPDS), and the Postpartum Depression Screening Scale (PDSS). The prevalence of postpartum depressive symptoms in immigrant Asian Indian women in northern California (Goyal, Murphy, & Cohen, 2006) has also been assessed. Using the PDSS, Goyal and colleagues reported that 24% and 28% of the sample of 58 mothers had major and minor depressive symptomatology, respectively. The earliest study, published in 1992 (York, Volpicelli, Brooten, Charche, & Speicher), was a longitudinal study that followed women’s depressive symptoms in pregnancy through 3 months after birth. Women’s depressive scores decreased during pregnancy to 6 weeks postpartum, but at 3 months after delivery, depressive symptom scores increased slightly.

Data collection times varied among studies. Horowitz and Goodman (2004) reported rates of elevated depressive symptoms as 41.9% at 4 to 8 weeks, 35.5% at 10 to 14 weeks, and 27.4% at 14 to 18 weeks after delivery. At 2 and 6 weeks postpartum, Rychnovsky and Beck (2006) found that 13% and 11% of their sample, respectively, had positive screens for PPD. In Sweden, similar rates were reported but at different time periods. In Seimyr et al’s (2004)

sample of Swedish mothers, rates of 17% and 12% at 8 weeks and 1 year postpartum, respectively, were recorded.

Affonso and colleagues (2000) undertook the most ambitious study in this category by investigating differences in postpartum depressive symptomatology among an international sample. Their sample of 892 women was from nine countries, representing five continents. Prevalence rates ranged from 23% to 35.1% at 4 to 6 weeks after delivery and from 16.9% to 33.6% at 10 to 12 weeks postpartum. Chen et al (2007) reported that 42.6% of Taiwanese mothers had elevated depressive symptomatology during the postpartum period. Considerations for nurse researchers in this area when conducting studies in the future should include more standardization of screening scales, cut-off scores, and data collection points to facilitate comparisons. More studies are needed that include a formal diagnosis of PPD, not just depressive symptom levels.

Postpartum Depression Risk Factors

Nurse researchers in the following countries have examined predictors of PPD: United States, Australia, Hong Kong, Taiwan, Canada, and Finland. Some of the frequently studied risk factors by these nurse scientists include social support, self-esteem, life stress, childcare stress, prenatal depression, and fatigue. One limitation of these studies on predictors is that the nurse researchers used measures such as the EPDS and Center for Epidemiological Studies-Depression (CES-D), which actually assess postpartum depressive symptomatology, and did not report the actual diagnoses of PPD. Another limitation of this predictor research is the varied data collection points in the studies, which ranged from 1 week to 1 year postpartum.

Social Support

In Logsdon's research program, she has repeatedly examined the relationship between social support and PPD. She has reported low social support as a significant risk factor in mothers of preterm infants (Logsdon, Davis, Birkimer, & Wilkerson, 1997), in adolescents (Logsdon, Birkimer, Simpson, & Looney, 2005), in white primiparas (Logsdon, McBride, & Birkimer, 1994), and in African American mothers with low income (Logsdon & Usui, 2001; Logsdon, Birkimer, & Usui, 2000). Low social support has also been found to be a significant predictor of PPD in Canadian women (Dennis, Janssen, & Singer, 2004, Dennis & Ross, 2006a), and in Chinese women (Leung, Martinson, & Arthur, 2005; Wang, Jiang, Jan, & Chen, 2003; Heh, Coombs, & Bartlett, 2004). In their study of PPD prevention activities, Ugarriza, Douchand Brown, & Chang-Martinez (2007) underscored the importance of social support as a protective measure.

Low Self-Esteem

Low self-esteem is another significant risk factor for PPD reported by multiple nurse researchers. Hall, Kotch, Browne, and Rayens (1996) were the first nurse researchers to report

a significant correlation between these two variables. In two separate studies, Logsdon et al. (1997) and Logsdon & Usui (2001) confirmed low self-esteem as a significant predictor of PPD. In Australia (Stamp & Crowther, 1994) and China (Wang et al., 2003), low self-esteem also was found to be a significant risk factor.

THIS INTEGRATIVE REVIEW, IN THIS
ISSUE OF *MCN* AND THE NEXT ISSUE,
SUMMARIZES POSTPARTUM
DEPRESSION STUDIES PUBLISHED
BY NURSE RESEARCHERS FROM
AROUND THE GLOBE.

Life Stress

Nurse researchers have repeatedly confirmed life stress as a significant predictor of PPD. These studies were conducted in the United States (Horowitz, Damato, Duffy, & Solon, 2005), in Canada (Dennis et al., 2004), and in China and Taiwan (Leung et al., 2005; Wang et al., 2003). Stress in women with PPD was also qualitatively examined in Chinese women (Leung, Arthur, & Martinson, 2005). Childcare stress was reported as a significant risk factor for PPD in the United States (Merchant, Affonso, & Mayberry, 1995) and China (Leung et al., 2005).

Fatigue

Fatigue and PPD have been found to be significantly related. The following five studies in the United States confirmed fatigue as a risk factor: Bozoky and Corwin (2002), Corwin, Brownstead, Barton, Hechard, & Morin (2005), Goyal, Gay, & Lee (2007), Rychnovsky (2007), and Groer et al. (2005). This significant relationship has also been reported in Canadian women (Dennis & Ross, 2005) and Taiwanese women (Huang, Carter, & Guo, 2004).

Prenatal Depression

In three studies, prenatal depression was found to be a significant risk factor in women developing PPD. Logsdon et al. (1994) reported such findings in U.S. mothers, Leung et al. (2005) in Hong Kong Chinese women, and Dennis & Ross (2006b) in Canadian mothers.

Meta-Analyses Done for Risk Factors

In relation to risk factors for developing PPD, Beck (1996a; 1996b; 2001) conducted three meta-analyses. In addition to the predictors reported by nurse researchers in the previously

mentioned studies, the meta-analyses identified the following additional significant predictors:

- prenatal anxiety
- poor marital relationships
- history of depression
- difficult infant temperament
- maternity blues
- low socioeconomic status
- single marital status
- unplanned/unwanted pregnancy.

Transcultural Perspectives of Postpartum Depression

Most studies conducted by nurse researchers in this area have been qualitative. Two published ethnographic studies focused on Hmong women (Stewart & Jambunathan, 1996) and Jordanian Australian women (Nahas & Amasheh, 1999). In four phenomenological studies, experiences of PPD were described for Middle Eastern migrant women in Australia (Nahas, Hillege, & Amasheh, 1999), Hong Kong Chinese women (Chan, Levy, Chung, & Lee, 2002; Leung, et al., 2005), and women in Ireland (Lawler & Sinclair, 2003). Grounded theory was the qualitative design used in three studies that focused on mothers in Finland (Tammentie, Paavilainen, Astedt-Kurki, & Tarkka, 2004), Sweden (Edhborg, Friberg, Lundh, & Widstrom, 2005), and Taiwan (Chen, Wang, Chung, Tseng, & Chou, 2006). Amankwaa (2003) carried out a descriptive qualitative study among African American women in the United States, and Horowitz, Chang, Das, and Hayes (2001) conducted a qualitative study of mothers' perceptions of postpartum depressive symptoms from an international perspective.

Beck (2007) modified her original grounded theory study on PPD ("teetering on the edge") (Beck, 1993) to include 10 qualitative studies on this mood disorder in mothers from other cultures that had been published by nurse researchers since Beck's original study had been completed. Postpartum depressed women in other cultures were used as comparison groups to modify Beck's grounded theory because the original "teetering on the edge" had been developed from a sample of all middle class, white women living in the United States. Just like the U.S. white mothers in the original grounded theory study by Beck, women in Hong Kong, for example, echoed loss of control as the basic problem. Women in these varying cultures progressed through the four stages of "teetering on the edge" to regain control of their lives.

Studies of Hispanic Women

Three quantitative studies were located that examined PPD in Hispanic women living in the United States. Martinez-Schallmoser, Telleen, and MacMullen (2003) studied the effect of social support and acculturation on PPD in 66 Mexican American women using the CES-D at 6 weeks postpartum. In this study, 53% of the women scored high on

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depressive symptoms. Reported significant predictors of elevated depression levels included prenatal depression, low family quality of life, and a high need for postpartum support. The acculturation measure used was language, and no significant findings of this variable and postpartum depressive symptoms were reported.

Heilemann, Frutos, Lee, and Kury (2004) investigated postpartum depressive symptoms among 129 mothers of Mexican descent. Also using the CES-D, 59% of these mothers scored high on depressive symptoms. Exposure to the United States in childhood, poor sense of mastery, and dissatisfaction with life were related to elevated depression scores. Beck, Froman, and Bernal (2005) used the PDSS (Beck & Gable, 2002) to measure level of depressive symptoms in Hispanic mothers. In addition to the PDSS, a formal diagnosis of PPD was included in the study design. Acculturation measurement focused on language. A heterogeneous sample of Hispanic mothers that included Mexican, Puerto Rican, and "other" such as Cuban women, was recruited. In this study, no consistent relationship was found between acculturation and PPD, but it was found that Puerto Rican women had significantly higher levels of depressive symptoms after birth than the other groups of Hispanic mothers.

One limitation of these quantitative studies is the use of language as the sole criterion measure for acculturation. Acculturation is a complex phenomenon that remains problematic to measure. This concept still requires better refinement to facilitate research in which it is used as a key variable. More research also needs to be conducted with subgroups of Hispanic mothers. Other limitations of these studies are that none of the three studies included a power

analysis, and only one used a DSM-IV diagnostic interview to establish a diagnosis of PPD.

Future Research

When discussing prevalence studies for PPD, it is clear that more quantitative research is needed, especially to better account for racial and ethnic differences in the U.S. population. Longitudinal studies should be conducted to identify periods of peak prevalence over the first 12 months after birth. The limited number of published studies by nurses hampers the ability of clinicians to plan for the best times and places to screen and intervene (Gaynes et al., 2005). If the prevalence of this mood disorder peaks after 6 weeks, then screening programs need to be put into place in specialties other than obstetrics, such as family practice and pediatrics.

Evidence Ready for Practice

One result of Part 1 of this literature review of nurse scientists' study of PPD is that some areas relating to PPD are now well studied and are ready for incorporation into practice. In nursing's search for evidence-based practice, we can

now say that we have sufficient research knowledge about these areas of PPD:

- confirmed risk factors for developing PPD
- the universal nature of this mood disorder across cultures
- the prevalence of elevated postpartum depressive symptoms in new mothers over the first 12 months after birth

CONTINUOUSLY ADVANCING THE KNOWLEDGE THAT UNDERLIES CLINICAL PRACTICE IS ONE OF THE HIGHEST PRIORITIES FOR PROMOTING NURSING'S FUTURE.

Nurses who work with childbearing families can use this information about risk factors for PPD, how often PPD occurs, and how widespread this mood disorder is among women of multiple cultures. Now is the time to put this knowledge into practice. Part 2 of this two-part series on nursing's contribution to the literature on PPD will appear in the next issue of MCN. ✦

Cheryl Tatano Beck is a Professor, School of Nursing, University of Connecticut, Storrs. She can be reached via e-mail at Cheryl.beck@uconn.edu

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SUGGESTED CLINICAL IMPLICATIONS

- Up to 19% of new mothers may have either major or minor postpartum depression in the first 3 months after birth.
- Postpartum depression is a universal phenomenon and not just limited to industrialized Western societies.
- Repeatedly confirmed risk factors for postpartum depression include life stress, low social support, low self-esteem, and prenatal depression.
- Acculturation is a complex phenomenon that needs to be considered in women who suffer from postpartum depression.
- Nursing knowledge from research has advanced far enough in the following areas that nurses can use this information in their practice:
 1. confirmed risk factors for developing postpartum depression
 2. the universal nature of this mood disorder across cultures
 3. the prevalence of elevated postpartum depressive symptoms in new mothers over the first 12 months after birth

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ONLINE



Postpartum Support International
www.postpartum.net

Online Postpartum Depression Support Group
www.ppdsupportpage.com

National Women's Health Information Center
www.4woman.gov

Massachusetts General Hospital Center for Women's Mental Health
www.womensmentalhealth.org

Motherisk.org
www.motherisk.org