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RESEARCH

Behavioral and Psychosocial Health of New Mothers and Associations With Contextual Factors and Perceived Health

Lorraine O. Walker, Bo Xie, Sherry G. Hendrickson, and Bobbie S. Sterling

Correspondence
Lorraine O. Walker, EdD, MPH, RN, School of Nursing, University of Texas at Austin, 1710 Red River St., Austin, TX 78701.
lwalker@mail.nur.utexas.edu

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ABSTRACT

Objective: To test the association of behavioral and psychosocial health domains with contextual variables and perceived health in ethnically and economically diverse postpartum women.

Design: Mail survey of a stratified random sample.

Setting: Southwestern community in Texas.

Participants: Non-Hispanic White, African American, and Hispanic women ($N = 168$).

Methods: A questionnaire was sent to a sample of 600 women. The adjusted response rate was 32.8%. The questionnaire covered behavioral (diet, physical activity, smoking, and alcohol use) and psychosocial (depression symptoms and body image) health, contextual variables (race/ethnicity, income, perceived stress, and social support), and perceived health. Hypotheses were tested using linear and logistic regression.

Results: Body image, dietary behaviors, physical activity behaviors, and depression symptoms were all significantly correlated (Spearman $\rho = -.15$ to .47). Higher income was associated with increased odds of higher alcohol use (more than 1 drink on 1 to 4 days in a 14-day period). African American ethnicity was correlated with less healthy dietary behaviors and Hispanic ethnicity with less physical activity. In multivariable regressions, perceived stress was associated with less healthy dietary behaviors, increased odds of depression, and decreased odds of higher alcohol use, whereas social support was associated with less body image dissatisfaction, more physical activity, and decreased odds of depression. All behavioral and psychosocial domains were significantly correlated with perceived health, with higher alcohol use related to more favorable perceived health. In regressions analyses, perceived stress was a significant contextual predictor of perceived health.

Conclusion: Stress and social support had more consistent relationships to behavioral and psychosocial variables than race/ethnicity and income level.

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Lorraine O. Walker, EdD, MPH, RN, is the Luci B. Johnson Centennial Professor in nursing, School of Nursing, The University of Texas at Austin, Austin, TX.

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Although giving birth and motherhood are normal events, some mothers in the United States find they are unprepared for and uninformed about the realities of the postpartum period (Howell, Mora, Chassin, & Leventhal, 2010; Kanotra et al., 2007; Martin, Horowitz, Balbierz, & Howell, 2014). The postpartum period may be an important health transition for some women, especially with regard to their behavioral and psychosocial health (Walker & Wilging, 2000). In a recent study, for example, nearly half of low-income postpartum women had multiple domains in which their behavioral and psychosocial health was classified as unfavorable, including areas such as diet and exercise, alcohol use and smoking, and depression symptoms (Walker, Sterling, Guy, Mahometa, 2013). When optimal, these domains contribute to the health and well-being of postpartum women, but when unfavorable, many may become risk factors for later chronic disease (Centers for Disease Control and Prevention [CDC], 2012) and mortality (Whitley, Batty, Hunt, Popham, & Benzeval, 2014). In this study, we extended prior research by studying behavioral and psychosocial health domains in relation to overall perceived health and the contextual factors of income level, race/ethnicity, stress, and social support in an economically diverse sample of postpartum women.

Only rarely has the spectrum of postpartum health, including diet, physical activity, smoking and alcohol use, depression symptoms, and body image been studied simultaneously.

Background

Behavioral and Psychosocial Aspects of Women's Postpartum Health

The behavioral (e.g., smoking) and psychosocial (e.g., depression) health aspects of postpartum women are often viewed in terms of their effects on parenting and on infants' health and development (American Academy of Pediatrics, 2012; Balbierz, Bodnar-Deren, Wang, & Howell, 2015; Cook & Strachan, 1999; Field, 2010; Gress-Smith, Luecken, Lemery-Chalfant, & Howe, 2012; Kahn, Zuckerman, Bauchner, Homer, & Wise, 2002; McLearn, Minkovitz, Strobino, Marks, & Hou, 2006). It is equally important, however, to view the period after giving birth from a larger women's health perspective (Institute of Medicine, 2010). The extended postpartum period (first postpartum year), sometimes seen by mothers as a new beginning (Sterling et al., 2009), is an opportune time in the life course to promote the health of women and prevent risk factors for chronic disease development.

Even for mothers experiencing normal pregnancies and births, the demands associated with infant care and postpartum changes in lifestyle and family may often prove stressful (Jevitt, Groer, Crist, Gonzalez, & Wagner, 2012; McConachle et al., 2008). Stress associated with a new infant in the family can lead to behavioral or lifestyle adaptations in which physical activity is low and diets are high in calories, various fats, and sugars (Berge, Larson, Bauer, & Neumark-Sztainer, 2011; Hull et al., 2010; Nasuti, et al., 2014). Stress can also play a role in smoking (Ansell, Gu, Tuit, & Sinha, 2012), postpartum smoking relapse (Correa, Simmons, Sutton, Meltzer, & Brandon, 2015; Park et al., 2009), and alcohol use (Hamilton, Ansell, Reynolds, Potenza, & Sinha, 2013). With regard to psychosocial health, postpartum stress may be a precursor of depression or depression symptoms (Beck, 2001), which are more likely to occur among mothers who have low social support (Beck, 2001; Corrigan, Kwasky, & Groh, 2015). Finally, unfavorable changes in women's feeling about their bodies (such as body image dissatisfaction) may occur postpartum, especially in women who have increasing body weight (Gjerdingen et al., 2009; Walker, 1998).

Bo Xie, PhD, is an associate professor, School of Nursing and School of Information, The University of Texas at Austin, Austin, TX.

Sherry G. Hendrickson, PhD, APRN, BC, is an associate professor of clinical nursing, School of Nursing, The University of Texas at Austin, Austin, TX.

Bobbie S. Sterling, PhD, RN, is an assistant professor of clinical nursing, School of Nursing, The University of Texas at Austin, Austin, TX.

Some of the domains of behavioral and psychosocial health have been extensively studied, in particular postpartum depression (Beck, 2001; Gavin et al., 2005; O'Hara & McCabe, 2013). By contrast, only rarely has the spectrum of postpartum behavioral and psychosocial health domains, including diet, physical activity, smoking and alcohol use, depression symptoms, and body image, been studied simultaneously. In one study of this spectrum, investigators found that among low-income postpartum women who had healthy pregnancies, 45% had poor behavioral or psychosocial health in two or more domains, whereas only 25% had no domains of poor health (Walker et al., 2013). In addition, Hispanic women were less likely than White or African American women to have accumulated multiple domains of poor health. Limitations of that study were inclusion of only low-income women and no direct measurement of women's stress or social support. Inclusion of women with low and high incomes and measurement of their stress and social support, as was done in the current study, advances understanding of the interplay between stress and behavioral and psychosocial health domains in postpartum women and supports a more holistic approach to their health.

A Framework for Women's Postpartum Health

As a framework of studying women's postpartum behavioral and psychosocial health, we drew on principles related to social determinants of health and life-course theory. Social determinants, such as low socioeconomic status, highlight the vulnerability of women's health to the adverse impact of living with chronic disadvantage (Turrell, Lynch, Leite, Raghunathan, & Kaplan, 2007; U.S. Department of Health and Human Services, 2013). The life-course perspective further provides a means of explicating potential mechanisms whereby that vulnerability may be set in place and accumulate early and throughout women's lives (Ben-Shlomo & Kuh, 2002; Lu & Halfon, 2003; Whitley et al., 2014). Early life experience is one aspect of the life-course perspective. More relevant for postpartum women is the aspect of stress during critical life stages, such as motherhood, especially if resources such as social support are limited. The cumulative effects of stress on the body (known as allostatic load) and its adaptive processes explain, in part, how stress and low protective factors, such as low social support, increase vulnerability to poor health (Gruenewald et al., 2012; Lu & Halfon, 2003).