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Theoretical Contributions to a Program of Research Promoting Postpartum Health

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YouTube videos of laughing, happy babies belie the unrelenting fatigue and sleep deprivation that mothers may experience during the weeks and months after giving birth. Parents and nurses alike expect fatigue and sleep deprivation to be present to some degree in every early mothering experience. At low levels, fatigue and sleep deprivation are perhaps adaptive by naturally keeping mothers near home while healing from childbirth. On the other hand, severe fatigue and sleep difficulties after childbirth are maladaptive by contributing to adverse health outcomes including reduced breastfeeding duration and functional status, subclinical and clinical depression, and the host of short-and long-term effects of untreated depression on infants and families (Brand & Brennan, 2009; Dorheim, Bondevik, Eberhard-Gran, & Bjorvatn, 2009; Parks, Lenz, Milligan, & Han, 1999; Pugh & Milligan, 1998; Runquist-Doering, Morin, & Stetzer, 2009; Rychnovsky, 2007).

Few women receive nursing care to manage postpartum fatigue and sleep problems during the weeks after childbirth when severe postpartum fatigue and poor sleep are most prevalent (Bozoky & Corwin, 2002; Rychnovsky, 2007). In some cases, the problems may be overlooked entirely (Troy, 2003). The lack of a theoretical foundation for interventions is one reason for the slow advancement of practice standards for postpartum fatigue and sleep. Thus, theory development was a central activity in my research to promote women's postpartum health outcomes.

I began my career studying postpartum fatigue and sleep, because these phenomena are amenable to nursing intervention and remain largely unexplored for their potential to improve health outcomes in mothers, infants, and families. I primarily focus on women living in socioeconomically disadvantage, but more widely, women living in vulnerable contexts. Although postpartum fatigue and sleep are distinct problems, I now address both simultaneously in my studies, because research and practice indicate that when women talk about managing fatigue, they also talk about sleep and vice versa. To address one problem, but not the other would diminish the clinical meaningfulness and impact on health outcomes. Further, I united the women's voices about their everyday experiences of fatigue and sleep problems with the findings from sleep science under one theoretical umbrella. Below I describe the theories and theoretical orientations that supported my combined '*top-down*' and '*bottom-up*' approach to develop a postpartum fatigue and sleep intervention (see Figure 1).

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“Grounded” Theory

My program of research began with the goal of filling the gap in understanding the everyday process postpartum women use to manage fatigue. As a first step, I conducted three studies using grounded theory methodology to describe this process from the ‘ground’ up. Symbolic interactionism (Blumer, 1969) underlies grounded theory and supports values in nursing to account for individuals’ perspectives about their health experiences. The first study investigated the first month postpartum (Runquist, 2007). Subsequent studies extended this timeframe to six months and were conducted with a focus delimited to women living in socioeconomic disadvantage (Doering & Durfor, 2011; Doering & Sims, in preparation). Postpartum women of socioeconomic disadvantage are in greater need for postpartum nursing care, because they are more likely to suffer from depressive symptoms, and their infants are more likely to have reduced health outcomes related to untreated depression (Brand & Brennan, 2009; Goyal, Gay, & Lee, 2010; Howell, Mora, Horowitz, & Leventhal, 2005). My research provided for a more nuanced understanding of fatigue and sleep across the depression symptom continuum. The grounded theories that emerged from these three studies formed a foundation of women’s knowledge and experiences that I subsequently relied upon for intervention development.

Theory of Unpleasant Symptoms

A second step was to consider existing theories, such as the Theory of Unpleasant Symptoms (TOUS) (Lenz & Pugh, 2003), widely used by nurse scientists as a means of organizing results of studies relating to postpartum fatigue (Corwin, Brownstead, Barton, Heckard, & Morin, 2005; Runquist-Doering et al., 2009; Rychnovsky, 2007). I employed this theory to develop some initial conceptualizations about postpartum fatigue. However, as a descriptive theory, the TOUS has limited capacity to contribute to intervention development.

Self-Management Theory

How women managed postpartum fatigue and sleep was an important element that emerged from my grounded theory studies. This knowledge was useful in generating relevant components of an intervention. However, I determined that developing an intervention required a guiding framework for further interpreting and organizing my grounded theory concepts. To this end, I sought a theory that could guide intervention development while at the same time harness the knowledge and expertise gained from the women experiencing the target phenomena.

The Individual and Family Self-Management Theory (IFSMT) provided an overarching framework for looking at postpartum fatigue and sleep in a new way. The IFSMT posits that self-management interventions can target health promotion, not only chronic condition management (Ryan & Sawin, 2009). This aligned well with my participants’ experiences of self-managing their fatigue and sleep after childbirth. The IFSMT conceptualizes self-management as a process, which also aligns with a grounded theory approach to understanding postpartum fatigue and asleep as process-oriented phenomena.

As a third step in developing my self-management intervention for postpartum fatigue and sleep, I conducted a secondary analysis of my two previous grounded theory investigations across six months postpartum from the perspective of the IFSMT (Doering & Richoux, in preparation). The process of self-management within the IFSMT has three components (*knowledge and beliefs, self-regulation skills and abilities; social facilitation*) which have sub-concepts that define each component. The secondary analysis extracted all data where participants used concepts of self-management (e.g., self-efficacy, self-monitoring, family

support). The results of this secondary analysis helped me understand more specifically how women self-managed postpartum fatigue and sleep based upon the IFSMT's definition of self-management.

Sleep Science

A fourth step was to bring together evidence from the wider science of sleep and fatigue (e.g., circadian rhythm, cognitive-based therapy for insomnia, normative postpartum and infant sleep patterns, sleep hygiene principles) with my grounded theory results. Sleep science provided the 'top-down' evidence that was used in combination with the 'bottom-up' evidence from the grounded theories to create the intervention components. Specifically, the concerns women expressed in the grounded theories guided selection of what was included in the intervention from the large body of sleep science. The following are two examples of this top-down and bottom-up theory combined approach in developing my intervention for self-management of problems with sleep and fatigue during postpartum.

Example one

"Self-efficacy" is a concept within the IFSMT component *knowledge and beliefs*. In the participant data, a portion of women described difficulty initiating sleep because of a racing mind or being unable to turn off their minds. The literature on cognitive based therapy for insomnia (CBT-I) provides clear guidance on how to help people fall asleep in this situation (Perlis, Jungquist, Smith, & Posner, 2005) and was used as one aspect of my intervention to promote women's confidence in their ability to initiate sleep when a racing mind was a concern.

Example two

Knowledge obtained from the secondary analysis of the grounded theories was used within intervention components for other IFSMT concepts. For example, my grounded theory studies generated knowledge about how women engaged in "self-monitoring" of postpartum fatigue and sleep, which is a concept within the IFSMT component of *self-regulation skills and abilities*. Women shared how they engaged in self-monitoring to prevent becoming too fatigued to reach out to family for help. Thus, concepts from the grounded theory work coupled with components from the IFSMT together guided development of the intervention.

Next Steps

The feasibility of this self-management intervention to promote sleep and reduce fatigue has recently been tested. The next step is to test intervention efficacy. The use of a *top-down and bottom-up* approach under the theoretical umbrella of the IFSMT was valuable in creating a clinically meaningful intervention. This approach brings together the science of postpartum fatigue and sleep as well as the science of self-management to develop new directions for nursing practice and patient outcomes. Nurse scientists and clinicians may use this approach to make connections between theories and research results to develop new practice approaches.

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Figure 1.
The combined 'top-down' and 'bottom-up' approach to intervention development.