5-25-2024

Clinical Nurse Manager Fatigue and Its Personal and Professional Impacts

Carlene Galanopulo
Walden University

Walden University

College of Health Sciences and Public Policy

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Carlene M. Galanopulo

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Sue Subocz, Ph.D.

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Abstract

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Carlene M. Galanopulo

MSN, Xavier University, 2005

BSN, Marywood University, 1979

Proposal Submitted in Partial Fulfillment

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Health Sciences

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Abstract

Workplace fatigue has been empirically linked with errors, injuries, and chronic health issues that negatively impact the healthcare worker, patients, and staff with whom that person comes in contact, as well as the organization for which that person works. The experience of fatigue in clinical nurse managers (CNMs) has been understudied. The purpose of this study was to understand the individual experience of fatigue and its professional and personal impacts as more fully described by CNMs. The research question that guided this study involved the professional and personal impact of fatigue as described by CNMs. The occupational fatigue in nursing model underpinned this descriptive, phenomenological study. A total of nine purposively selected CNMs from three Midwestern academic medical centers participated in semi-structured, individual, in-depth interviews. Following Giorgi's four step data analysis process, meaning units were identified, categories developed, and themes described. Key themes included feelings of guilt, exhaustion, anger, and sadness related to fatigue, as well as relationship difficulties with their partners and their children related to the fatigue they experienced. Implications for positive social change include reduction in the level of fatigue experienced by CNMs that could result in reduction of errors, injuries, and chronic health issues that could also positively affect outcomes for patients, staff, and organizations.

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Chapter 1: Introduction to the Study

In this qualitative study, I explored the personal and professional impacts of clinical nurse manager (CNM) fatigue. Fatigue has been empirically linked with errors, injuries, and chronic health issues that negatively impact the person suffering from fatigue, the patients, and staff with whom that person comes in contact, and the organization for which that person works (Caruso, 2014; Steege et al., 2015). There have been many quantitative studies of fatigue, but both the description and definition of fatigue are still inadequate. Therefore, there remains an insufficient understanding of the experience of fatigue in working populations (Pasupathy & Barker, 2012).

The complex role of CNMs includes responsibilities for leadership, personnel and financial management, and patient care. It affects the CNM's ability to assimilate change, experience job satisfaction, consider leaving an organization or the nursing profession, acquire knowledge, and influence patient and worker outcomes (Kath et al., 2013; Udod & Care, 2012). Exploring the individual CNM experience of fatigue could provide insight and knowledge that would be beneficial to patient, staff, and organizational outcomes. This study was important because it aimed to enhance the definition of individual fatigue described in the occupational fatigue in nursing (OFN) model, thereby broadening the relevance and application of the model in nursing. This study has the potential to provide a greater understanding of the individual experience of CNM fatigue to enhance the dialogue necessary to reduce the negative impact of fatigue. In this way, the study is a vehicle to provide information for positive social change, which could be realized

through the reduction of provider errors and patient injuries. The assumption is that a reduction in financial costs would follow a decrease in fatigue and its consequences.

In this chapter, I provide a brief analysis of the literature that highlights crucial information pertaining to fatigue and its causes, impacts, and outcomes. The problem statement highlights why the CNM population is so important to study. The research question connects the conceptual framework to the methodology and outcomes of the study. The study sections present the qualitative approach chosen, the rationale for this choice, and the steps taken to ensure the trustworthiness of the data collected. The assumptions section and the scope and boundaries section provide a brief picture of the beliefs underlying this study, the rationale for the choice of the study population, and the inclusion and exclusion criteria used, as well as the transferability of the data collected and analyzed. A description of the limitations of this study is provided to address overt and covert biases. Attention is paid to the methods used to manage bias. Finally, the significance section addresses how this study will add to the literature, inform future research, contribute to better outcomes, and have a positive impact on society.

Background of the Study

Fatigue has been studied and found to relate to medical errors, aviation crashes, transportation accidents, motor vehicle crashes, worker injuries, chronic illnesses, and deaths (Horrey et al., 2011; Pasupathy & Barker, 2012; Williamson et al., 2011). Federal agencies, regulatory bodies, and accrediting agencies such as the Department of Transportation, Federal Aviation Administration, Department of Labor, and The Joint Commission (JC) have published regulations, rules, and directions for the management of

fatigue in the workplace (JC, 2012; United States Department of Labor, Occupational Safety and Health Administration, n.d.). The health care industry has not kept pace with the public and private sectors in recognizing and mitigating the state of fatigue and the associated negative outcomes (Parhizi et al., 2013).

Attempts to Define Fatigue

The term *fatigue* has eluded a clear definition. This may be one aspect of the fact that effective strategies for the prevention and mitigation of fatigue are lacking (Pasupathy & Barker, 2012; Williamson et al., 2011). Fatigue has been recognized as a multidimensional phenomenon having a physical, mental, and overall impact on humans (Barker & Nussbaum, 2011; Parhizi, et al., 2013; Pasupathy & Barker, 2012). Conceptual models such as the systems engineering initiative for patient safety model (SEIPS model), the conceptual model of total fatigue (TF model), and the OFN model have developed over the last 15 years. These conceptual models are primarily developed from measured or quantified findings of reported fatigue in the workplace (Barker, 2009; Carayon, 2006; Parhizi et al., 2013; Steege & Pinekenstein, 2016). Researchers have continued to describe fatigue as subjective and a response to high physical and psychological demands in situations where there is insufficient time for recovery (Caruso, 2014; Parhizi et al., 2013; Steege & Pinekenstein, 2016; Steege et al., 2015). Research has not adequately explored the subjective experience of fatigue which may contribute to an incomplete definition of fatigue. A large body of research has consistently described a linkage between fatigue and negative outcomes for nurses, patients, and healthcare

organizations (Barker & Nussbaum, 2011; Caruso, 2014; Parhizi et al., 2013; Steege & Dykstra, 2016; Tiesinga et al., 1996).

Factors Associated With Fatigue in Various Work Contexts

Years spent on the job, time spent working, the interference of work at home, the amount and quality of sleep, the time between work and sleep, the complexity of tasks, and the rate of error have all been evaluated and measured related to fatigue. (Moen et al., 2013; Kath et al., 2013; Van Yperen et al., 2016; Matthews et al., 2012; Moen et al., 2013; Steege & Pinekenstein, 2017; Udod et al., 2016). Empirically, a lack of sleep and the poor timing of shift work have been linked with errors, a diminished capacity for decision-making, poor muscular coordination, and chronic illnesses (Caruso, 2014; Steege et al., 2015). Complex work environments that require a combination of vigilance and multitasking were found to negatively affect the capacity for making decisions and the frequency of errors (Guastello et al., 2014). Evidence has suggested that between 1% and 20% of accidents in the fields of transportation, aviation, construction, the military, and the private sector in general were linked with some level of operator fatigue (Horrey et al., 2011; Williamson et al., 2011). Fatigue as a subjective phenomenon has remained poorly understood. As a result, it has been challenging to complete a definition of fatigue and successfully prevent it while mitigating its effects (Williamson et al., 2011).

Nurses and Fatigue

Quantitative research findings with staff nurses have related fatigue to the work performed, satisfaction with the work, and level of stress experienced (Kath et al., 2013; Parhizi et al., 2013; Steege et al., 2015). In 2007, Ricci et al. (as cited in Steege &

Dykstra, 2016) reported that an estimated 38% of all workers experienced some form of fatigue. In a 2011 study by Barker and Nussbaum, more than 50% of the nurses evaluated acknowledged suffering from acute or chronic fatigue. Most of the findings currently cited in the literature refer to the staff nurse perspective of the impact of fatigue but not the CNM perspective.

Fatigue has been extensively studied from a quantitative point of view and the variables have been examined in detail. However, a stable definition of fatigue has not been developed nor has a clear understanding of the personal and professional impact of fatigue been achieved. What is missing is the qualitative research approach that could enhance the analysis of objective measures to provide an expanded understanding of fatigue in CNMs. A qualitative research approach would provide the multidimensional view advocated by many researchers (Bae & Fabry, 2014; Barker & Nussbaum, 2011; Gonzalez-Morales et al., 2012; Heeb & Haberey-Knuessi, 2014; Horrey et al., 2011; Kath et al., 2013; Steege, Pasupathy, et al., 2017).

The CNM occupies a boundary-spanning position in the field of nursing that includes responsibilities for administrative duties and patient care (Heeb & Haberey-Kneussi, 2014; Kath et al., 2013; Moen et al., 2013; Moore et al., 2015). As leaders and staff nurses, CNMs fall into a category described by Moen et al. (2013) as higher-status professionals. This specific group has experienced an increase in stress, time at work, time working, and a blurring of boundaries, all of which affect their personal and work lives. The blurring of boundaries and increased stress experienced in the health care

environment have created conflict for many higher-status professionals such as CNMs (Kath et al., 2013; Moen et al., 2013).

In summary, this study was necessary because CNMs are at high risk for fatigue-related negative outcomes. The complexity of their work, the amount of time they work, and the blurred boundaries they experience between their family lives and work lives are foundations for the development of fatigue and a diminished work capacity. In their leadership roles, CNMs are responsible for the health, well-being, satisfaction, and outcomes of their staff, patients, and organizations. Identifying how CNMs perceive fatigue is critical for advancing an understanding of the personal and professional impacts of fatigue, as well as the development of a clearer definition of fatigue.

Problem Statement of the Study

Fatigue is recognized as a contributing factor in negative safety outcomes and as a cost burden to organizations (Caruso, 2014; Horrey et al., 2011; Steege et al., 2015; Williamson et al., 2011). Fatigue is also linked with health issues such as hypertension, sleep disorders, diabetes, psychological disorders, and chronic illnesses (Lerman et al., 2012). Measures to mitigate the impact of fatigue have been published by professional and governmental organizations such as the American Nurses Association (ANA), American College of Occupational and Environmental Medicine (ACOEM), Centers for Disease Control and Prevention (CDC)/National Institute for Occupational Safety and Health (NIOSH), and JC (ANA, 2014; Caruso et al., 2015; CDC, 2015; JC, 2011, 2012; Lerman et al., 2012). CNMs directly affect patient and staff outcomes. In their boundary-spanning roles and responsibilities, CNMs are a critical link in clinical outcomes. With an

understanding of how fatigue is experienced by CNMs and the consequences of that fatigue, the healthcare industry will be better able to improve quality outcomes.

Industrial accidents, errors, and deaths related to fatigue continue to occur despite extensive quantitative studies and recommended mitigation approaches for improved safety (Caruso et al., 2015; CDC, 2015; JC, 2012). In the dual role of leader and patient care provider, CNMs have a level of complexity at work that positions them to better understand the effects of stressors and work demands that create fatigue (Bae & Fabry, 2014; Barker & Nussbaum, 2011; Gonzalez-Morales et al., 2012; Heeb & Haberey-Knuessi, 2014; Kath et al., 2013). The predominantly quantitative approach and limited study of the concept of fatigue at the CNM level represents an opportunity to recognize the importance of the CNM's influence on and connection to staff and patients. Only one concept analysis was found in a search of the literature that was completed by Tiesinga et al. (1996). Tiesinga et al. described intensity, duration, pattern, domination, specificity, and explicability as foundational constructs for fully exploring and understanding fatigue and its impacts. Although the researchers acknowledged explicability as a subjective phenomenon, they focused on causality rather than experience. The researchers further suggested that tools developed for the measurement of fatigue without adequate understanding of the phenomenon could not be valid or reliable. An inadequate understanding of CNM fatigue, its expression, and its impacts may contribute to the limited impact of interventions for managing fatigue (Caruso, 2014).

The role of the leader in organizations affects how well change is integrated and knowledge is acquired, how satisfied workers are with a job, what influences the

intention to leave a job, and patient and worker outcomes (Buttigieg & West, 2013; Kath et al., 2013; Udod & Care, 2012). Managerial level and professional level workers report higher levels of stress and burnout related to the escalation of work demands, increased time working, increased ambiguity about job and role expectations, organizational or systems initiatives, and a lack of role clarity. All of these issues are possible causal or additive sources of fatigue (Buttigieg & West, 2013; Kath et al., 2013; Udod & Care, 2012). The identification and quantification of these fatigue factors has not significantly changed the impact of fatigue on nurses (Caruso et al., 2015; CDC, 2015; Drake & Steege, 2016; Steege & Pinekenstein, 2016).

Purpose of the Study

The purpose of this study was to understand the individual experience of fatigue as well as its professional and personal impacts more fully as described by CNMs. An exploration of the fatigue experience can tease out social definitions, beliefs, attitudes, and understandings from the CNM perspective. Pasupathy and Barker (2012) in their study reported three levels of fatigue in staff nurses but recommended that diverse levels of nurses needed to be studied for a more multidimensional and definitive understanding of fatigue. The findings of the present study contribute to the literature by creating an enhanced understanding of the personal and professional impacts of fatigue on CNMs. The findings add dimension to the construct of person in the OFN model. The added depth and breadth of the experience of the CNM provides a foundational element for future research aimed at understanding the essential nature of fatigue and its impact on CNMs and their work.

Research Question

How do CNMs describe fatigue and its impacts on their personal and professional lives?

Conceptual Framework of the Study

The conceptual framework for this study was the OFN model described by Steege and Pinekenstein (2016) in their discussion on building effective fatigue risk management systems in nursing. In 2006, Carayon et al. described the newly developed SEIPS model and its constructs, which are foundational elements of the OFN model. Five components of this model have remained stable over time:

1. person
2. tasks
3. technology/tools
4. physical environment, and organizational condition (Carayon et al., 2006; Steege & Pinekenstein, 2016). Steege and Pinekenstein (2016) extended the SEIPS model.

Early attempts to define and describe the concept of fatigue occurred over decades, with Ream and Richardson (1996) and Tiesinga et al. (1996) formalizing dimensions and specifications aimed at its valid measurement. Referencing Piper's (1987) focus on the multidimensional and subjective, yet insufficiently understood nature of fatigue, Ream and Richardson and Tiesinga et al. attempted to further conceptualize and understand fatigue in their analyses. The measurable expression of fatigue was sufficiently described by these researchers. Both research teams affirmed that the

subjective nature of fatigue, which included feelings and experiences, remained insufficiently described and understood. These early attempts to define and conceptualize fatigue were also early indications that understanding how fatigue was experienced by individuals was necessary, but unknown. Tiesinga et al. developed five specifications of fatigue; the fifth specification, explicability, highlighted the need to understand how individuals described their fatigue. In their conceptual analysis of fatigue, Ream and Richardson used Walker and Avant's approach to theory development (as cited in Ream & Richardson, 1996). They clearly demonstrated that the subjective experience of fatigue had been overlooked, i.e., beyond the physical and mental dimensions typically identified. The work of Ream and Richardson and Tiesinga et al. explained the important but insufficient examination of the subjective experience of individual fatigue and was antecedent to the human factors engineering and ergonomic foci of studies that followed.

The conceptual model of TF (Barker, 2009) identified physical, mental, and total fatigue as constructs. In 2009, Barker reported the findings of a cross-sectional three-phase study that included surveys, simulated work environments, objective measures, and correlations between the subjective and objective measures of fatigue. Barker analyzed the mental, physical, and total fatigue related to mental and physical performance impacts. Barker found that mental fatigue affected total fatigue and that mental performance and physical fatigue impacted physical performance and total fatigue. But no crossover or compounding effect was found between mental and physical fatigue. These findings suggested that mental and physical fatigue affected performance and were

independent in the way they affected total fatigue. The constructs of mental and physical fatigue are included in the OFN model.

My study was a phenomenological approach to exploring the lived experience of fatigue in CNMs. The specific aim of this study was to describe and more fully understand the individual, subjective meaning, and description of CNM fatigue. The OFN model includes the construct of person as well as the physical, mental, and emotional constructs of fatigue that were valuable to this study. and supported a deeper exploration of subjective meaning. A deeper and more detailed description of fatigue research and its application within the OFN model and this study is given in Chapter 2 of this dissertation.

Nature of the Study

A phenomenological inquiry was used in this study. The hallmark of a phenomenological inquiry is its focus on the lived experiences of the participants (Creswell, 2013; Giorgi, 2009). The experience of fatigue is a conscious one, which is holistically understood and described by the participant (Giorgi, 2009; Patton, 2015). In this descriptive exploratory method, the researcher and participants are cooperatively linked and mutually shape the data as they unfold (Lincoln & Guba, 1985; Moustakas, 1994). Understanding of the phenomena of fatigue is derived through discrimination and explanation of the rich, dense descriptions offered by CNMs (Creswell, 2013; Morse, 2009; Patton, 2015). The faithful rendering of the CNM narrative that is understood by the researcher supports the phenomenological method of inquiry (Giorgi, 2009). It is through qualitative inquiry that understanding leads to meaning that can be translated across multiple domains (Giorgi, 2009; Morse, 2009).

Key Phenomena of the Study

The personal and professional impacts of fatigue in CNMs were the central phenomena in this study. The impact of fatigue on the psychosocial aspect of a CNM's personal life was a third phenomenon explored from the individual perspective. In a phenomenological study, the participants describe their perceptions and Sometimes previously unknown beliefs, perceptions, experiences, and understandings can be uncovered.

Methodology of Data Collection and Analysis

In this phenomenological study, data were planned to be collected from CNMs in two different hospitals in the Cincinnati area. Chapter 4 describes how the data collection unfolded from the planned recruitment methodology to the reality of what occurred. Concurrent and sequential analysis of the data used a multistep process that faithfully described the individual experiences of participants. Analysis of the data was a multistep process of listening to audiotapes prior to transcription and inputting the data into NVIVO 10. Field notes were written during and directly following interviews. Abstraction of the data into themes was undertaken after similarities and differences were identified and organized. Memoing, an analytic narrative process by the researcher synthesizing the data (Miles et al., 2014), was completed to enhance the reflection and analysis of the data. Member checks, a method to verify conclusions in a study (Miles et al., 2014), were used to offer participants inclusion and an opportunity for input to the final analysis. Deidentified data and conclusions were shared with professionals, not engaged in the study, for confirmation.

Definitions of Key Terms

Clinical nurse manager: "Nurse managers lead one or more units and have a variety of role expectations, including: (1) leadership of subordinate nursing and support personnel to ensure their job satisfaction and retention through coaching and mentoring activities; (2) interdisciplinary collaboration and clinical management of a group of patients and families to meet organizational performance and goals for patient outcomes; (3) human resource management to meet staffing needs, productivity targets, retention goals, and regulatory requirements; (4) budget planning and management to meet organizational targets; (5) monitoring of quality assurance and performance improvement to standardize processes, minimize error, and improve outcomes; (6) development and empowerment of staff to enhance the professionalism of the workforce; (7) attendance at multiple meetings to get and give information; and (8) translating and embedding the culture, values, and behaviors embraced by the organization to the staff and physicians" (Kath et al., 2013; p. 1475).

Fatigue: For this qualitative study, fatigue was considered a "… multicausal, multidimensional, non-specific and subjective phenomenon, which results from prolonged activity and psychological, socioeconomic, and environmental factors that affect both the mind and the body" (Barker & Nussbaum, 2011, p. 811; Pasupathy & Barker, 2012, p. 22).

Assumptions Implicit in the Study

Qualitative researchers bring implicit assumptions to studies that include the nature of reality (ontology), how knowledge is acquired (epistemology), the role that

biases play (axiology), and by what processes the studies will be completed (methodology; Creswell, 2013; Giorgi, 2009; Moustakas, 1994; Van Manen, 2014). The reader's trust and confidence may be enhanced when there is transparency related to the underlying philosophical assumptions of the researcher.

My assumption was that CNM fatigue was an intangible condition and could only be clearly understood by learning about CNMs' unique experiences and descriptions. This assumption was necessary and foundational to understanding fatigue and its impact on CNMs' personal and professional lives. The axiological assumption in this study referred to my prior experience with and exposure to this community of CNMs. This highlighted my values and potential biases as a leader and registered nurse. This assumption was important because it brought to the forefront my ability as a researcher to be close to the participants and faithfully document their experiences (Creswell, 2013).

Scope and Boundaries of the Study

The phenomenon under study was CNM fatigue and its professional and personal impacts. Managerial level and professional level workers have reported increased stress and burnout related to the escalation of work demands, increased time working, increased ambiguity related to work expectations and initiatives, and a lack of role clarity; which are all possible causal or additive sources of fatigue (Buttigieg & West, 2013; Kath et al., 2013; Udod & Care, 2012). My experiences coaching and developing CNMs led me to this study and influenced the boundaries of the study and the study population. The defined boundaries were related to the job title of CNM. The population consisted of current CNMs employed in a hospital setting chosen regardless of race, gender, level of

education, length of tenure in their positions, and unit of specialty or location. All participants had to speak English fluently. They had to be employed by the organization where the study occurred in a full-time position, working no less than 36 hours per week. The unit type and size and specific shift times (i.e., days, evenings, or nights) were not criteria for exclusion. Staff registered nurses, licensed vocational nurses, patient care assistants, and other nurses or clinical personnel without leadership responsibilities (e.g., charge registered nurses), as well as clinical directors and nonclinical managers, were excluded from this study. The title of CNM was redefined during the recruitment period to include director, if the role was aligned with the definition provided. This will be discussed in Chapter 4.

Other conceptual frameworks were considered for this study, including the demand, control, support (DCS) model (Karasek, 1979; Karasek & Theorell, 1990) and burnout model (Maslach et al., 2001). Both frameworks include the workplace environment. The DCS model focuses on worker autonomy in decision making and its effect on stress and fatigue (Karasek & Theorell, 1990). The Maslach burnout model focuses on burnout as a condition stemming from the work environment and manifesting as exhaustion, cynicism, and inefficacy (Maslach et al., 2001). Both models were limiting based on their narrow focus on the work environment. Karasek (1979) and Karasek and Theorell (1990) focused on supervisor support and resources related to work but excluded family and social influences. Maslach et al. (2001) identified emotional exhaustion but did not examine congruent social influences that could impact the development of burnout. Both models had relevance to the research. However, because the psychosocial

impact was a focus of this study, neither model was found to be adequate for the study's goals.

Transferability is described by Lincoln and Guba (1985) as a test of the context in a study being able to span in some other specialty, location, or time. Their position was that transferability can only be determined by the consumer of the literature and only when there is thick and rich descriptive data (Lincoln & Guba, 1985) The CNM title is a familiar designation with common expectations across regions and states within the United States. However, the titles, roles, and responsibilities of CNMs may vary with the contexts of the roles having broad similarities. For this reason, transferability may be possible within the specialty of nursing. Caution should be used when considering transferability into specialties outside the context of nursing management. The location of a study is important to consider. This study was completed in the midwestern United States in three JC accredited large urban Level 1 and 2 acute care trauma organizations. It may not, therefore, represent other regions and organizations in rural areas. This study cannot and did not wholly represent the population of nurses. Therefore, transferability may have been affected because the study may not have reflected other populations across the United States or internationally, including cultural and ethnic considerations.

Limitations of the Study

The phenomenological method relies on the reporting of the lived experiences of participants and therefore is subject to researcher biases, issues of participant trust, the temporality and location of the study, cultural biases, and sampling that lacks diversity

(Creswell, 2013; Maxwell, 2013; Patton, 2015; Van Manen, 2014). Transparency of the limitations provides for greater trustworthiness and confirmation of the study and data.

CNM fatigue is an affective or intangible experience and the data related to CNM fatigue represent personal expressions, beliefs, and understandings (Creswell, 2013; Patton, 2015; Van Manen, 2014). A limitation consistent with this qualitative approach is that the participant may not feel comfortable about fully sharing experiences. To minimize this effect, it is important to create an open, safe, and trustworthy environment for the participant while guaranteeing confidentiality.

The sample was small and the participants who responded and committed to the study were volunteers. This may have affected the diversity of the sample. Changes to the study plan will be addressed later in Chapter 5.

Significance of the Study

This phenomenological study explored the individual CNM experience and impact of fatigue. The rich dense descriptions and essential meanings of the CNM lived experiences of fatigue add depth and breadth to the construct of person in the OFN model. The reflective nature of this phenomenon revealed a common language and experiences that led to a greater understanding of the individual professional and personal impacts of CNM fatigue. The common language can be used to further explore fatigue and its organizational and personal impacts. It is possible that a common language and experiences may translate across hierarchical and interprofessional boundaries and create a dialogue leading to a deeper understanding of the fatigue phenomenon.

Society could benefit from this study on three levels: the patient, the staff, and the organization. The social change that could result from this study is a greater understanding of the individual experience of CNM fatigue and enhancing the dialogue necessary to reduce the negative impact that was already described in the literature. Positive social change would be realized through a diminished frequency in errors and injuries associated with CNM fatigue, which could result in a decreased length of stay for patients and diminished financial consequences for patients, CNMs, and hospitals. Costs associated with workplace injuries and illnesses have been estimated to be $225.8 billion or $1700 per worker annually (CDC, 2015). In 2010 the social cost of adverse events was estimated at $950 billion or 40% of health care spending overall (Goodman et al., 2011). Even a small reduction in costs associated with CNM fatigue, through positive changes realized in the environment of care, could improve the quality of life for patients and staff.

Chapter Summary

In summary, fatigue is a financial burden to organizations and linked to negative outcomes for patients and staff. CNMs have dual responsibility for both patient care and leadership. And because there is a lack of knowledge about the fatigue they experience in their overall roles, this research will help to describe and understand the personal and professional impact of the fatigue they experience more fully. The research question (how do CNMs describe fatigue and its impacts on their personal and professional lives?) reflects and connects to the problem, purpose, conceptual framework, and significance of

this study. The detailed scope, delimitations, and limitations identified in this chapter clarify what the study did and did not explore.

In Chapter 2, an in-depth analysis and synthesis of the current and germane literature related to the topic is provided. The conceptual framework of the OFN model is described, the key search terms used, and databases accessed are discussed.

Chapter 2: Literature Review

Fatigue has long been recognized as a financial burden to organizations and as a contributing factor to negative safety outcomes (Caruso, 2014; Horrey et al., 2011; Steege et al., 2015). It has been linked with chronic health issues such as hypertension, sleep disorders, diabetes, and psychological disorders, as well as physical injuries and errors (Lerman et al., 2012). Industrial accidents, errors, and deaths related to fatigue continue to occur despite an extensive number of quantitative studies of fatigue and subsequent suggestions for mitigation approaches for improved safety (Caruso et al., 2015; CDC, 2015).

Managerial level and professional level workers have reported increased stress and burnout related to the escalation of work demands, increased time working, conflicted communication around role expectations and organizational initiatives at the CNM and unit staff level, and a lack of role clarity; all are possible causal or additive sources of fatigue (Buttigieg & West, 2013; Kath et al., 2013; Udod & Care, 2012). Because of their dual role as leader and patient care provider, CNMs have a level of complexity at work that positions them for a better understanding of the effects of stressors and work demands that create fatigue (Bae & Fabry, 2014; Barker & Nussbaum, 2011; Gonzalez-Morales et al., 2012; Heeb & Haberey-Kneussi, 2014). The empirical analysis of fatigue has not significantly changed the continued impact of fatigue (Caruso et al., 2015; CDC, 2015).

The purpose of this study was to explore the knowledge, understanding, attitudes, and beliefs held by CNMs regarding the professional and personal impacts of fatigue.

The data collected contributes to the literature by creating a greater understanding of the personal and professional experience of fatigue by CNMs. Describing the personal and professional impacts of fatigue as shared by the CNM participants adds dimension to the constructs of individual and psychosocial impact in the conceptual model of OFN. The added depth and breadth provide a foundational element for continued research aimed at understanding the essential nature of CNM fatigue and its impact in the clinical area and on safety outcomes.

In this chapter, I provide an in-depth analysis of the literature related to leadership roles, CNM roles, psychosocial concerns, and fatigue and its impacts. A detailed description of the search strategies, key search terms, and databases used is provided. The discussion related to the conceptual framework and its related constructs and concepts offers insight into the current state of the published literature. Connections between the research question and the literature further highlight the importance of this study.

Literature Search Strategy

The literature search for this study progressed from a simple approach using overarching terms such as *fatigue* and expanding to more complex terms such as *organization identity* and *change*. Because fatigue has been widely studied in various professions, my searches yielded 500 to more than 2,000 results. Not all results were appropriate even after filters and delimiters were applied. I found that searches using the same terms days apart yielded varying results. Several expansive libraries were available to me over the period in which I searched the literature.

An iterative search was conducted, and the first term or the first results helped to develop future search terms as the complexity of the subject evolved. The terms *fatigue* and *psychosocial factors* led to the topics *job demands, control,* and *support model,* which led to the term *work-family conflict.* Inevitably, scanning the *antecedents of fatigue* led to research on *dual vigilance tasking*. The literature has limited research focused on fatigue in CNMs, middle managers, and leaders. As a result, the literature on *leadership, organization change and effects,* and *burnout* was accessed for commonalities that were previously expressed at differing professional levels. The literature on leadership and organizational change was further explored for *cross-network relationships, subnetwork behaviors, social identity,* and *boundary spanning*. A single theory of fatigue has not been developed, so a conceptual framework for this study was necessary to proceed.

Conceptual Framework of Literature Search

According to Linda Sue Davis, a registered nurse and Doctor of Philosophy in nursing, "If a concept has not been fully analyzed and defined then it cannot be understood by everyone in the same manner. An instrument developed from an incomplete definition will reflect an incomplete understanding of the phenomenon measured" (personal communication, September 28, 2018). Davis's shared insight echoed that of Tiesinga et al. (1996) in that it offered a caution that the measurement approach so often used in the quantitative analysis of fatigue is an insufficient description of the phenomenon. Both Davis and Tiesinga et al. reasoned that a more complete understanding of the personal depth and breadth of the fatigue experience from the individual perspective of CNMs remained understudied and, therefore, a full reliance on

conceptual frameworks must be approached judiciously. Acknowledging this shortcoming in the OFN model, which integrates the TF model (which is described further in the section rationale for choice of model), supported the narrow focus and importance of this study.

The conceptual framework for this study borrowed from and was informed by the OFN model. This study was positioned to explore the professional and personal impacts of fatigue in CNMs. CNM fatigue has been insufficiently studied, and a gap is therefore present in the understanding of its personal and professional impacts. The OFN model and its five constructs underpinned this study and were essential to the further understanding and definition of fatigue.

Occupational Fatigue in Nursing Model

For this qualitative study, fatigue was considered a "multicausal, multidimensional, non-specific, and subjective phenomenon, which results from prolonged activity and psychological, socioeconomic, and environmental factors that affect both the mind and the body" (Barker & Nussbaum, 2011, p. 811). The OFN model has evolved over time and has relied on human factors, engineering, fatigue risk management models, and the SEIPS model (Steege & Dykstra, 2016). OFN specifically describes the interrelationships between the environment, technology, task, organization, and person, or the five constructs of SEIPS (Carayon et al., 2006; Steege & Dykstra, 2016; Steege & Pinekenstein, 2016; Watterson et al., 2023). Primarily, this model has been recommended to nursing administrators to approach the mitigation of fatigue within the health care organization. Steege and Dykstra and Steege and Pinekenstein described

the OFN model as having the ability to clarify and focus administrative responses to fatigue mitigation through policy development, environmental redesign, and technological redesign for efficiency and effectiveness. In their study, Steege and Dykstra utilized qualitative methods to interview nurses regarding the five constructs within the OFN model. This model describes the effect of fatigue on the system, but it does not analyze, report on, or describe the individual experience of fatigue. This insufficient consideration of the individual's lived experience of fatigue has resulted in the current insufficient understanding of fatigue in CNMs.

Person

The construct of person as depicted in the OFN model refers to the individual health care worker, is flexible, and can include the nurse, physician, or other professionals on the care team and in the care environment (Steege & Dykstra 2016). A key focal point at the person level is the person's capacity (Watterson et al., 2023). Capacity refers to the level of work demand and the ability of the individual to respond. The person is affected by the other four constructs or can influence the other constructs. The OFN model, like the SEIPS model, presupposes that the interrelationships among the constructs create a complex environment in which fatigue can be managed or flourish to the detriment of the work goals.

Task

Tasks as a construct within the model are described as those items or actions necessary to achieve specified or expected outcomes in the health care unit (Steege &

Dykstra, 2016; Steege & Pinekenstein, 2017; Watterson et al., 2023). They can be patient related or process oriented but are always goal specific.

Technology

Technology is the construct that refers to the tools engaged in the health care environment that add to successful communication or to the condition of the patient (Steege & Dykstra, 2016). Electronic health records are an example of technology in the environment of care, but technology is not limited to the electronic health record. For the CNM, technology refers to electronic budgeting, safety reports, staffing models and applications, communication methods and devices, and computer programs (Steege & Pinekenstein, 2017).

Environment

The environment construct provides the context to the work. It includes the patient care area as well as the offices, visitor waiting areas, access points and other rooms defined as part of the environment of care (Steege & Dykstra, 2016). The environment of care also includes the social networks that contribute to work completion and attitudes in the environment (Cross & Parker, 2004). The environment is not limited to one area but extends throughout the organization.

Organization

According to Watterson et al. (2023), fatigue impacts organizations through negative patient care outcomes, compromised profit attainment, and employee turnover. The organization has the fiduciary duty to patients and employees to ensure a safe working environment and quality delivery of care (Watterson et al., 2023). Fatigue

impact mitigation requires analysis of those antecedent and contributing factors so the correct outcomes can be achieved.

Use of a Conceptual Model in Research

Fatigue has been well studied in the subordinate levels of nursing practice but not at the leadership levels. Choice and use of a conceptual model for this study was influenced by the existing data that only described the experiences of nurses at the subordinate level. The following descriptive data are correlated with the OFN model constructs and provides clarity for its use in this study.

Nurses have been interviewed about their occupational fatigue from the perspective of what factors contributed to their occupational fatigue and what factors prevented them from developing fatigue (Steege & Dykstra, 2016). Through directed content analysis, Steege and Dykstra (2016) found that nurses described the patient room size, break room privacy, and accessibility to assigned patient rooms as both negative and positive aspects of care and the development of fatigue. Tasks were also reported as having the ability to create and reduce fatigue. Technology simply worked or did not work and was efficient or inefficient; in any of those situations, inefficiency, and disrepair escalated the development of fatigue (Steege & Dykstra, 2016). When questioned about systems such as organizational leadership, nurses described relational perceptions; when the relationship with the scheduler or manager was good or unit teamwork was good, they felt that fatigue was manageable, but when the relationship was perceived as poor, fatigue was harder to manage (Steege & Dykstra, 2016). Upper management was described as contributing to staff nurse fatigue based on decisions that

were passed down without letting workers at the subordinate level (who had the responsibility for carrying out decisions) voice their views on them (Steege & Dykstra, 2016). Steege and Dykstra reported the staff nurse participant descriptions of the construct of person as variable and related to themes of competence, confidence, and helplessness. They did not expand on those descriptions or their relationship to fatigue.

Limitations of Occupational Fatigue in Nursing Model

The OFN model was derived from the SEIPS model, which has been well accepted in the industrial and occupational engineering professions. Its use for OFN is a good fit. However, it is a systems approach to examining tasks, environments, persons, tools/technologies, and organizations rather than a way of exploring the individual experience of fatigue. The researchers recommended further study of diverse levels of workers for a greater subjective and objective understanding of fatigue outcomes (Pasupathy & Steege, 2012; Steege & Dykstra, 2016; Steege & Pinekenstein, 2016). Although the person construct was present, the focus of the OFN did not address the specifications of fatigue as described by Tiesinga et al. (1996), or the dimensions of fatigue as described by Piper et al. (2008).

Rationale for the Choice of the Model

The original choice of model for this framework was the conceptual model of TF (Barker, 2009; Pasupathy & Barker, 2012). The TF model has been adapted over time and embedded within the OFN model. The OFN model (Appendix A) retains the same constructs but also includes the impact on outcomes and the nursing process and redescribes total fatigue in a Venn diagram (Steege & Dykstra, 2016). In the OFN model

and integrated into the Venn diagram of the TF model, is the construct of emotional fatigue (Steege & Dykstra, 2016). The integration of the nursing process, impact on outcomes, and emotional fatigue was not well described in the TF model. Over time, nurses have described acute and chronic fatigue in the context of their work (Steege & Pinekenstein, 2016). They have also reported using coping mechanisms such as exercise, sleep, and becoming engrossed in hobbies to combat or reduce the effect of fatigue (Drake & Steege, 2016). The OFN model is a stable formatted model that has been well researched. It contains the person construct, which needs further development. The OFN model expands the opportunities for the acquisition of new knowledge that can enrich and expand our understanding of fatigue, particularly CNM fatigue.

Literature Review as Related to Key Concepts

Nurses are responsible for the highest percentage of direct patient care while patients are hospitalized (Steege, Pinekenstein, et al., 2017). Research has consistently found that the physical and mental complexity of nursing work is a contributor to the development of fatigue (Barker & Nussbaum, 2011; Chen et al., 2014; Parhizi et al., 2013). Poor sleep and poor intershift recovery have also been linked with manifest fatigue (Caruso, 2014; Moen et al., 2013; Steege & Dykstra, 2017). Fatigue has been empirically linked with higher rates of error and injury in multiple professions and across industries (Horrey et al., 2011; Williamson et al., 2011). There is limited research on how a CNM describes, knows, or understands their personal and professional fatigue and its impacts.

Fatigue in Workers

In the general population, transportation industry workers, members of the military complex, aviation professionals, construction workers, and health care professionals, fatigue has been and continues to be linked with negative outcomes (Gander et al., 2013; Horrey et al., 2011; Taylor et al., 2015; Tiesinga et al., 1996; Williamson et al., 2011). Associated errors, accidents, injuries, chronic health conditions, and deaths have continued to occur despite extensive research on fatigue (CDC, 2015; Horrey et al., 2011; Steege, Pinekenstein, et al., 2017). A systematic review conducted by Bae and Fabry (2014) reported that in 2011 nurses, who were 1% of the total U.S. population, worked on average, 200 hours more per year than other U.S. workers. Longer hours resulted in shorter recovery times between work shifts and a higher risk of injury or error (Bae & Fabry, 2014; McCaughey et al., 2015). A clear definition of fatigue has not been achieved, but there is agreement that the phenomenon is complex and consists of physical, mental, individual, and psychosocial experiences from which workers have an inadequate period for recovery (Drake & Steege, 2016; Parhizi et al., 2013; Steege et al., 2015).

The physical and mental impacts of fatigue have been explored through studies on dual vigilance tasking and physical energy output over periods of time (Barker & Nussbaum, 2011; Guastello et al., 2014). The length and quality of sleep have been linked as antecedents to fatigue and error (Caruso, 2014; Geiger-Brown et al., 2012). Simulated work environments have been used to observe participants' evolving states of fatigue and rates of error (Guastello et al., 2014). Akerstedt et al. (2014) found that

fatigue varies from day to day and is closely correlated with the level of perceived stress. They confirmed that the quality of sleep, level of perceived stress, and perception of well-being or illness were all interrelated in individuals experiencing fatigue. The strongest correlation was with the individual level of perceived stress and perception of health (Akerstedt et al., 2014). Fatigue can manifest as physical clumsiness or weakness or diminished mental clarity. It is also associated with a high rate of absence due to sickness, and this has been connected to short intershift recovery and insufficient sleep (Bultmann et al., 2012). The neurobehavioral effects of fatigue have been described as slowed cognition, slowed reflexes, and increasingly slowed action-reaction times (Geiger-Brown et al., 2012). The quantitative study of fatigue has shown that its measurable outcomes indicate a level of complexity that is still not fully understood.

The complex nature of fatigue has contributed to a lack of a clear definition and understanding of it and little progress on successful mitigation of it. Fatigue has been linked with negative safety outcomes for patients and staff, including errors, injuries, and chronic health issues (Caruso, 2014; Steege et al., 2015; Williamson et al., 2011). Fatigue has long been recognized as a financial burden to organizations and as a contributing factor to negative safety conditions and outcomes (Caruso, 2014; Horrey et al., 2011; Steege et al., 2015; Williamson et al., 2011). It has been linked with chronic health issues such as hypertension, sleep disorders, diabetes, and psychological disorders (Lerman et al., 2012). The ACOEM, CDC/NIOSH, ANA, and JC have published statements of recognition and programmatic direction to mitigate fatigue in workers (ANA, 2014; Caruso et al., 2015; CDC, 2015; JC, 2011, 2012; Lerman et al., 2012). Although these

position papers exist and mitigation strategies are available for integration into the work environment, health care environments continue to experience associated, negative outcomes (Drake & Steege, 2016; Parhizi et al., 2013).

Health care and nursing in particular are behind other health care and professional agencies in addressing and successfully mitigating fatigue. Research has shown that health care workers, including nurses, sustain a rate of injury that is three to four times higher than the national average of 3.7 cases per 100 workers (McCaughey et al., 2016). Leigh (2011) and Leigh and Marcin (2012) reported the total economic impact of all worker injuries in the U.S. was $251 billion per year; health care workers make up 11% of that total and the total equated to just under $1 billion per week (as cited in McCaughey et al., 2016). More importantly, research has also shown that injuries sustained at work are associated with decreased job satisfaction, increased rates of voluntary turnover and burnout, and decisions to leave the profession entirely (Bae & Fabry, 2014; McCaughey et al., 2016). The importance of this information is related to the current and predicted shortage of nurses, which may be worsened by the impacts of injuries (McCaughey et al., 2016).

Fatigue in the Health Care Environment

The health care environment is complex and subject to organizational policies, government regulations, and state licensing requirements. It has subnetworks that include groups of personnel, subunits, and hierarchical administrations (Cross & Parker, 2004; Morgan & Ogbanna, 2008). A primary focus of the healthcare environment is the delivery of effective quality care to patients that culminates in excellent outcomes. The

primary delivery of that care rests with the nursing staff, but the oversight of the care rests with hierarchical administrative persons. Research has shown that the physical environment impacts workers and can contribute to the development of fatigue (Carayon, 2006; Drake & Steege, 2016).

The physical environment of care is the direct environment in which the nurse works. It includes the patient room, hallway, break room, supply room, and workrooms (Dykstra et al., 2016). Nursing staff have indicated that an inadequate environment of care interferes with the delivery of care and directly adds to fatigue (Drake & Steege, 2016; Dykstra et al., 2016; Pasupathy & Barker, 2012). Examples of environmental issues reported by nurses as contributing to fatigue include narrow hallways and very small patient rooms. They also described their break areas as inadequate related to location and not providing the ability to truly separate them from their work environment (Drake & Steege, 2016).

A preponderance of quantitative studies has measured and evaluated fatigue (Barker, 2009; Chen et al., 2014; Drake & Steege, 2016; Gander et al., 2013; Guastello et al., 2014). Findings from these studies indicated that fatigue was manifested in a myriad of ways. Errors of omission and commission in medication delivery, increased rates of falls and nurse injuries, poor sleep, poor recovery, and sleepy driving were frequently reported by nurses (Geiger-Brown et al., 2012; Horrey et al., 2011; Williamson et al., 2011). Common symptoms that were linked to fatigue included poor physical coordination, difficulty concentrating and making decisions, diminished strength, changes in mood and tolerance, and an increased rate of personal injuries such as back

injuries (Caruso, 2014; Chen et al., 2014). Researchers have identified a link to chronic illnesses and diseases such as hypertension, diabetes, insomnia, and depression (Geiger-Brown et al., 2012; Williamson et al., 2011). These significant findings coupled with the shortage of nurses today, and potentially in the future, have made it crucial to better understand nurse fatigue. There is limited information on the personal and professional impacts of CNM fatigue even though extensive research on fatigue has been done.

Roles and Responsibilities of Clinical Nurse Managers

The CNM in the hospital environment is the prime focus of this study. Hospitals with hierarchical levels of leadership include CNMs in the hierarchy. The CNM is identified as being a direct connection between executive level leaders and subordinates (Kath et al., 2013). Roles of CNMs may differ depending on location in urban or rural areas and the status of acute versus nonacute settings (Kath et al., 2013). CNMs in a hospital system may have risen to their positions from a subordinate staff position because of excellent clinical skills or an extended vacancy and lack of applicants (Moore et al., 2016). In the United States, the level of education required to assume the role of CNM varies. Nurses elevated to the CNM position may have temporal (tenure) qualifications and a degree that ranges from associate to baccalaureate; and some may have achieved a master's or doctorate level of education (Warshawsky & Havens, 2014; Williamson, 2011).

CNM responsibilities include oversight of subordinate staff in addition to their already wide-ranging responsibilities in other areas (Kath et al., 2013; Moore et al., 2016; Udod et al., 2016). The American Organization of Nurse Executives (AONE) described

the nurse manager as having 24-hour responsibility for one or more units (AONE, 2015). The duties include providing patient care, hiring, and terminating other workers, evaluating staff members, coaching staff, and patients, and arranging for staffing and scheduling. In addition to these duties are responsibilities for budgeting, generating organizational initiatives, monitoring patient outcomes, setting up safety standards, assessing staff and patient satisfaction, getting involved in shared governance, and monitoring regulatory compliance and preparation (AONE, 2015; Kath et al., 2013; Moore et al., 2016; Udod & Care, 2012). The responsibility for organizational initiatives is passed to the CNM in meetings and the expectations for outcomes compete with other directed priorities and available time (Moore et al., 2016; Udod & Care, 2012; Udod et al., 2016). The role requires that the CNM communicates with the director or assistant vice president and with the subordinate staff (Udod et al., 2016). In research studies, CNMs have reported working long hours that overflow to the home environment and as a result negatively affect their intershift recovery (Kath et al., 2013; Liu et al., 2014; Moen et al., 2013; Van Yperen et al., 2016).

CNMs have complex roles that span leadership, staff, and patient responsibilities (McCaughey et al., 2016). The CNM position affects the integration of change, job satisfaction, intention to leave the job or nursing profession, acquisition of knowledge, and influence on patient and worker outcomes (Kath et al., 2013; Udod & Care, 2012; Van Bogaert et al., 2013). In addition, the CNM interacts with upper-level managers and is responsible for representing organizational initiatives, establishing collaborative practices across specialties, and managing the ambiguities that exist within staff roles,

their own professional roles, and the context of the environment of care (Kath et al., 2013; Udod et al., 2016; Van Bogaert et al., 2013). As boundary spanners, CNMs have the capacity to affect the absorptive capacity of their organizations and subordinate staff. Absorptive capacity refers to the ability of boundary spanners to "acquire, assimilate, transform, and exploit knowledge" and lead to innovation and change (Ebers & Maurer, 2014, p. 319). Subordinate personnel have described the impact of a CNM on their job satisfaction and intent to leave the job; they have stated that these factors can be driven by the CNM's ability to communicate, show respect, and demonstrate a personal interest in the staff members (Feather et al., 2015). Historically, CNMs have been responsible for staff satisfaction, professional education, unit budgets, and the safety of patients. The role has expanded to include increased demands and greater complexity adding to increased stressors and possibly decreased satisfaction and effectiveness in the role (Kath et al., 2013; Udod et al., 2016; Van Bogaert et al., 2013).

Clinical Nurse Manager Fatigue

Although there have been extensive studies of staff nurse fatigue and its impacts, fatigue in CNMs has not been well studied (Steege, Pasupathy, et al., 2017; Steege, Pinekenstein, et al., 2017). Fatigue is considered multidimensional and related to the mismatch of work demands and individual capacity (Ebers & Maurer, 2014; Steege, Pasupathy, et al., 2017; Steege, Pinekenstein, et al., 2017). It affects physical, cognitive, and psychosocial resources negatively (Steege & Dykstra, 2016). The boundary-spanning position of clinical duties (patient care) and leader duties (management) uniquely

positions the CNM as a critical link in the study of fatigue and its personal and professional impacts.

Van Bogaert et al. (2013) found a direct connection between the stress of the work and CNM emotional exhaustion, job satisfaction, and intention to leave the job. Udod et al. (2016) reported similar findings in Canadian nurse managers. The findings of Steege, Pinekenstein, et al. (2017), Udod et al. (2016), and Van Bogaert et al. (2013) confirmed the existence of the complexity of CNMs' work, insurmountable expectations of them, and inconsistency in expectations of them by senior leaders and other personnel at an organizational level. Gonzalez-Morales et al. (2012) found that stressors and a sense of overextension that depleted psychological and physical capacities created burnout in individuals that could also be collective and related to an organizational culture. In a cross-sectional nonexperimental study of nurse leaders (including nurse managers) across 30 hospitals, Kath et al. (2013) found three predictors of increased stress in CNMs. Role overload, role conflict, and organizational constraints were identified as antecedents to job stressors, job dissatisfaction, burnout, and an intention to leave the job or position in multiple studies (Chen et al., 2017; Kath et al., 2013; Moen et al., 2013; Purdy et al., 2010). Akerstedt et al. (2014) reported that stress and the perception of health had the strongest correlations with fatigue. Organizational constraints and stressors were also associated with fatigue and burnout (Gonzalez-Morales, 2012; Steege, Pinekenstein, et al., 2017). However, studies described limitations indicating that causality and directionality could not be identified and that antecedents beyond the workplace environment and responsibility had not been explored (Kath et al., 2013; Steege,

Pinekenstein, et al., 2017; Udod et al., 2016). Research has narrowly focused on the workplace impact but not the bidirectional impact for individuals with responsibilities and challenges that span the workplace, home, and social networks (Chen et al., 2017; Moen et al., 2013; Steege & Dykstra, 2016; Steege, Pasupathy, et al., 2017; Steege, Pinekenstein, et al., 2017; Udod & Care, 2012).

It is widely accepted that the work of higher-level professionals has become more complex, with increased time demands and the blurring of boundaries between work and family life (Moen et al., 2013; Van Yperen et al., 2016). The higher demands described by nurse managers and associated with time worked and boundary blurring were also associated with burnout, increased stress, impaired attempts at coping, job dissatisfaction, and intent to leave the job (Kath et al., 2013; Moen et al., 2013; Udod et al., 2016). CNMs were experiencing similar changes with increased complexity, time demands, and boundary blurring between work and family (Steege, Pinekenstein, et al., 2017). Matthews et al. (2012) found in their study of time worked and family impact that the role (work or family) a person most identified with would take precedence in outputs and time dedication. In the study by Steege, Pinekenstein, et al. (2017) of nurse managers (including CNMs and nurse executives), participants reported negative effects on their family and personal lives due to job-related fatigue. They also described some level of concern regarding their ability to stay in their positions because of the sustainability of the pace and complexity of their work without relief (Steege, Pinekenstein, et al., 2017). CNMs reported guilt, reduced socialization, compression of time, and inability to complete home responsibilities when fatigued (Steege, Pinekenstein, et al., 2017). Moen

et al. (2013) and Chen et al. (2017) confirmed these perceptions in their studies on work complexity and stress in higher-level technology workers and Taiwanese nurses, respectively. Research on work-family conflict consistently described work and family as separate entities or spheres, suggesting they existed separately and independently, and that time was unlimited (Moen et al., 2013). Complexity and stress are enmeshed with work resources and add to and detract from family or nonwork responsibilities (Chen et al., 2017). Notably, family responsibilities can create negative or positive effects for work responsibilities and the reverse is true as well (Chen et al., 2017; Matthews et al., 2012; Moen et al., 2013). Despite the cultural differences of Taiwanese nurses, Chen et al. (2017) confirmed western hemisphere research findings of negative effects related to increasing complexity and time at work as resulting in higher levels of stress. Steege, Pinekenstein, et al. (2017) found that CNM fatigue was an antecedent to negative effects on work, families, friends, and other social networks and that it could then also be a direct result of difficult situations in all of these spheres.

Conclusions About the Literature Review

Very few studies of CNM fatigue exist, and those that do exist examine CNM fatigue from the perspectives of sleep and stress. The mixed methods study of Steege, Pinekenstein, et al. (2017) is the most recent study of CNM fatigue, but it still does not explore or create a greater understanding of CNM fatigue. My study explored and attempted to provide a greater understanding of fatigue in CNMs. Research on staff nurses has strongly suggested the connection between fatigue and negative safety outcomes. Despite extensive quantitative research, there is little understanding of the

individual, personal, and professional impacts of fatigue on CNMs. This study explored and led to an understanding of CNM fatigue that adds to the OFN model construct of person.

The research question for this study was directed at occupational fatigue and its personal and professional impacts to include those external psychosocial foci that may or may not impact work and home. At the completion of this study the data correlated with the literature from the perspectives of consistency in description of the CNM fatigue experience, the interaction of the professional and personal environment as antecedent and additive to the experiences described and while the study was ongoing alignment with the literature was described by CNM participants in terms of constructs surrounding burnout, social identities and networks, concerns over family conflict, individual capacity, absorptive capacity, and concern for ways to address their concerns.

Chapter 3: Research Method

The purpose of this study was to understand the individual experience of fatigue and its professional and personal impacts as described by the CNM. An exploration of the affective experience teased out social definitions, beliefs, attitudes, and understandings of fatigue from the CNM perspective. Pasupathy and Barker (2012) reported three levels of fatigue in staff nurses but recommended that diverse levels of nurses be studied for a multidimensional and definitive understanding of fatigue. The findings of this study contribute to the literature by creating a greater understanding of the personal and professional impacts of fatigue on an individual and thereby add dimension to the construct of person in the OFN model. The added depth and breadth of individual experience provides a foundational element for future research aimed at understanding the essential nature of fatigue and its impact in the clinical area.

In this chapter, I describe and discuss in detail the research design, my role as researcher in the study, and the rationale for choosing the qualitative approach. I also describe the ethical procedures, research questions, sampling approach, and interview schedule. The information in this chapter provides an opportunity for other researchers to replicate this study in as true a form as possible. The depth and detail offered give consumers of research the ability to determine the trustworthiness of the research data described in terms of its credibility, transferability, dependability, and confirmability.

Research Design and Rationale

A single question guided this research: How do CNMs describe fatigue and its impacts on their personal and professional lives?

The central phenomenon in this descriptive, phenomenological study was fatigue experienced by CNMs. Integral to this study were the OFN model concepts of person, task, technology and tools, organization, and environment (Steege & Pinekenstein, 2016). When these concepts were addressed, they provided social and professional contexts for the experience of fatigue reported by the CNM participants. Further concepts addressed the physical, mental, and emotional fatigue described from the individual CNM perspective (Steege & Pinekenstein, 2016).

A descriptive phenomenological approach was used to explore and further understand the personal and professional impacts of CNM fatigue. A hallmark of phenomenology is its recognition of multiple realities and the coalescence of multiple perceptions offered by participants (Creswell, 2013; Moustakas, 1994; Patton, 2015). Phenomenological inquiry deeply explores two temporal spaces (Van Manen, 2014). The first space is the immediate lived moment shared between researcher and participant that introduces the phenomenon to the relationship. The second space has two parts, the reflective description of a phenomenon experienced by the participant and the open receiving of that description by the researcher (Moustakas, 1994; Van Manen, 2014). Immediacy and currency are not the focus; instead, the emphasis is on the participant's reflection on a previous experience and its objectified meaning known only by the individual (Van Manen, 2014).

All qualitative inquiry acknowledges the existence of multiple realities (Giorgi, 2009; Lincoln & Guba, 1985; Van Manen, 2014). Phenomenology differs from other qualitative approaches by exploring the deep and rich description of an experience as it is given (Moustakas, 1994; Van Manen, 2014). Ethnography examines a culture of sameness in expression and action and then orders it for consumers (Creswell, 2007; Patton, 2015). It does not explore what it is like to have the experience of culture; only phenomenology explores the very essence of the experience as it is originally presented (Van Manen, 2014). The phenomenology approach differs from the case study approach in that a case study allows for an expansive description but may not reach the depth of the personal lived experience (Patton, 2015; Maxwell, 2013). Contrasted with quantitative methodology, phenomenology seeks to explore and understand beliefs, norms, and circumstances from a wholistic and natural perspective (Lincoln & Guba, 1985; Moustakas, 1994; Van Manen, 2014). The commonality of daily life experience seldom leads to the deep reflection that is fundamental to phenomenological inquiry. Phenomenological inquiry is perfectly matched for the aim of deeper understanding and uncovered meaning of the expressed, lived experience of fatigue.

Role of the Researcher

The primacy of my role as researcher is to witness, record, and describe fatigue from the CNM perspective as shared by the participant during the interview (Cope, 2014). The participant is asked to describe the experience as it is understood by the participant. The population under study, the locations for the study, and the social parameters of the study provide the study context (Patton, 2015).

As the researcher, I have the ethical duty to protect the participant experience and at the same time explore the experience described by the participant (Patton, 2015). The CNM population chosen for this study was intended to be limited to two midwestern full-service academic hospitals within two miles of each other. Additional recruitment is discussed in Chapter 4. I have worked as a registered nurse and provided local and regional presentations to organizations and professional associations in this area; this may have heightened the relational or power vulnerabilities and impacted the flow of the interview. I have worked collaboratively across organizations in the design, development, and building of clinical practices, and so it is possible that I may have taught or supervised some of the participants.

The vulnerabilities and power differentials that may have existed between me and the participants were known prior to the interview (Creswell, 2013). The chance that a relational or power differential may exist has the potential to negatively impact the interview process. To minimize the chance of a negative impact, I was attentive to my previous experiences, aware of my biases, established a safe environment, and encouraged the participants to verbalize their experiences. *Epoche*, reduction, and bracketing were used to describe the method of removing all researcher preknowledge, judgments, and personal experiences to avoid bias (Saghafian & O'Neill, 2018; Van Manen, 2014). Van Manen (2014) noted that it is impossible to remove all bias but that by engaging in reflection on and the explication of bias the researcher can heighten the self-awareness of biases. I reflected on my previous experiences in a journal prior to and directly following my interviews. Bracketing my previous experience with participants

helped to maintain a more objective environment that allowed the participants to freely describe their experiences (Cope, 2014).

Incentives were not permitted by these organizations, and all participants were treated equally. The interviews were conducted via zoom because of the pandemic quarantine and so no snacks or drinks were provided. The protection of confidentiality was managed by using a code or number for each participant (Patton, 2015). Participants were informed that they could refuse to participate at any time without any fear of retribution. They were also assured that if they chose to withdraw, their information would be removed from the study.

Methodology

Participant Selection Logic

The population chosen for this study was the CNM population of two midwestern academic hospitals located approximately two miles apart. Additional recruitment was necessary as described in Chapter 4. The sampling strategy for this study was based on the research question, which focused on the experience of the CNM population. Purposive sampling is using a specific population group for a study (Creswell, 2013; Patton, 2015), and was used for this study because the selected population was narrow, and the phenomenon of interest was fatigue in CNMs. In the event saturation was not reached, the participating organizations would be contacted and a request in writing would be provided to resend the invitation to CNMs within the organization. To reach saturation, further recruitment was necessary and is described in Chapter 4.

CNMs chosen to participate in this study had to be registered nurses who held a position of management over one or more inpatient units. The participants were not limited by level of education, number of certifications, or years of experience. The CNM population had to have the title of nurse manager, head nurse, or CNM. This was expanded to include director in the title, as described in Chapter 4, as long as their job description met the inclusion criteria. Excluded from this population were any other registered nurses who did not have leadership responsibilities and registered nurses with the title of director, assistant vice president, vice president, chief nursing officer, director of nursing, supervisor, or educator. Outpatient CNMs, staff registered nurses, and licensed practical nurses were also excluded from this study.

Both organizations used for the study were accredited by the JC, connected with a medical school, and equal in size, and both offered full services that included inpatient, outpatient, and trauma services. One organization had Magnet certification. Both organizations were connected to colleges of nursing. Only one of the colleges offered the degrees Master of Science in nursing, Doctor of Philosophy in nursing, and Doctor of Nursing practice. The organizations that were added for recruitment are described in Chapter 4.

Phenomenological inquiry is an intense exploration of one or multiple phenomena described in depth by a participant. Van Manen (2014) suggested that by its very nature, a sample size restricts or misses the point and meaning of the phenomenological approach. He suggested that it is not necessarily saturation that is required but instead the valuable and unique description of individuals that sets them apart. Sample sizes

recommended in the literature (Creswell, 2013; Patton, 2015) were between eight and 12 participants for individual in-depth interviews (IDIs) and to reach saturation. Saturation occurs when the interviews yield no further new information, that is, when common expressions or repetitive descriptions are provided by participants. For this study, I planned to recruit and interview eight to 10 CNMs. A rule of thumb described in the literature suggests that saturation can be reached with 10 participant IDIs (Patton, 2015).

Instrumentation

In this phenomenological study, instrumentation was developed to prescreen the participants (Appendix D) and guide the interviews, which included the asking of open-ended questions (Appendix E). A prescreening of interested respondents affirms that participants meet the inclusion and exclusion criteria. The interview guide is a script that establishes the process of the interview.

Prescreening Tool

The prescreening tool is designed to ensure that the inclusion and exclusion criteria are met (Appendix D). A short introduction to this tool, in this case a questionnaire, was written. This tool specifically asked about the title of the position, years of management experience, type of management education, highest level of education, years in the current organization, and time in the current position. From this instrument, participants received their confidential identifier.

Interview Guide

The interview guide (Appendix E) is a tool that provides an organized process and a script to inform the participant about the study and what to expect during the interview.

It also serves to initiate the relationship for the interview. The interview guide is organized and has an introduction that is written and verbally presented at the outset of the interview. Following the introduction, the guide offers a reminder to obtain informed consent and initiate audio recording. Once these steps are completed, the interview itself can begin.

Interview Questions. The interview was semi structured and used open-ended questions (Appendix E). The preliminary interview questions for this study were developed using the indicators and specifications described by Tiesinga et al. (1996) and the themes described by Steege, Pinekenstein, et al. (2017). Steege, Pinekenstein, et al. examined themes from three specific areas: sources, coping, and the consequences of fatigue. Tiesinga et al. described six indicators that needed further qualitative exploration: intensity, duration, pattern, domination, specificity, and explicability. Despite that fact that fatigue is listed with depression in the DSM IV categories and is associated with numerous nursing diagnoses in plans of care, Tiesinga et al. recommended further exploration of the subjective meaning for individuals and a more wholistic comprehension of the phenomena that may lead to better theoretical development.

Steege, Pinekenstein, et al. (2017) found commonality between nurse executives and nurse managers. A few of the themes they identified, and that have also been described in the burnout literature, include 24/7 accountability, boundaries on work, impact on life outside work, impact on quality of care, and sustainability in a role (Kinnunen et al., 2017; Kutney-Lee et al., 2013; Salyers et al., 2015; Steege, Pinekenstein, et al., 2017).

Van Manen (2014) and Creswell (2013) recommended that questions for qualitative inquiry should be broad and nonspecific so that the participant is comfortable with responding and has room to respond from a vantage point of understanding and reflection. They also suggested that the interview guide contain probing questions attached to each interview question. Probing questions are developed so the researcher can explore information more deeply and participants can further elaborate on their reflections (Van Manen, 2014). As an interview progresses, probing questions may or may not be necessary to collect more in-depth information.

Completion of the Process Outlined in the Interview Guide. The final step of the interview guide was the closure of the interview. I developed a script to thank the participant for participating in the study and shared the next steps with the participant (Creswell, 2013; Jacob & Furgerson, 2012; Patton, 2015). I also assured the participant that there would be no further questions.

Ensuring the Validity of the Interview Questions. Validation that the questions would allow for thick, rich, deep, descriptive information was achieved through the engagement of a panel of experts and a pilot study of the interview questions and procedures. An expert panel reviewed the questionnaire. Interviews were scheduled with three CNMs, and the guide was followed precisely to determine if the interviews questions were valid.

Expert Panel

The interview protocol was reviewed by three academic registered nurses who had the degree Doctor of Philosophy in nursing and had published academic works. They

were recruited to read the interview schedule for clarity, appropriateness, and alignment with the descriptions of fatigue of Tiesinga et al. (1996) and Steege, Pinekenstein, et al. (2017: Creswell, 2013). Revisions were made to the interview questions based on comments received from the expert panel.

Pilot Study

A pilot study was completed once the expert panel had provided a review of the interview questions. A pilot study emulates the proposed study, includes participants who meet the inclusion and exclusion criteria, and uses the same interview questions. The pilot study included three CNMs from health care organizations other than the selected research sites. These participants agreed to participate and signed a consent form. They were scheduled separately for an IDI. This pilot study helped uncover areas that needed improvement, questions that needed further adjustment, and timing concerns. Once this pilot was completed the recruitment phase of the study could begin.

Procedures for Recruitment, Participation, and Data Collection

This phenomenological study of CNM fatigue and its personal and professional impacts was conducted at two separate midwestern academic health care organizations. Both organizations were described as full-service health care organizations with strong community connections. Both organizations had indicated an interest in participating in this type of research and in sharing the final research report with their clinical directors. Additional research sites were necessary, which is described in Chapter 4.

Recruitment

To recruit CNMs at the two organizations, I sent each organization's representative a short email requesting a meeting to discuss my dissertation research. I met with the director of professional practice and nursing research at each of my designated sites. Before recruitment could occur, I needed to submit a proposal to the institutional review board (IRB) at each institution and obtain approval from both.

The CNM participants in this study were employed by two separate organizations. I planned to conduct eight to 10 IDIs at each organization. I developed an informational flyer for the CNMs (Appendix C) that included a description of the research aim and significance, clearly stated the inclusion and exclusion criteria, provided my contact information, and invited them to participate (Creswell, 2013; Patton, 2015). I provided that information to both organizations at the same time. Each organization then emailed the information to all of the CNMs. CNMs who were interested responded to the original invitation and were asked to complete a screening form (Appendix D) to affirm that they were eligible to participate in this study per the inclusion and exclusion criteria. They were sent the informed consent form at the same time for review in case they met the criteria for inclusion and chose to participate in the study.

All information was confidential, and participants were notified that their information would be kept confidential. Each participant was assigned a number to further ensure confidentiality. The organizations did not have access to any confidential information. No parts of the interviews, participants' private information, or texts of the transcriptions, interpretations, or processes of analysis were shared with the

organizations. If the study did not reach saturation or there were too few participants, a second mailing would be completed by the institution and the same process of recruitment would be followed. The second mailing was carried out and additional participants were needed, so more sites were added. Finding the sites, IRB approval, and recruitment of participants is discussed in Chapter 4.

Participation

Once the recruitment phase of this study was initiated and appropriate participants were confirmed, I began scheduling IDIs at the convenience of each participant. The informed consent form was provided for each participant, as was the screening form, which the participant could review. The participant and I also reviewed the form together and signed it in person. The consent form contained information about the study, degree of risk for harm, data collection, confidentiality, and how the data would be stored, shared, and published. Participants were also informed that they could withdraw from the study at any time without any consequences.

I conducted all of the interviews. The location for the interview was determined by each individual CNM and scheduled at a mutually agreed-upon time and date (Creswell, 2013). Before the interview began the participants were asked to sign the informed consent form. The participants were assured that the information they provided would be kept confidential and could not be identified as coming from them (Patton, 2015). The IDIs were a minimum of 1 hour in length and could be as long as 90 minutes. Participants were informed that the interviews would be audio recorded.

Data Collection

Data collection was completed by me. The collected data were uploaded into NVIVO 12. The NVIVO transcription service was used to transcribe the audio recordings. Transcriptions and audio recordings were reviewed by me to ensure that they were complete and represented the statements made by participants (Cope, 2014; Creswell, 2013; Patton, 2015). When the data analysis was completed, the participants received an email indicating they could review the final analysis. After they reviewed the final analysis, they were informed that the study was complete (Patton, 2015).

Data Analysis Plan

The data analysis for this descriptive phenomenology followed Giorgi's method of analysis. This method originally had five steps but was later streamlined to three steps by combining the original third, fourth, and fifth steps. In 2009, Giorgi described the three steps in this way: Step 1, reading the transcripts holistically; Step 2, reading for transitions and specific phenomenological meanings; and Step 3, using reflections to lead to essence. The original fourth and fifth steps described by Giorgi in 2009 involved synthesis and writing the final narrative. For this analysis I followed the 3-step process.

Reading the Transcripts Holistically

Giorgi (2009) recommended that all transcripts be read in their entirety, i.e., holistically. The context of the interview must be visualized while reading; no presuppositions should influence the reading; and the research should be open to the tenor, pace, language, inflections, and expression of the interview so that the interview

can be relived, and a sense of its meaning can be obtained for the participants (Giorgi, 2009).

Looking for Transitions and Meanings

This second step in the data analysis was an examination of the text for transitions or changes in descriptions (Giorgi, 2009). Giorgi (2009) saw this as a first step toward reaching a depth of understanding. Here the researcher highlighted the phenomenological meaning of the experience, which could be contained in a few words, sentences, or paragraphs.

Engaging in Reflection That Leads to Essence

The third step was described as the most intense of the analytic steps (Giorgi, 2009). I reflected on the everyday descriptive language of the participant and brought the analysis to a more abstract level. Overarching categories of understanding were created at this stage. My experience, knowledge, and understanding were engaged to bring diverse statements together under a single heading (Giorgi, 2009). It was possible to have multiple headings with diverse statements that had been synthesized to provide similar phenomenological understandings.

Final steps in this third part of the analysis included examining the final categories and determining, through questioning of the categories, which categories were essential to the experience of fatigue. Giorgi (2009) stated that the use of imaginative variation or eidetic reduction as the final step in the analysis would lead the researcher to build a statement that fully described the essential meaning of the experience of fatigue.

The analysis took place concurrently with the interviews. I performed the analysis of all the data, and all the data were loaded into NVIVO following the transcription and review. Mapping and graphing within the software were used to assist with the analysis of the data. Journaling during the analysis process helped me to keep a historical record of the work. Transcription was completed by NVIVO speech recognition transcription service, which was IRB certified and reported a 90% accuracy rating.

The data analysis is richer when the researcher follows a process and dwells with the content (Giorgi, 2009). Dwelling with the content allows for the researcher to question the data and a deeper understanding of the shared experience to be developed (Giorgi, 2009). The analysis of the data is strengthened when a second researcher is engaged to read the transcripts and analysis (Miles et al., 2014; Patton, 2015). The benefit of this double check is in the dialogue around disagreement and reexamination of the final analysis for accurate representations (Miles et al., 2014; Patton, 2015). A separate experienced researcher who was a registered nurse with a Doctor of Philosophy in nursing degree and a record of publication and who had specialized in qualitative inquiry and data analysis reviewed the transcripts, and any discrepancies were discussed. Cases that were not consistent with other cases were reviewed to determine where there may have been inconsistencies or discrepancies, and the findings were described.

Determining the Trustworthiness of the Data

Trustworthiness included the components of transferability, credibility, dependability, and confirmability (Lincoln & Guba, 1985; Miles et al., 2014). Trustworthiness of the data was ensured by meeting the specifications of these four

components (Miles et al., 2014). It could be ensured only through a stable research design, consistent and careful handling of the data collected, truthful reporting of the data, and sound ethical methods (Lincoln & Guba, 1985; Maxwell, 2013; Miles et al., 2014).

Transferability

Transferability is met when the findings in a qualitative study can be applied to other groups or locations (Cope, 2014). It is also met when an individual can identify personally with the findings (Cope, 2014). The CNM title is a familiar designation for which there are common expectations across regions and states in the United States. The roles and responsibilities of CNMs may vary, but they are broadly similar in all CNM contexts. Therefore, transferability may be possible in the CNM specialty of nursing (Cope, 2014; Patton, 2015). Caution should be applied when considering transferability to specialties outside the context of nursing management.

Credibility

Credibility ensures that the content is believable and truthfully reflects the participants' statements (Cope, 2014). Credibility is ensured by asking participants to review the final data analysis to determine whether it reflects the perceptions they have shared. In this study, credibility was achieved through the collection of data that was thick, rich, and descriptive of the CNM lived experiences. The data collected were reflective because they were being recalled. The participants reflected on the experience of fatigue and how it affected them. They described the feeling, effect, and impact they perceived. My reflections were important before and after my interviews with the CNM

participants and took the form of journal entries, verbal debriefings with a colleague, and reviews of notes taken during the interviews. Credibility was further ensured when the number of interviews completed led to saturation of the CNM descriptions. A peer reviewer was invited to review the interviews and final documents in order to enhance the credibility of this study.

Dependability

Dependability refers to the replicability of the study (Cope, 2014). My responsibility as researcher was to adhere to my study plan, adjust it in the event of unforeseen developments, and document any changes that occurred to provide future researchers with a clear path for replicability. Only the person that has read the research could determine the salience and applicability of the research within a specific context. While the predominant consumer of this research may be the CNM or nurses, it could also draw interest from other healthcare providers as they relate to the environment of care.

Triangulation strengthened the dependability of the study by using multiple sources and resources and approaches and avoiding bias (Patton, 2015; Polit & Beck, 2022). The participant selection was purposive, but it was also convenient within the organizations. The use of two distinct and separate hospital sites in the same locale may have added some diversity and/or heterogeneity to the study. Triangulation included peer reviews, researcher checks, and the analysis of themes or codes in terms of the theoretical perspectives of the phenomenon. Although these strategies were important to the study, additional member checks were provided to ensure that what was being written was truly

what had happened. Member checks, according to Miles et al. (2014), include the participants in the completion of the data analysis by encouraging their insights about the data that was collected and analyzed. I had another more experienced qualitative researcher analyze and help me think through the process of data analysis. As a result, the interrater reliability was tested before the data were analyzed.

Confirmability

Confirmation of the study ensures that the participants' voices are well represented (Cope, 2014). An independent researcher was asked to affirm the study's confirmability. Participants were asked to review the final analysis and comment on whether they agreed with the findings or whether the descriptions accurately represented their descriptions in the data. Confirmation was also achieved by using the thick, rich descriptions provided by the participants during the IDIs (Cope, 2014; Polit & Beck, 2017).

Ethical Procedures

The ethical procedures for this study were tied to the protection and support of the participants and the conduct of the study overall (Creswell, 2013; Patton, 2015; Polit & Beck, 2017). The National Institutes of Health (NIH) certification is no longer considered adequate in this region, and I needed to become certified for research through the Collaborative Institutional Training Initiative (CITI) of the Greater Cincinnati Academic and Regional Health Centers, a group overseen by the University of Cincinnati Office of Research. CITI training was completed before the study began. Each site required a separate IRB application, and the applications could be shared with the chief nursing

officers on request. The participants were at no risk when participating in the interviews and were informed that they could withdraw from the study at any time (Creswell, 2013; Frankfort-Nachmias & Nachmias, 2008; Polit & Beck, 2017). Participants were informed that they would not suffer any consequences or undue side effects from participating in or withdrawing from the study. They were also told how important it was to the researcher to hear and understand their perceptions.

Recruitment of the participants took the form of an invitation, which contained a brief description of my background and a short, clear description of the study phenomenon. Participants were provided with information on how to agree to participate in the study and how to contact me, the researcher. IRB approval of the study was achieved before any communication, contact, or research was initiated. Participants were informed that they were under no contract to complete the study and that if they chose to withdraw from the study there would be no repercussions. Participants were also informed that there were no interventions in this study and so there would be little chance of harm. Participants were required to consent before being interviewed and were provided with my phone number should they have questions. Complete confidentiality was maintained, and the participants were referred to by identifiers. Their information was not directly shared, but they were informed that themes from the analysis might be shared without identifying the participants' associations with the themes. All data were kept on a hard drive that contained no other data, and it was stored in a locked filing cabinet. Data would be destroyed after 6 years in alignment with the policies of the participating health care organizations.

Chapter Summary

In this chapter, I described the process and details of my approach for this qualitative study on CNM fatigue. I addressed my role and the importance of bracketing to avoid bias. Transferability, credibility, dependability, and confirmability were described as they applied to this study to ensure the trustworthiness of the data that were collected. My method of sampling was also described, along with my specific population of interest. The ethical nature of the study and my actions were explored and described, and important information regarding the region and facilities in which the study took place were shared in an effort to support the replicability of this study in the future.

Chapter 4 Results

The purpose of this study was to understand the individual experience of fatigue and its professional and personal impacts as described by the CNM. The findings of this study may contribute to the literature by clarifying, describing, and providing a greater understanding of how fatigue impacts the personal and professional life of an individual CNM. The further aim of the study was to add dimension to the construct of individual CNM, i.e., Person, in the OFN model. The added depth and breadth of individual CNM experience could provide a foundational element for future research aimed at understanding the essential nature of fatigue and its impact in the clinical area.

Research Question

How do CNMs describe fatigue and its impacts on their personal and professional lives?

Chapter 4 Preview

In this chapter, I will describe findings from my pilot study, Walden IRB processes, and changes made to my study protocol. The participants and study settings will be described while maintaining confidentiality. I will explain the process for data collection and data analysis, which followed Giorgi's four step process. Trustworthiness will be addressed through the four conditions of transferability, credibility, dependability, and confirmability established by Lincoln and Guba (1985) and widely accepted in the field of qualitative research.

Pilot Study

The pilot study was conducted after receiving Walden IRB approval and before collection of any data. The purpose of the pilot study was to test the instrumentation and make certain there were no adjustments necessary for conducting a well-planned study. Participants in the study were recruited by me directly and were known to me as CNMs in local organizations. None of the pilot participants were employed in the same organizations where the study was conducted. While conducting the pilot study it became obvious that at least two of the questions on the interview protocol needed to be adjusted. Additionally, the COVID-19 pandemic was found to be an important facet of the participants fatigue descriptions. A single broad question about the effect of COVID-19 on participants' fatigue was added to the interview protocol. The interview protocol was amended, and Walden IRB approval was received for the amended interview protocol.

Setting

The population chosen for this study was the CNM population of two midwestern academic hospitals located approximately two miles apart. The sampling strategy for this study was based on the population of study which were CNMs. Purposive sampling was used because the selected population was specific, narrow, and the phenomenon of interest was fatigue in CNMs (Creswell, 2013; Patton, 2015).

At this juncture, it is important to describe changes in the nature of the role the participants held in their academic hospitals due to the COVID-19 pandemic. COVID-19 was declared a pandemic by the WHO on March 11, 2020 (CDC museum, 2022). When the study was first conceived, COVID-19 was not present; however, by the time approval

for study was received, COVID-19 had become a serious issue within the academic hospitals the participants worked in and their CNM roles were significantly impacted. During the pilot study, participants related how their experience of fatigue was impacted by COVID-19, which influenced the direction of the interviews. Participants discussed changes to their organizational environments due to COVID-19 including unit redesigns to accommodate epidemic proportion population increases, changes to budget structures to capture and cover COVID-19 related unit, staff, resource, and uncategorized expenditures, staff furloughs as units changed from specialty foci to COVID focus and Intensive Care Unit as well as Step Down Unit expansions. The changes in the academic hospital settings due to COVID-19 are reflected in the results of the study.

Demographics

At no time were demographic data collected. A screening tool was developed to collect data regarding inclusion and exclusion criteria but not demographic or identifiable information. Confidentiality was strictly maintained. The sample size was set for 12 participants, but I was only able to recruit nine participants despite efforts. Saturation of data was important to the study and was met in several areas that will be described in the data analysis section.

Data Collection

Recruitment was carried out as proposed in Chapter 3. However, it became apparent that despite several rounds of recruitment and use of snowball sampling, I could not reach the number of 12 participants originally planned. Both academic hospitals yielded four participants each, which resulted in a total of eight participants. I obtained

Walden IRB approval to extend my recruitment within a local college of nursing from the MSN and DNP programs which yielded one additional participant for a total of nine participants.

Data were collected through interviews that were audio recorded. All nine interviews were conducted via Zoom and used the approved interview guide (Appendix E). Audio recording was completed using a SONY audio recording device backed up with an IPAD 6 in case of mechanical failure. The recordings were double checked for completion and then the IPAD 6 recordings were deleted. The SONY recordings were uploaded to NVIVO transcription software. Once the transcription was complete, they were saved in NVIVO and then downloaded to a password protected external drive. NVIVO was used to organize the data.

Data collection started on December 1, 2020, and was completed on November 15, 2021. The extended period over which the interviews occurred was related to the COVID-19 pandemic, inadequate response to recruitment notices, and attempts to add new organizations in other states to meet the projected number of participants. I applied to multiple academic hospital IRBs and spoke with many different research directors to recruit additional participants. I had extended periods of time dedicated to waiting for the participating academic hospitals' IRBs to respond. In the end, I decided to stay with my original two academic hospitals and recruit CNMs from the local college.

Each participant was interviewed once. Interviews lasted from 59 minutes to 90 minutes with an average of 72 minutes.

Data Analysis

Giorgi's four step process for data analysis was followed. Concentrated data analysis is completed within the first three steps. The fourth step in the analysis is focused on synthesis in the narrative write up of the analysis.

Giorgi Step 1: Reading the Transcripts Holistically

The first step in the analysis process is related to completion of the in-depth individual interview, listening to the audio capture, and accurate transcription which was completed by NVIVO automated transcription. Once the transcription was completed, I listened to it while checking the accuracy of the written document. Once accuracy was established, and all corrections were made I listened to the audio while I read the transcripts over multiple times. I have read and listened to my transcripts no fewer than nine times. Reading the transcripts holistically included bracketing my previous experience to assure nonbiased perception and openness to the interview and data as it was provided by the participant. Openness to hearing and reliving the interview brought the context of the interview forward and helped to underpin a more holistic understanding. I moved to the second step in Giorgi's process of analysis.

Giorgi Step 2: Finding Transitions and Meanings

The second part of Giorgi's data analysis process is to listen for transitions or changes that may highlight emphasize or change presentation of the information (Giorgi, 2009). Using NVIVO, meaning units were identified. Meaning units are concrete statements, sentences or single words that describe or highlight certain meaning as given by participants (Giorgi, 2009). It is also a point in the analysis where I was able to move

from the structure of the interview questions to the way in which participants described how they experienced fatigue in their lives. Inductive analysis enhanced the eidetic reduction described by Giorgi (2009) as accepting what is given. In this part of the analysis, I focused on the semantic and concrete way in which participants used words to describe their experience. This phase of the analysis yielded nearly 300 single meaning units before redundancy or duplication was checked and corrected. After checking for redundancy and duplication 271 meaning units were established. Once the meaning units were reviewed Three categories were identified. The categories of Internal Drivers, External Drivers, and COVID-19 were identified and structured and meaning units were moved into one or more of these three categories. In the following paragraphs I will describe the categories and share those meaning units that demonstrate alignment with the specific category. Dwelling with the data in an intense and continuous manner helped to uncover the ensuing category descriptions and affirm participant descriptions.

Internal Drivers of Fatigue

As I began to uncover consistencies within the data, I found that the participants described core emotional and mental perceptions that manifested in specific language. They indicated that fatigue was always present but could ebb and flow. They described a progression of fatigue over the week with their mentation most affected toward the end of the week. Several participants described anticipatory anxiety for the prospective week as contributing to their fatigue. They also described multiple ways in which they experienced fatigue physically, emotionally, and mentally. But overall exhaustion was the most common term used in their descriptions.

Participant 210 said,

I mean, it comes from all the way around, … more stress from work, lack of sleep, lack of exercise, feeling like an imposter, you know, feeling like I'm letting people down is a big one because it kind of becomes that vicious cycle of, you know, you already feel kind of down and then you don't do the next thing that you wish you should or you think you should do. And then you get more down because you didn't do that next thing. It's like a vicious cycle sometimes.

Participant 205 stated,

I'm just so exhausted, and there are other times in my life … I just have a lot of energy and I feel like I can do a lot of stuff. And for me personally, it's there in one sense of fatigue impacts the next, which impacts the next, which impacts the next. So, like when I'm feeling mentally exhausted, I notice that that's a direct correlation to my emotional exhaustion. And when I'm feeling …I don't have the energy like the mental stamina to like do the things that I know will help me pull out of, like physical exhaustion. So, I just feel tired.

Participant 201's response was as follows:

For me, it kind of comes in different forms. Sometimes it is just more of an exhaustion where I just want to sleep. Many times, it's, I guess, exhaustion when feeling like there's too much coming into my brain, and I can't process it very well. I feel very disjointed. I feel like I'm not able to focus, I guess is a good way to describe it. Inability to focus and stay focused and complete a task or something that I'm working … where I have to set it aside and then I'm pulled into

> something else. … another form would be like an anxiety, exhaustion and another kind of anxiety of I'm not going to get this done in a certain amount of time or somebody is counting on me. And then I have a feeling of, I don't want to say depression. … but depressive thoughts that I'm not, you know, good enough or doing a good job or enough for that kind of thing. And then sometimes a profound or longer period of time, then it becomes a little bit more physical ailments like just aches, pains, headaches, things like that.

Participants described feeling guilt toward their families and staff. They described feelings of inadequacy, ineffectiveness, and internal frustration resulting from environmental factors. Some participants voiced having insufficient energy, fluctuating moods, and lower tolerance levels for meeting their family's needs. They described interrupted sleep that was made worse by racing thoughts related to unfinished and pending work which resulted in not feeling rested.

According to Participant 201,

> It frequently happens, I think emotionally with fatigue for me is it's like racing thoughts …I'm just spread thin all over and I can't even it's just racing. It's this and that this that. And then I can't like, finish or complete one thought before I'm on to something else. And by the end of where, whatever I have been stressing about it and thinking about, I'm one exhausted, but two, I haven't solved anything. And like I think to myself, how did I get here?

Participant 224 said,

> I wake up two times a night on average and sometimes have difficulty going to sleep. I wouldn't get back to sleep until 2:00 or 3:00 in the morning because of my anticipation, like, oh my god, I got to go back to sleep. I got to fall asleep because I got to get up. I got this ….

Participant 205 responded,

> … I don't know … Sometimes it's just crippling …It's just overwhelming like and you don't even know where to start. … you're just so tired and everything feels. Like a marathon. … it's not all the time. It's just at times… I expend so much energy doing all these things that by the time I get home, clean up, OK, I just have nothing left. And … I end up, you know, laying down and going either right to sleep or trying to go to sleep and tossing and turning.

Participants described burdens of the job that contributed to physical, mental, and emotional fatigue. The inability to release some of their tensions on the job led to carrying these feelings home to their families. This culminated in a feeling of guilt and recognition that they see themselves as unfair to their families.

Participant 210 described:

> …for me, what I notice is that little things start upsetting me…. one more email of a request of something to do. I just want to throw my computer out the window, right? And then, another initiative …they just assume that managers are going to have time to do it. And it's like, where am I supposed to get the time? … that frustration level ...becomes an undercurrent. … I notice my reserve is pretty much gone. And then I'm grumpy. OK, so then it's trying really hard to hold all of that

in so that the staff don't see it, which then it personally takes a toll. And … you go home and you're grumpy with the family because you can take it out on them when you can't always take it out at work. I mean, you shouldn't take it out on them, but they're going to love you no matter what… people at work are just going to go up the chain and complain.

Participant 203 stated,

… when you're the manager, 24-7, it's hard to not bring work home with you, no matter how hard you try. … you're always getting the text messages or the phone calls or putting out fires or, you know, even if it's not a fire, just staffing issues or just asking and answering questions on a schedule. Or, you know, if somebody needs to take a leave of absence or, you know, whatever is needed, you're still needing to be available 24 seven. I mean, there are plenty of days where I go home and I just feel like it's been a really, really bad day. And I, … take it out on my family. You don't mean to, but it's just one of those things that you do and then you realize, OK. I am … not very nice right now.

According to Participant 205:

I scream at them. I have zero patience. By the time I get home, I'm so done … I feel like I sometimes yell at my children for being children, … I feel like I expect them to be better and be like, act older because I'm just so tired that I can't parent break. Like, I feel like I have been parenting a whole day. If I am being honest, regret like if I knew this was going to be what I wanted to do career-wise, should I have even had children knowing that I can't give them like what they need

> emotionally? Resentment, you know, resenting my job for taking my ability to be a mother, resenting my children, for taking my ability to be a manager. And then guilt for feeling those.

From a slightly different focus, participants expressed frustration with communication in their partner relationships. They identified that many times they did not share their feelings of fatigue with partners. They described ways in which they felt their partners would express a lack of understanding because the partner was not part of the healthcare field. They also did not feel they wanted to burden their partner or children.

Participant 224 said,

> I just tell him I'm just... tired, mentally tired, I can't do this right now. You know, he's like we got to do this, you know, get on the computer. I'm like, I don't want to be on the computer. I've been on the computer for 10 hours today… just give me a break. Let me rest. … I'm like, you don't understand it, and I don't expect you to understand it. So, I try not to share this with you. … sometimes I just bite the bullet and it makes me more exhausted and more fatigued because I just go ahead, and I do it.

Said Participant 201,

> He's been [at his job] 25 years and you know… it's a different type of job. So that's kind of… we struggle a little bit that way, and I don't sometimes share as much because I just I don't think he wants to hear it.

Participants also described knowledge around self-care actions that could help them feel better. They acknowledged that physical activity like working out at the gym, kick boxing, taking walks, cooking, listening to music, were activities that helped. They still reported personal time as constricted and a barrier to being able to engage in things they liked to do.

Participant 210 commented,

> I think the tendency is to put yourself last. So, I think socially, I don't have a lot going on because I feel like that takes less priority. You know, so it becomes work and then it becomes family, and then there's not a whole lot of time left. So, I feel like that kind of thing is missing and the energy and ability to keep up with things that make me happy on the day to day is …. less.

Participant 115 remarked, "I'm going to the gym. I'm working out. I'm finding other methods to relate this, but I do find that there's days where I just don't have the energy to go anywhere."

Stated Participant 217:

> I mean, just besides doing things that you know, I want to do, either cooking or something like that, something that's more enjoyable to kind of help and it'll not necessarily mitigate the fatigue, but it does, you know, put you in …. a little better mental place.

External Drivers

Participants described specific contextual /environmental factors that added to or compounded their level of fatigue. They described a lack of resources, exclusion from

decision making, contradictory direction from their leaders, and uncertainty in the face of the pandemic that affected their ability to lead their staff effectively. They reported being held accountable for specific data and budget issues that were out of their control. They described an inability to staff units related to furloughs/riffs and unit redesign. Participants described an increased need to work as staff in their units related to inadequate/insufficient staff numbers. Many reported working 60 and 70 hours per week and being called in the evenings to help staff their units or address unit concerns. In several cases participants were moved to different positions or new responsibilities were added to their existing role.

Participant 201 commented on the lack of resources:

> …the other part that is pervasive is the lack of just support. So, an example … every day of my life where I need to order or purchase, you know, blood pressure cuffs …and the process of going through that … They give you a tip sheet with X, Y and Z on how to do this. … so, for me to order … takes not just a few minutes, it literally takes an hour to two hours. And that's just one thing. … they took away my admin assistant who was very helpful … set up my staff meetings, helping me like set up files. Doing all of this … is now back on to the managers …. And it takes a lot of my time [and that is] money like just doing that kind of task work.

Said Participant 115,

> I'm here, I'm working, you know, 60 plus hours a week. I'm salary. I mean, we'll make it up down the road sooner or later, but don't come at me and say, take a day

off and then schedule meetings. And because … I can't disconnect. I can't. And I think that's the biggest thing is I just feel like I never do disconnect.

According to Participant 203,

… trying to figure out who needs a response right away and who can wait a couple of days. … working on projects … we have a lot of different specialties and [important] projects that need to be worked on. …it'' trying to just figure out, you know, who can do what parts of it and who am I needing to wait for? … what can I do to … help others so we can get, … our timelines done in time? ..I think organization is probably the most tiring …because there's so many … aspects to all the people involved to process changes to policy updates. …And by the end of the day, you just want to not ever look at an email or a computer or a phone or anything because that's all you've got.

Participant 203 commented the following:

… so the very first time was when we closed. … what are we going to do? not panic, … This has never happened before. There's not a roadmap. What does this mean for me and my unit? .. they opened us up for [a different specialty] but took it away … I think the [hardest] part of it was knowing what the staff wanted and the inability to deliver that. And then when they [laid staff off a second time] … and then trying to figure out how to bring them all back in … was another kind of hit on that scale and stuff. … And for me, it was pretty immediate because … they didn't ask me. So, what's the hardship of staying there? And you know, should we maybe look at the deadlines in a different way? … That's what puts me off. …the

> most is that the decision was made… in a very arbitrary way without ever really asking [or listening to the response] what would be the outcome if we asked you to wait another month period … Here's what this means this delay, and let's talk about … the pros and cons and come to a decision because I don't ever feel that I had input into that, that they ever really heard ... me

Participant 201 noted,

> … there was like a weekend, I think, where I had 13 staff members from a Friday to a Monday that went out because they all were COVID positive. And my [focus was on] staffing drive … then I'm getting emails … that you didn't do your patient satisfaction audits or something like that.

Remarked Participant 227,

> How about how about me? I mean, and even when they do the staff satisfaction surveys, the answers are geared towards the manager only. So, it looks like the manager [is] the problem when [it] could possibly be the next step up, right? What if this manager has really good ideas and wants to try new things… but they're not allowed?

COVID-19

Participants described the crisis of the pandemic as a significant factor adding to their level of fatigue. Most participants described fatigue before the pandemic, but all the participants identified the pandemic and its effects as a multiplier for their already existing fatigue. Several participants referenced the pandemic and its effects as a form of secondary trauma for them related to their role of listening and supporting their staff who

were experiencing family traumas related to COVID-19 compounded by high mortality rates of their patients. They described unit redesigns and relocations as well as staff relocations or furlough related to incorrect skills to work during the pandemic. Several participants described how unsupported they felt being expected to listen to staff and families and leaders but having no outlet themselves.

Participant 115 said,

> I turn the TV off and disconnect just because I was so emotionally exhausted from everything, and everybody wanted a quick solution and everybody wanted answers. Everybody, you know, thought their way was the right way and the staff that went out with COVID or family members that died from COVID, you know, and we've never really rebounded. And you know, the staff nurse is exhausted, but the leadership has changed because most of us are out there helping to fill the positions. We're not just sitting in our office making up our own schedule.

Stated Participant 115,

> …now I'm seeing the [CNMs] nurses here on the floor doing the same hours I'm doing, they're coming in to work night shift because they can't get enough staff and then still try to attend the meetings during the day and meet all the expectations… keep getting told to take time off… but it's kind of a punishment because you take time off and you got the same amount of work or more waiting on you when you get back. … it's the nature of the beast of not just COVID, but in nursing, because we're running so short right now. The market is crazy because people are paying ungodly amounts to the nurses to travel, so they're giving up

their fulltime positions to go make 60 to 80 to 90 thousand dollars in a couple of months.

Participant 201 claimed in their interview:

I will say this year has been … fatigue for me has come mostly in mental fatigue of my staff. Like, there were many days where I literally got absolutely nothing done on what was on my schedule, except for people …continually… filing into my office to describe their anxiety, their depression, their you name it and scared and not being able to see their family and to take care of these really sick patients or some of their horrific, you know, experiences of floating over to the COVID units and have a patient that, you know, quickly deteriorated and how scary that was. So, … that, just taking all of that in and how to be able to help them where I really just had to listen. And, you know, so that was probably the most fatigue.

Participant 224 stated,

[We don't take COVID patients but] …it got more exhausting because we picked up the slack and we took care of all the other med. surg. patients. And I don't think people realize [different diagnoses take different energy for care]. That is very exhausting, and I think like your late-night phone calls and the COVID meetings that you had to get on … at specific times, it's 7:00 in the morning, 12:00 in the afternoon or five at night. … keeping up with the updates. I mean, that is exhausting. You talk about fatigue and meeting fatigue. You know, we were constantly on [MS TEAMS meetings] and emails and listening. And you

> know, you get one email out… to turn around two hours later to update it, take it down and to reeducate that right there within itself was exhausting.
>
> Reflected Participant 210,
>
> And I think right now, I'm extremely sensitive to the staff just because of what we've gone through, because the unit that we work in has been primarily the COVID unit. So, we have a lot of nurses right now who are in pretty tenuous situations with work and stress and, you know, just wellness in general. And we've got people stepping away and a lot of turnover. And so, I feel like I'm ultra-sensitive to those guys when they come in [to my office] now. And really, I put down everything and let's talk.

Giorgi's Third and Fourth Steps Finding the Essence and Describing It

In Step 3, Giorgi (2006; 2009) is particular in his description of finding essence from the givenness of the participant's lived experience or lifeworld experience. He describes the essence as a subjective understanding by the researcher that is interpreted from what is given by the participant but also allows for a subjective generalization of the phenomena (Giorgi, 2009). Dahlberg (2006) added by qualifying that essence is not something mysterious but rather a part of the everyday life experience which we may in fact take for granted and which is what makes it seem so difficult. Giorgi's description of the true essence of a phenomenon consists of examining meaning constituents and identifying those meaning units that are invariant and then become meaning constituents. He describes invariant as that meaning constituent that when removed will collapse the phenomenon affirming it is essential to its existence (Giorgi, 2006, 2009). He clarifies

that further describing any meaning unit that is variant, such that when it is removed from the phenomenon the phenomenon does not collapse, is not essential. In this discussion Giorgi makes clear that no single interpretation of an essence can be all encompassing and in fact it can be interpreted and understood from multiple foci (Dahlberg, 2006). Giorgi suggests that acknowledging and describing the essential nature of the phenomena under study merely creates a per se steppingstone that later or replicated phenomenological study may address differently. As a result, uncovering the essence of a phenomenon helps to further understand the phenomenon at a richer level (Dahlberg, 2006).

During analysis of the data provided by participants it became clear that uncovering/describing the essence of fatigue was the final step to representing what they shared. My time dwelling with the data uncovered that fatigue was a complex phenomenon that when described and expressed by the participants was multifaceted and deeply embedded in their daily lives. Fatigue affected both their home and professional lives at two levels. In the lifeworld of home, fatigue affected family relationships deeply and it affected the participants' self-worth. In the lifeworld of work the phenomenon of fatigue affected professional relationships with subordinates and leadership and to some degree it affected trust. The professional context or environment was both antecedent and decedent to fatigue and so was not limited to the professional environment but instead acted as an insidious extension into the home environment. These points of understanding helped to uncover the invariant structures that were essential to the phenomenon of fatigue.

The essence of fatigue is not the discreet or overt symptomatology associated with its description. It is instead the social, emotional, and physical disruption experienced by the participants particularly related to their professional position. The essence of fatigue is seen in the complex way it manifests and grows under specific conditions. Fatigue is not a singular phenomenon standing independently. Its essence is found in its interwoven confounding and compounding effect. In this study the essential nature of fatigue relies on interdependence and evolving states of experience between the professional and personal context. Its essence is evolutionary in the sense that it is made stronger by continuing inputs in both contexts/environments and personal understanding and its overall effect on self -perception of wellbeing. In the context of fatigue there is not one singular invariant meaning constituent and instead all meaning constituents rely on one another to become invariant. The phenomenon of fatigue can only be collapsed when a series of related meaning constituents are removed (e.g., interrupted sleep, ruminating thoughts, exhaustion).

The unique essence of fatigue for this participant population of CNMs is related to their structure of power. The participant's unique essence of fatigue is linked to their power differential between staff and upper management. The essence of fatigue is wrapped in their feelings of exclusion from decision making, inadequacy and ineffectiveness in their role as CNM. The essential meaning of fatigue in this participant population is that fatigue is a constant presence. The participants described waxing and waning and multiple different associated experiences but there was never a point where they described fatigue as non-present. The invariant nature of fatigue is in its absence. If

fatigue is absent then it cannot exist, and the participants describe its ever-present nature in every response within every proportion of their lives. Its presence and essence are supported by the emotional, physical, and mental trajectories of their daily personal lives and their professional careers. The essence of CNM fatigue is dependent on the role and context in which they work. They described their dependence on higher leadership to recognize the untenable nature of the CNM position which was not met and yet was a large part of their fatigue experience. They described personal concerns that exacerbated their fatigue but that could not be changed. These two situations are the invariant nature of fatigue in the CNM and the essence of their fatigue at the same time. Another way that CNMs may have identified the essence of their fatigue experience is through consideration of their parenting role both at home and on the job. The parenting of adults in the professional environment as well as the home took a toll on CNMs and underpinned a deeper more disturbing pattern to their fatigue.

Evidence of Trustworthiness

Credibility

As described in Chapter 3**,** to assure credibility in this study the data, transcripts, and memos were reviewed by an expert in qualitative research. I kept a journal with some information written in a notebook and some written as memos in NVIVO. The information was considered when meeting with the next participant. The information was applied in the next participant meeting as a deeper probe pending their responses. A summary of findings was shared via executive summary with participants asking to

affirm or comment on whether they felt the information reflected what they shared. Saturation was reached in several focus areas that were reported.

Dependability

To assure dependability, I strictly followed and adhered to the interview guide, documented all changes to the interview guide, and assured ethical compliance through Walden IRB approval. I worked closely with my chair to validate my information. I maintained handwritten and electronic memos and a codebook to categorize meaning units. I used notetaking after an interview to debrief myself. I used a recording device several times to reflect on what was discussed and what my impressions were after the interview. These recordings were transcribed to short, bulleted notes and deleted from the device immediately.

I originally intended to recruit eight to 12 CNMs for this study. Because of the COVID 19 crisis it was difficult to obtain a full sample. The IRB application was amended, and one organization was added for further recruitment of participants. A total of nine participants were recruited instead of the original 12, which may weaken some of the findings and certainly affected the ability to reach saturation in some areas of the data analysis.

Transferability

I believe this study is transferable to other CNM positions in the United States. As a well-accepted designation, the CNM role has similar expectations across the spectrum of nursing leadership. This study should be viewed with caution when considering

transferability to any practice outside of nursing and nursing management or outside of the United States.

Confirmability

Confirmability was achieved by sharing the findings from the final analysis with participants and asking for their affirmation or comment on whether their voices were well represented. Trustworthiness was further enhanced after significant evaluation of data and transcript analysis clarified there are no discrepant, deviant, or disconfirming cases.

Summary

Chapter 4 presented the data analysis process that was followed using Giorgi's four steps, the setting, and findings. The essence of fatigue was uncovered for this specific population of CNMs. The data analysis aligns with the research question asking how CNMs describe fatigue and its impact on their personal and professional lives. The analysis found that the participants reported a serious and sometimes severe impact to their personal and professional lives. The data analysis found disrupted family, sleep, and social interactions. The analysis also found the participants were uncomfortable with contradictory leadership expectations, excessive demands in the form of piling on work without inclusion in decision making. Overall, this analysis adds to the extant literature by providing depth of information surrounding the experience of fatigue in CNMs.

In Chapter 5, I will interpret the findings, compare them with the literature, and align them with the SEIPS conceptual model of OFN. I will describe the limitations of the study and make recommendations for future research. My social impact statement

will be revisited, and I will fully discuss potential outcomes. Additionally, Chapter 5 will describe whether the definition of fatigue at the personal and professional level has been deepened and how that can be an impetus for change in the clinical area or in clinical practice.

Chapter 5: Results

Introduction

The purpose of this study was to understand the individual, lived experience of fatigue and its professional and personal impacts more fully as described by the CNM. The further aim of the study was to add dimension to the construct of individual in the OFN model. The phenomenological method was used for this study. The personal and professional impacts of fatigue in CNMs were the central phenomena in this study. Psychosocial impacts of fatigue were studied from an individual perspective.

The single research question for this study was how did CNMs describe fatigue and its impacts on their personal and professional lives. The nature of this phenomenological inquiry was focused on the lived experiences of the participants (Creswell, 2013; Giorgi, 2009).

Three overarching categories were identified for this study. They included internal drivers related to the daily lived experience of fatigue as described by the individual CNM, external drivers that were contextual/environmental elements additive and antecedent to fatigue and its impacts, and finally the lived experience of fatigue during the COVID-19 pandemic. The internal drivers of fatigue as described by the participants identified the weight of responsibility from work to home and home to work as magnifiers of their fatigue demonstrated in emotional, mental, and physical expression. The external drivers focused on the overarching surrounding environment that contributed to their experience of fatigue and included the professional environment as contradictory, unsupportive and poorly resourced.

Interpretation of the Findings

Very little research was found that directly examined fatigue as described by the CNM. The interpretation of the findings in this study describes affirming and disconfirming evidence and highlights how this data extends knowledge and understanding of fatigue. Findings from previous studies completed on CNMs has been correlated across the data in this study.

Internal Drivers of Fatigue

In this research study on CNM fatigue the category for internal drivers described specific context and meaning that contributed to CNM perceptions and experiences. The participants described fatigue as affecting their self- worth and their view of the clinical world around them. In 2017, Steege and Pinekenstein conducted a mixed method study aimed at understanding nurse leader fatigue. Their findings showed that nurse leaders reported a lack of focus, frustration, decreased tolerance, disengagement from work and anxiety that preceded the coming work week (Steege & Pinekenstein et al., 2017) brought on and made worse by a high level of fatigue.

The complexity of personal and professional fatigue impacts was explored through the interrelated context/ environment of personal and professional fatigue. A phenomenon described as complicated guilt, which compounded fatigue, was described by the CNM participants in this study. This guilt was described by participants as the inability to successfully meet the needs of their family and selves as well as the needs of the staff and employer organizations. The participants further described the feeling of being a fraud related to an inability to meet other's needs. The subtly described guilt

compounds an already existing fatigue state. Kath et al. (2014) described blurred boundaries between the home and professional environment with increased time working that led to an increased report of stress at the higher-level positions. These findings affirm Steege, Pinekenstein, Arsenault-Knudsen et al.'s, (2017) study, which described nursing leaders as being unable to plan for personal time or participate in non-work events, being conflicted by demands between home and work. While they did not describe complex guilt on the surface their study findings relate to this current study interpretation.

Issues of fear were subtly and directly described in the professional realm as related to a lack of voice or opportunity for self-defense in the face of consistent criticism by subordinate staff, and upper-level management. In the personal realm this same fear was interpreted from indirect statements expressing concern around whether their personal or professional relationships could be sustained or whether their children would have an overarching negative impact in their lives from the way fatigue influenced their behaviors. Several participants referred to having a secondary form of PTSD related to the way in which they were impacted across the spectrum from work to home and home back to work. Matthews et al. (2012) had similar findings in their study of directionality of effect and found that work/family impact would be affected dependent on where the participant placed the most value, i.e., work first home second or home first work second. CNM participants engaged in self-doubt about whether they should stay in their positions or should they have ever committed to the position. CNMs also described a love for their work and families but leaned toward leaving the position which affirms similar findings

in Maslach's et al.'s (2001) work on burnout. Maslach et al. described constructs of burnout that included the development of cynicism and dislike for the work environment and people in it. They went on to describe the effect of burnout creating a sense of personal inefficacy which led to an increased potential for leaving the job or profession (Maslach & Leiter, 2008).

External Drivers of Fatigue

Context for fatigue alludes to the environment which can include temporality, location, job responsibilities, and staff load (Canivet et al., 2010; Steege & Dykstra, 2016; Steege & Pinekenstein, 2016; Steege, Pinekenstein, Arsenault-Knudsen et al., 2017). External drivers refer specifically to phenomena outside the individual that participants indicated were unpredictable to control. Participants consistently described the work environment as having a powerful impact on their fatigue, and its direction was toward the home environment.

Participants described the invasive nature of their work on their home and families. They described an anticipatory anxiety that it would happen, that work always interfered with their personal home life, but it was unpredictable. This unpredictability added to their fatigue as the participants could never let their guard down to unwind and separate from the job. Kath et al. (2016), Moen et al. (2016), and Steege and Pinekenstein, Arsenault-Knudsen et al., (2017) all described similarities in their studies related to stress and nurse leaders suggesting the inability to separate from work at the end of the day meant shorter recovery times that were not adequate and then led to increased fatigue.

The participants consistently described a lack of resources and limited leader support in an environment that was in a state of rapid and sometimes poorly planned change. They described a lack of inclusion in decision-making, unreliable standards of accountability, unclear expectations, and conflicting direction from higher levels of leadership. Trust was an important factor in the development of CNM fatigue. Consistently having to guess at change or receive directions without discussion developed a sense of poor self-esteem, reduced self-efficacy and in turn led to a lack of trust in the leadership and the environment of work. This perspective was not addressed in Steege and Pinekenstein's (2017) study on nurse leader fatigue. In their study they addressed multiple levels of nurse leaders and so could not have a pure examination of the CNM perspective. Maslach et al., (2001) examined self-efficacy and inadequate nurse leader resources as links to burnout and intention to leave the job. At no time did the participants in this study suggest inadequate resources or diminished self-efficacy as concrete considerations but rather they discussed them as a product of the environment in general.

COVID-19 Pandemic (Alignment With the OFN)

.....The timing of this study is significant because it was completed during the mid to later stages of COVID-19. For most of the participants the COVID-19 pandemic escalated their levels of fatigue because it was unknown, had a severe impact on the patients as well as staff, negatively affecting the environment of care. Overall CNMs saw the COVID-19 pandemic as having a significantly negative effect on staffing and potentially patient outcomes. Limitations

The limitations of this study included the timing of the study related to delays in obtaining outside IRB approvals, accessibility related to the COVID-19 pandemic which delayed and may have prevented CNMs from responding or participating related to the workload described in previous chapters. Other limitations included the diversity of the sample. While the sample size is small in qualitative research this sample size consisted of >90% women with only one respondent being male. In addition, there is a lack of diversity in culture and ethnicity in this study. The predominant participant was Caucasian and as a result the minority population in nursing was not represented adequately. Additionally, the location of the study participants being in the Midwest may not translate across the United States or internationally. These listed limitations suggest caution should be used before applying or using the information outside of the targeted population and outside of the Midwest region of the United States.

Recommendations

The study limitations can be addressed by conducting further research at the quantitative or mixed methods level with a stronger recruitment effort to include greater

racial diversity, ethnic diversity, and male representation. While qualitative research does not aim for representativeness (Polit & Beck, 2022) transferability would be enhanced.

The findings demonstrated some agreement with previously completed quantitative work including studies focused on staff nurse fatigue and the singular mixed methods study by Steege et al. (2019). Quantitative and qualitative, and at least mixed methods replication of this study with other CNMs and at multiple levels of nursing practice will further add to the extant literature and more effectively confirm the consistency of findings not just with CNMs but at varied levels of nursing practice. Confirmation of consistency of the findings across multiple practice levels of nursing is important to be able to impact society (patients), nurses, and organizations positively. It is only with consistent findings mirrored qualitatively and quantitatively that the extant literature and mitigation strategies can be strengthened and made more effective.

My study's findings have theoretical and social implications for the future study of fatigue and its mitigation strategies. Great opportunity exists in continuing to deepen the five constructs of the OFN model, particularly the person construct, as it interacts with the other constructs. By deepening the construct of person and its interconnectedness in the environment of care at all levels this study adds further dimension for fatigue mitigation at the staff, patient, and organization levels.

Implications

The aim of this study was to explore and more fully understand the individual perspective of CNM fatigue and its impact professionally and personally. This study may help to highlight the importance of the interconnectedness CNMs have with the

environment of care and with staff. From a social change perspective, illuminating this interconnectedness can potentially lead to better idea exchange that in turn may help to drive the development of better strategies to mitigate fatigue.

Society could benefit from the findings from this study on three levels, the patient, the staff, and the organization. Positive social change could benefit the patient through diminished frequency in errors and injuries associated with CNM fatigue resulting in a decreased length of stay and decreased cost. Even a small reduction in costs associated with CNM fatigue, through positive changes realized in the environment of care, could improve the quality of life for patients and staff.

Fatigue has been associated with chronic illness, absenteeism, burnout, and intent to leave the job and sometimes the profession at both the CNM and staff nurse positions. The findings in this study show a failure at the level of the organization and extant literature to recognize CNM fatigue, and the roles' interconnectedness as a key facet in the mitigation of fatigue. Organization acknowledgment of CNM fatigue may be key to drive increased communication and engagement of staff in the development of mitigation strategies. A shared model of consideration and mitigation design may include CNM and subordinate staff working together to avert the negative impacts associated with chronic illness and loss of professional personnel. The social benefit of even a small reduction in chronic illness impact, burnout, or loss of nursing personnel could benefit the organization as well as the environment of care and delivery of care to the patient.

Purposeful and directed mitigation of fatigue must also consider the overarching impact on families. The findings in this study affirmed the continually blurring

boundaries between home and work. CNM participants in this study described a devastating impact on their family lives that included guilt and sorrow over treating their families poorly related to the continuous stress of the job which added significantly to their fatigue. Recognition that 24/7 responsibility for the unit is untenable is not sufficient to protect families from significant disruption. The findings in this study surfaced the important role that organizations have to consider ways in which the family is better supported at the CNM level relative to the weighty responsibilities of unit leadership. The social benefit that can arise from this organizational consideration may help to improve family adaptations and indirectly reduce the stressors that heighten CNM fatigue.

CNM fatigue must also be managed from a personal standpoint. The implications from this study include consideration of what steps a CNM must take to manage their own professional and personal fatigue. The findings in this study affirmed the importance of exercise and other pleasurable social events as successful ways to reduce the negative impact. CNM participants described the benefits of these types of activities. They also acknowledged a need for familial or social support to reliably engage in the activities.

Conclusion

This study analyzed the personal and professional experience of fatigue as described by CNMs. Paradoxically, the literature recognized the stress associated with the CNM position and the responsibilities of the CNM but did not investigate fatigue in this population. This study found that fatigue is real for CNMs and has been unheeded and poorly addressed. CNM fatigue is double edged because not only is it experienced at work but has far reaching effects in the home/family and social life as well. Mitigation

strategies at the staff nurse level have been recommended but have been unsustainable. No such strategies have been developed or considered for the CNM level. The CNM is a key stakeholder role in developing shared mutual approaches with staff nurses to develop sustainable and effective strategies for the management of fatigue in the environment of care. Improvement of patients, organization, and staff outcomes is an elemental organizational responsibility.

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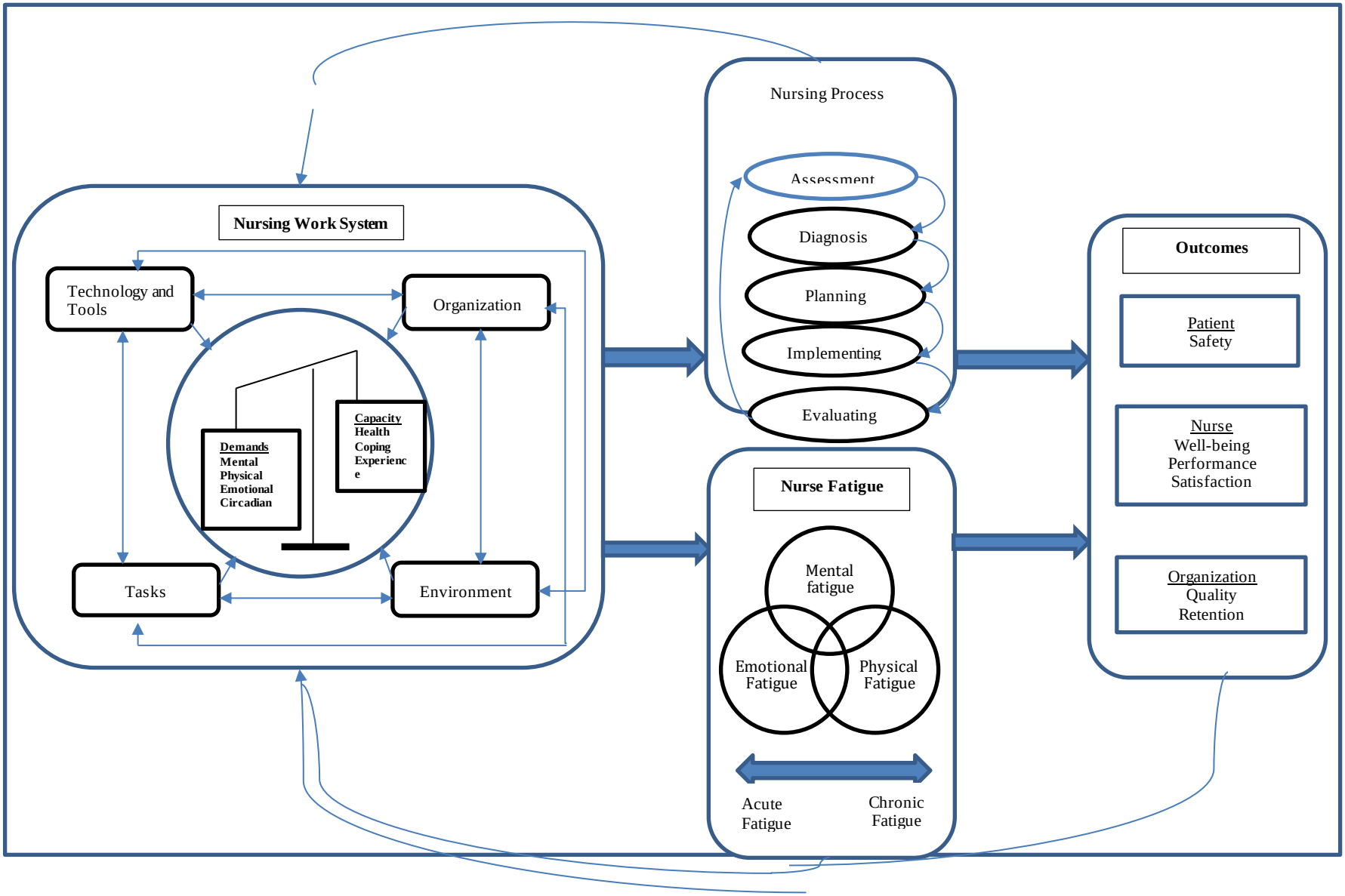
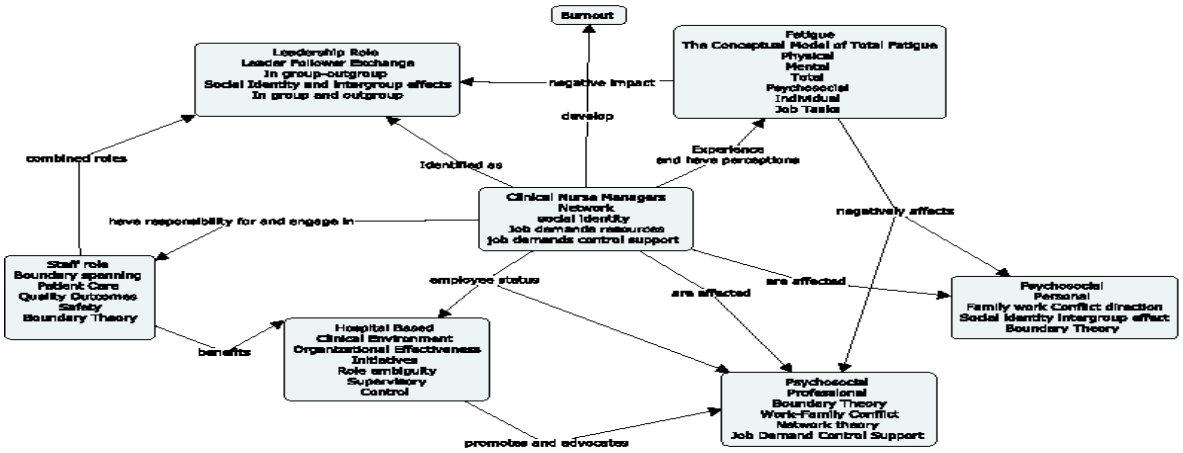
Appendix A: Conceptual Model of Occupational Fatigue in Nursing



From “Addressing Occupational Fatigue in Nurses: A Risk Management Model for Nurse Executives” by L.M. Steege, and B. Pinekenstein, 2016, *Journal of Nursing Administration, 46*(4), p. 195 (https://doi.org10.1097/NNA.0000000000000325)

Appendix B: Initial Concept Map



Appendix C: Informational Flyer

Research Study: The Experience of Fatigue Described by Clinical Nurse Managers

I am seeking nurse managers, head nurses, and clinical nurse managers to participate in a study about fatigue in clinical nurse managers. You are receiving this informational flyer because your hospital/organization has agreed to send it to all registered nurse employees with the title of nurse manager, head nurse, or clinical nurse manager. The expected outcome of the study is an in-depth description of clinical nurse manager fatigue that can be used to design, develop, and integrate strategies that may help improve the negative outcomes of fatigue.

To qualify for this study, you must be a registered nurse who holds a position of management over one or more inpatient units. Participants are not limited by their level of education, number of certifications, or years of experience. You must have the title of nurse manager, head nurse, or clinical nurse manager and currently work in that position.

Excluded from this population are any other registered nurses who do not have leadership responsibility, registered nurses with the title of director, assistant vice president, vice president, chief nursing officer, director of nursing, supervisor, or educator. Outpatient clinical nurse managers, staff registered nurses, and licensed practical nurses are also excluded from this study.

Participation involves answering a few questions to determine if you are eligible, completing a short demographic form, and participating in a 60- to 90-minute interview with the researcher about your experiences with personal and professional fatigue. The interview will be scheduled at a time and place that is convenient for you.

If you are interested in participating in this study, email me at -xxxxxxxxxxxxxx or contact me by phone at xxx-xxx-xxxx

Appendix D: Screening Form

Age in years: _____

Number of years as an RN: _____

Educational level: (check all that apply)

____ RN diploma

____ ADN

____ BSN

____ MSN

____ DNP

____ PhD

____ Other (please describe): _____

Managerial education type: _____

Work experience:

_____ Certification

_____ Formal academic degree

____ Master's

____ Bachelor's

____ Other (please describe):

Current position title (please check one):

____ Head nurse

____ Nurse manager

____ Clinical nurse manager

Number of months in position: _____

Number of years at this hospital: _____

Assigned number: _____ (to be filled out by researcher)

Appendix E: Interview Guide

1. Introduction

This study is focused on understanding the impact of fatigue on the professional and personal lives of clinical nurse managers. Understanding personal and professional experiences of fatigue will provide a more complete definition that can be used to identify the experience and create strategies to effectively manage both positive and negative outcomes of fatigue.

During this interview, I will be audio recording your descriptions. You will receive a copy of the final analysis and be asked to read it. It is important for me to know if you feel the final analysis fairly represents how you experience fatigue and its impact on your life.

2. At this time do you have any questions that have not been answered?

3. (Turn the audio recording on)

4. Interview

Tiesinga et al. (1996) identified the following indications and specifications for describing fatigue. These criteria will be used to develop interview questions for study participants. The criteria are:

Indications	Specifications	Target questions
Intensity	Tiredness, fatigue, exhaustion	1. Do you experience fatigue? 2. How would you describe your fatigue? 3. Do you believe you experience fatigue as a by-product of your work? 4. Are there any specific words you use to describe your fatigue? 5. How would you explain your fatigue to someone else?

		6. When someone else complains of being fatigued, what are your thoughts?
Duration	Less than 1 month, b/w 1 and 3 months, b/w 3 and 6 months, more than 6 months	1. Thinking back to when you first started this job, describe how your fatigue evolved. 2. When did you first notice that you were fatigued? 3. How has it changed over time?
Pattern:	Constant, intermittent	1. How would you describe the pattern of fatigue that you experience? a. Describe a specific point in your work week or day when you experience fatigue. b. Can you describe anything similar or different when you are at home? c. Can you describe a specific place where fatigue feels more intense or less intense? d. How do you shut down from work at night? e. What is the first thing you think about when you wake up in the morning?
Domination	Dominant, subordinate	1. Describe how present fatigue is in your life? 2. How often does fatigue impact your work life? 3. How often does fatigue impact your home life?

		4. What is missing from your life because of your fatigue? (Steege)
Specificity	Generalized or specific	1. How would you describe the physical symptoms of fatigue that you experience? 2. Are there any specific parts of your body that alert you in particular? 3. How would you describe the mental effects of fatigue and what signals you that you are mentally fatigued? (Steege) 4. How does physical fatigue affect your ability to perform your work? 5. How does mental fatigue affect your ability to perform your work? 6. How does physical fatigue affect your ability to interact with your family? (Steege) 7. How do you experience fatigue emotionally? 8. Can you provide examples for any of the questions about mental, physical, or emotional fatigue?
Explicability	Explicable, inexplicable	1. What do you believe contributes to your personal fatigue? 2. What do you believe contributes to your professional fatigue? a. What makes your fatigue worse? b. What makes your fatigue better?

		3. How do you manage your home life and fatigue? 4. (Steege) Can you describe any strategies you use to manage or modify your fatigue at work? 5. (Steege) Can you describe any strategies you use to manage or modify your fatigue at home? 6. How do you know you have been successful in managing your fatigue? 7. How do you describe or share your sense of fatigue with your colleagues? 8. How do you describe or share your sense of fatigue with your family, partners, or spouses? a. Describe your family's response.

5. End of interview

The interview is ended now. Thank you very much for your willingness to participate in this study. Your information is confidential and will not be shared directly with anyone. Clinical directors, the chief nursing officer, and you will receive a copy of the final analysis, which will not contain any of your private information.

Should you have any further information to provide or if you would like to discuss anything at all with me after we leave today, please do not hesitate to contact me personally. I can be reached at xxx-xxx-xxxx. If you would prefer to send your questions or information via email, I can be reached at xxxxxxxxxx.