

SELF-CARE PRACTICES OF RURAL NURSES IN MONTANA

by

Jeanne Randale Conner

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Approved for the College of Nursing

Dr. Helen Melland

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## ABSTRACT

Nurses have an ethical obligation to maintain competence and to continue personal and professional growth. Promotion of self-care encourages the nurse's personal and professional development. Review of the literature indicates little is known about the self-care practices of rural nurses. The demanding nature of professional nursing practice coupled with an ongoing nursing shortage in the United States challenge nurses' efforts to maintain adequate self-care for personal and professional development. This study was a replication, extension nursing research study intended to collect data about and explore the self-care practices of rural nurses in Montana. The study used a mailed, paper survey tool to collect information directly from a sample of rural nurses practicing in Montana. In July 2011, a total of 360 surveys were mailed to actively licensed registered nurses in eight rural counties in Montana; 194 surveys were completed and returned yielding a response rate of 53.8%. A significant portion of the study's respondents were over fifty years of age and reported living with chronic health problems. Social support, workplace accommodations for chronic health problems, increased opportunities for physical activity and support for optimal nutritional choices are among the recommendations for practice discussed. Formal validation of the survey tool and replication with other populations is recommended.

## CHAPTER 1

## INTRODUCTION

Introduction

Nurses have an ethical obligation to maintain competence and to continue personal and professional growth (American Nurses Association, 2001). Promotion of self-care encourages the nurse's personal and professional development. The "demanding nature of professional nursing practice" may lead to neglect of self-care by nurses and subsequent health problems (Chow & Kalischuk, 2008, p. 31). "The nursing shortage in the United States has intensified the clinical and leadership demands of nurses in all roles and has constrained the time and resources available for self-renewal" (Pipe & Bortz, 2009, p. 36).

Background of the Study

Contemporary issues inherent to living in the United States early in the 21st century present difficult challenges to professional nursing practice. Among those issues are nursing shortages, increasing demand and complexity of care, financial pressures, emerging socio-political-environmental issues as well as a "dispirited nursing workforce" (Pipe, 2008, p. 117). The State of Montana, located in the northwestern region of the continental United States (U.S.), along the U.S./Canadian border, is primarily a rural state with a few more-populated, urban areas. Nurses in Montana have opportunities to practice in urban and rural settings. The experiences of professional isolation, or "a sense

of isolation from professional peers” (Long & Weinert, 2010, p. 11) is characteristic of rural nursing practice. Brady (2010) reported that collegial relationships with nurse colleagues positively influence nurses’ work satisfaction. Research conducted by Persky, Nelson, Watson, & Bent (2008) indicated that nurses rated as most caring by patients also derived the most enjoyment from their relationships with coworkers (p. 18). O’Lynn (2010) reported one participant in his study noted that “rural nursing is a self-driven practice” (p. 307). It is not known whether the location of practice affects nurses’ self-care practices, thus research regarding the self-care practices of Montana nurses may be helpful in developing evidence-based approaches to current rural nursing practice and workforce issues. Additionally, replication studies are considered essential in determining and supporting evidence based nursing practice (Polit & Beck, 2008, p. 328; Fahs, Morgan, & Kalman, 2003).

### Statement of the Problem

Montana nurses who choose to practice in rural settings face the additional challenges of lack of anonymity, reduced access to professional development opportunities, professional isolation, and role diffusion (Long & Weinert, 2010). Although Chow & Kalischuk (2008) studied the self-care practices of undergraduate nursing students, study of the self-care practices of rural nurses specifically is not represented in the nursing literature.

### Purpose of the Study

The purpose of this research was to conduct a systematic extension replication study of the work conducted by Chow & Kalischuk (2008) regarding the self-care practices of undergraduate nursing students. This replication study was conducted to identify the self-care practices of registered nurses in the primarily rural state of Montana. “Replication studies are direct attempts to determine whether findings obtained in an original piece of research can be duplicated in another independent study. A strong evidence-based practice requires replications” (Polit & Beck, 2008, p. 328). A systematic extension replication study is one “in which methods are not duplicated, but there are deliberate attempts to test the implications of the original research” (Polit & Beck, 2008, p. 328).

### Background and Significance of the Study

“In light of the aging nursing workforce, the current nursing shortage, and an increase in injuries sustained while delivering nursing care, an examination of current self-care practices in all areas of nursing is warranted” (Chow & Kalischuk, 2008, p. 31). In their study of the self-care practices of undergraduate nursing students, Chow & Kalischuk (2008) found that a majority of the participating students reported engaging in health-promoting self-care practices. Nurses serve as role models for their patients. In nursing, there is a recognized relationship between “personal health, self renewal, and the ability to deliver sustained quality care” (American Association of Colleges of Nursing, 2008, p. 28). “A nurse who engages in self-care extends to the patient the positive

benefits of the self in harmony and wholeness” (Chow & Kalischuk, 2008, p. 32). “Self-care to address physical, emotional, intellectual, and spiritual needs influences how employees respond in the workplace” (Sherwood, 2003, p. 40). Due to the defining characteristics of rural nursing practice, i.e. lack of anonymity, role diffusion, professional isolation, rural nurses’ self-care practices may be different than those of nurses working in non-rural settings. Additionally, due to small rural populations, each rural nurse has the potential to affect a larger percentage of the community than a nurse practicing in a more-populated setting (O’Lynn, 2010, p. 309).

#### Definition of Terms

The term “rural” is hereby defined as an area with open countryside and settlements with fewer than 2,500 residents (Economic Research Service/United States Department of Agriculture [USDA], 2007). There are variations of rurality, reflecting an area’s degree of remoteness from urban areas and even smaller numbers of residents per square mile. These variations will be acknowledged through the use of rural urban continuum codes (RUCC) (Economic Research Service/USDA, 2004). The RUCC will be identified for the county of each responding nurse’s primary practice setting, as determined by the nurse’s response to a survey item requesting the zip code for his/her primary practice setting. “Rural nurse” is defined for the purpose of this study as the professional nurse who provides healthcare to people living in sparsely populated areas (Lauder, Reel, Farmer, & Griggs, 2006, p. 74). In this study, the term “rural nurse” refers to actively-licensed registered nurses.

“Self-care practice”, for the purpose of this study, reflects activities and practices the nurse engages in to promote or maintain his/her own health. According to Chow & Kalischuk (2008), self-care practices are categorized as “meeting daily needs, health-promotion activities, and engagement in health and healing modalities” and that responses to questions about those categories’ activities are indications of one’s self-care practices (p. 33).

### Theoretical Framework

This research study utilizes Watson’s theory of human caring, or caring theory, as its theoretical framework. Caring theory identifies self-care as an integral component of nursing practice (Watson, 2008, p. 47). Watson (1997) writes that “the nurse, or practitioner, who is working within this theory and its underlying philosophy, needs to cultivate a daily practice for self” (p. 51). Additionally, for nurses using this theory to support their practice, “living authentically requires a commitment to self care at that deep level of personal practice and discipline, which in turn is honoring one’s own embodied spirit, taking time for soul care” (Watson, 1997, p. 51). Nurses’ self-care nurtures the personal and professional growth necessary to bring one’s whole self to the nurse-patient relationship, thereby potentiating quality in nursing practice. Caring theory also describes ten factors, or caritas processes, which provide structure for the “more fluid aspects of the model” (Watson, 2008, p. 30) and constitute quality patient care by the nurse. Watson Caring Science Institute (2011) states that “transpersonal caring relationships are the foundation of the work” described by caring theory. Major concepts

making up caring theory are: formation of a humanistic-altruistic system of values; instillation of faith-hope; cultivation of sensitivity to self and others; development of a helping-trusting relationship; promotion and acceptance of positive and negative feelings; systematic use of the scientific problem-solving method for decision making; promotion of interpersonal teaching-learning; provision for supportive, protective, and corrective mental, physical, sociocultural, and spiritual environment; assistance with gratification of human needs; and allowance for existential-phenomenological forces (Neil & Tomey, 2006, pp. 95-97).

#### Research Question

O'Lynn (2010) reported that “relatively little has been published describing the experiences of nurses who care for rural dwellers” (p. 299). Education in self-care practice is an essential element in baccalaureate education for professional nurses (American Association of Colleges of Nursing, 2008). Sherwood (2005) states that “self-care is not an option; it is essential both for maintenance and retention of our workforce but also for the quality of care rendered” (p. 76). Chow & Kalischuk (2008) explored the self-care activities of undergraduate nursing students in their study, but little is known about the self-care activities of licensed nurses in rural settings. The question to be addressed in this study: what are the self-care practices of registered nurses practicing in rural areas of Montana?

### Limitations

The findings of this research study are limited by the sample size, the self-report format of the survey tool, as well as limitations inherent to the use of mailed paper surveys, the chance that the survey will be discarded because the sender is not recognized, and nonresponse error (Dillman, Smyth, & Christian, 2009, p. 17). The practice of self care is dynamic and may change over time according to the individual's needs and lifestyle. Subjects' responses to this survey provide a snapshot of the subjects' self-care and nursing practice at a single point in time. The subjects' responses may be different if the survey was completed at a different time, reflecting changes in life situation as well as personal and professional growth.

Mailed surveys, accompanied by an introductory cover letter, were sent to registered nurses residing in eight rural counties in Montana and currently licensed to practice as RNs in the State of Montana. This procedure may inadvertently exclude RNs who practice in rural settings but reside in a non-rural county. Findings may not be generalizable to licensed practical nurses, advanced practice nurses or registered nurses practicing in other areas.

Validity of the original tool was addressed by Chow & Kalischuk (2008) with the statement that the instrument was designed by the authors, based on the literature and input from students, and approved by the institution's Ethical Review Committee (p. 33). Formal testing of the survey tool for content validity was not completed for this study.

### Delimitations

Subjects participating in the mailed paper survey were asked to provide the zip code for their primary workplace. The zip code of the workplace was used to determine the rurality of the subject's work setting (Economic Research Service/USDA, 2004). Worksite zip codes were analyzed to determine the rural urban continuum code (RUCC) assigned to the zip code for that location.

### Assumptions

A number of assumptions were made in the course of this research. One assumption is that rural nurses may engage in or utilize self-care practices differently than nurses working in non-rural areas. A second assumption is that self-care is a professional responsibility for practicing nurses. Finally, it is assumed that actively licensed registered nurses in Montana are able to read and understand the English language, capable of completing a paper and pencil survey, and able to return the completed survey in the self-addressed stamped envelope provided with the survey.

### Organization of the Study

The subsequent four chapters of this extension replication study are organized according to literature review, methods, results, and discussion. Chapter 2 includes a review of current literature pertinent to the topic of study. The chapter examines literature published in the preceding three years regarding rural nurses, self-care practices, caring theory, as well as the use of self-report, paper surveys for research studies.

Chapter 3 presents the study design, the sample, the survey tool used to collect research data, and the methodology utilized in data analysis. Chapter 4 describes the findings of the study based on descriptive analysis of quantitative data. Chapter 5 presents a discussion of findings, limitations, and recommendations.

## CHAPTER 2

## REVIEW OF THE LITERATURE

Introduction

This replication study is concerned with examining the self-care practices of Montana nurses. The push for evidence-based practice in nursing heightens the important role replication studies play in establishing credibility and extending generalizability of research findings (Polit & Beck, 2008, p. 328). Further support for replication studies is evident in Mantzoukas' (2007) discussion of evidence-based practice and the value of reflection in advancing nursing practice, that "knowledge is something emergent that is always in dialectical interplay with experience and action and as such requires continuous interpretation or re-description" (p. 219). According to Watson (2009), the compelling importance of exploring and understanding the phenomenon of caring in diverse ways, in this case, the nurse's caring for self, is "one of the responsibilities for nursing's maturity" (p. 15).

A literature review was conducted in December 2010 for the research study reported in this thesis. The Cumulative Index to Nursing and Allied Health Literature (CINAHL) was utilized as the database for the purposes of the literature review. MEDLINE/PubMed (Medical Literature On-Line), a database developed by the United States Library of Medicine, was utilized for additional searches using the same concepts for search terms when CINAHL yielded no results. Searches for full-text, English-language research articles published between the years 2007 and 2010 were completed on

CINAHL using the following concepts for search terms: “rural nurses”, “self-care practices”, and “caring theory”.

### Nursing in Montana

In 2009, there were 7290 nurses actively practicing in the State of Montana (MT DPHHS, 2010). Roberge (2009) reported that 60% of the world’s nurses practice in urban areas (p. 82) and cited the need for replication and elaboration of research on the topics of rural nurses’ job satisfaction and retention (p. 91). In Montana, 54% of the population is considered urban, compared to 79% of the total U.S. population (MT DPHHS, 2010). The distribution of nurses working in Montana is more concentrated in a few areas of higher population density (Bernier, 2009, p. 5) even though only one of Montana’s 56 counties is actually designated urban, 10 counties are designated rural and the remaining 45 are frontier (MT DPHHS, 2010).

Rural nursing is characterized by professional isolation, role diffusion, and fewer available healthcare resources, relative to nursing practice in more populated settings (O’Lynn et al., 2009, p. 35). These characteristics present significant challenges to rural nurses’ utilization of research and implementation of evidence-based practice, including attention to their own professional development and self-care. “The role of the rural nurse has not been well understood or communicated” (Jackman, Myrick, & Yonge, 2010, p. 65). Jackman, Myrick, & Yonge (2010) assert that with the current healthcare system’s focus on highly technical, specialized medical care, the contributions of rural nurses to the health of their communities has been devalued and marginalized.

Bigbee (2007) reported findings that nurse to population ratios are higher in more densely populated areas, and that many rural and frontier areas have been plagued by “chronic nursing shortages” (p. 40). Accordingly, Roberge (2009) reported less job satisfaction among rural nurses compared to urban nurses and recommended online support groups for rural nurses as a possible retention strategy, providing professional and emotional support to increase job satisfaction and duration of employment (p.85). Intellectual stimulation and emotional support are integral facets of self-care that affect job satisfaction and the nurse’s desire to maintain rural employment or seek a different position offering a broader range of professional resources or opportunities.

The term “rural nurses” yielded eighty research articles as a result of the search on CINAHL. Most of those eighty articles focused on the patient of the rural nurse, rather than the nurse. The eight articles discussed here were selected by the author because of their inclusion of elements considered characteristic of rural nursing practice.

In the report of an interpretive phenomenological study conducted by Conger & Plager (2008), it was noted that the development of supportive relationships is integral to a rural advanced practice nurse’s sense of connectedness and increases the opportunity for a positive experience with rural practice. The researchers observed that one of the themes that emerged from their data analysis was that of “rural connected versus disconnected” (p. 25). The study determined that “the development of strong support systems are necessary for survival in rural working environments” (Conger & Plager, 2008, p. 36).

O'Lynn et al. (2009) noted in their study that rural nurses report difficulties in critiquing nursing research and translating research to practice. The researchers identified the importance of professional practice networks in enabling rural nurses to more effectively utilize research in their practices (p. 42). Bushy (2008) identified the fact that “the depth of rural research in general, and by nurse researchers focusing on rural cultural groups in particular, is limited” (p. 221). Rural health care workers are faced with the barriers of cost, travel time, and distance in their attempts to simply attend research conferences (p. 234). Bushy stated that “for this reason, effective strategies must be used to deliver information to peers who live and work in rural catchment areas” (p. 234). Opportunities for collaborative work and the creation of on-line support groups for rural nurses were identified by Roberge (2009) as strategies that may be helpful in efforts to retain rural nurses.

Penz & Stewart (2008) surveyed registered nurses working in Canada. They reported that among those surveyed, rural nurses working in smaller healthcare facilities reported higher levels of autonomy and higher levels of nurse-physician interaction, suggesting rural nurses experience more autonomy in their practice compared to non-rural nurses. McCoy (2009) stated that rural nursing practice presents challenges not faced by nurses in urban or suburban settings. The lack of anonymity often experienced by rural nurses can lead to “ethical situations related to confidentiality and role strain for the nurse” (McCoy, 2009, p. 129) and may result in the nurse feeling as if the professional role extends well beyond the workplace and encompasses the nurse’s personal time as well. Based on the multiple roles rural nurses embody and the

opportunity to provide leadership across the community, Stanton (2009) reports that “no professional provider is in a better position to effect change in the rural environment than the rural based professional nurses” (p. 2). Jackman, Myrick, & Yonge (2010) speak to the unique experience of rural nursing when they state “rural nurses know the needs of the rural population because they are a part of the population ergot the communities they serve” (p. 66).

### Self-Care Practices

“Self-care practices”, for the purpose of this study, reflects activities and practices the nurse engages in to promote or maintain his/her own health. Health practices and behaviors such as physical activity, nutritional intake, hydration, adequate sleep and rest, substance use or abuse, stress management, and use of vitamins and supplements are among the activities considered self-care practices. The term “self-care practices” yielded twenty-eight research articles as a result of the search on CINAHL. In twenty-four of the articles, “self-care practices” referred to practices engaged in by the patient rather than the nurse. The four articles discussed here focus on self-care by practicing nurses.

Chow & Kalischuk (2008), whose work this study seeks to replicate, explored and described the self-care practices of undergraduate nursing students. Most of the nursing students surveyed reported engaging in self-care practices, despite the fact that busy schedules interfered with their ability to optimally meet needs for sleep, fluid, exercise, and other self-care activities (p. 31).

As health care professionals, nurses are aware of the importance of health-promoting behaviors, but the demands of working in high-stress work settings may impede the nurse's ability to practice self-care. Manthey (2008) explored the role of social justice and respect in nursing practice and stated "accepting responsibility for managing one's own relationships, energy, and life balance is an aspect of social justice that needs much deeper exploration than it has received to this point in time" (p. 64). Hernandez (2009) describes the important role of self-care in nursing practice and presents a nursing self-care tool utilizing the acronym CARING, the letters of which stand for concepts elemental to such practice: compassion, awareness, reflection, intentionality, nonjudgmental attachment, and gratitude. Andrews & Wan (2009) reported their research on the role of mental health, healthy coping skills and retention of nurses. They state that "nurse managers may be called upon to assist in the identification of internal and external resources for those facing challenges sustaining a healthy lifestyle. Workplace culture and policy may require adjustment to help nurse employees achieve balance when faced with multiple job-related demands" (p. 349).

### Caring Theory

The term "caring theory" yielded sixty-eight research articles as a result of the search on CINAHL. In fifty-seven of the articles, "caring theory" referred to theory other than Watson's caring theory. Eight articles were determined by this author to include "caring theory" in a manner applicable to this study.

Caring theory has been utilized to develop nursing interventions described in studies published within the past three years. Stein (2008) described the role of caring theory in her professional progression to a Doctor of Nursing Practice. Writing that caring theory provides the theoretical framework for her nursing research, she adds that this theory supports her focus on therapeutic use of humor as well (Stein, 2008, p. 39). In another study, Stein (2009) reports her use of caring theory in qualitative research with nursing students to support the role of laughter as an “important ingredient for self-care and healing” (p. 268). Through her research, Stein (2009) identified “support for Jean Watson’s model that humor and laughter can serve as subjective inner healers that promote self-care, and that caring for the caretaker leads to healing” (p. 273).

Pipe & Bortz (2009) described the application of caring theory in research studying mindfulness-based stress reduction in nursing leaders. Authenticity, self-reflection and the cultivation of self-knowledge are identified as important leadership qualities (p. 35). Pipe & Bortz (2009) report that the “caritas process of cultivating one’s own spiritual practices and transpersonal self, going beyond ego self” (p.37) theoretically supports the application of mindfulness-based stress reduction techniques utilized in their study.

Caring theory was applied in the creation of a teaching-learning course designed for senior baccalaureate nursing students (Sitzman, 2007). Sitzman (2007) writes of the need for clarification in the use of the word caring. “The aim of a course created for senior BSN students at Weber State University (WSU) is to focus on Jean Watson’s definition of caring and then assist students to enact professional caring based on a

deepened understanding of this sometimes misunderstood and trivialized term” (Sitzman, 2007, p. 8). In an investigation of nursing students’ perceptions related to on-line nursing education, Gabbert (2008) writes that “Watson’s caring factors can be viewed as the outward expressions of caring demonstrated through the quality and content of on-line student and faculty interactions” (p. 69). The cultivation of trust-based relationships between faculty and students, and attention to individual learning needs are examples of educational strategies recommended by Gabbert (2008).

Pajnkihar (2009) discussed the use of Watson’s caring theory in the development of professional nursing practice in Slovenia. Pajnkihar’s study sought to test the hypothesis that “a generally acceptable and useful nursing model would give Slovenian nurses a better understanding of their role, and more autonomy and authority, and enable them to provide more holistic patient care” (p. 43). Pajnkihar (2009) asserts that the study of caring theory is useful in the development of theory for nursing practice in Slovenia because it “discusses the philosophical and spiritual basis of caring and sees caring as the moral and ethical ideal for nursing and for the preservation of human dignity” (p. 45).

Nursing research related to recruitment, retention, and burnout has employed caring theory as a lens through which to view these issues. Como (2007) provides an overview of care and caring from historical, ethical, and theoretical viewpoints and asserts that the “use of the caring context for nursing care delivery may positively have an impact on the level of burn-out that is so often seen in today’s healthcare settings” (p. 41). Tjale & Bruce (2007) explored the concept of holistic nursing as a framework for pediatric nursing practice in South Africa. The authors concluded that “spirituality is the

predominant antecedent” of holistic nursing care (p. 45) and that Watson’s caring theory “recognise the impact of individual’s spirituality on health and well-being” (p. 49).

### Nurses’ Self-Care Practices

A search of the literature for full-text research articles published between 2007 and 2010 which combined the concepts “rural” or “Montana” and “nurses\*” and “self-care” was completed on CINAHL. Seven hundred twelve articles were identified as a result of this search. Most of the articles were found to refer to self-care in relation to the patient, rather than the nurse as it is being considered here. Birks, Mills, Francis, Coyle, & Davis (2010) found that nurses serving in rural or remote areas reported the experience of being on-call 24-hours per day, seven days per week and that it caused a great deal of stress for them (p. 30). Ulrich et al. (2010) mentioned the importance of including structured debriefing/self-care sessions for the graduate nurses participating in a successful RN residency program. Dunaway & Running (2009) exhort nurse practitioners to “learn to seek the type of intrinsic professional rewards that engender genuine job satisfaction and represent true professional self-care” (p. 563).

Rose & Glass (2008) examined the value of emancipatory research to contemporary nursing practice and observed that the “nursing profession has traditionally promoted holistic healthcare practice in client care, however, the holistic and humanistic care of our nurses has been long relegated to the margins” (p. 19). They further stated that the complexities of today’s nursing practice increase nurses’ “susceptibility to impaired well-being” (Rose & Glass, 2008, p. 9). McCloskey & Taggart (2010) recommended self-

care and the development of positive coping strategies in response to the occupational stress experienced by the palliative care nurses in their study (p. 240).

King, Vidourek, & Schwiebert (2009) studied disordered eating and job stress among nurses and determined that because of nurses' vital role in health care, it is critically important to understand the factors that negatively impact nurses' well-being (p. 862). The authors report that self-care can improve the self-esteem of nurses and that "self-care may include exercise, eating healthy, challenging oneself intellectually, seeing mental health support when needed and also establishing a healthy network of supportive relationships" (King, Vidourek, & Schwiebert, 2009, p. 867).

In a study comparing the health-promoting behaviors of nursing students compared to non-nursing students in Turkey, the researchers wrote that nursing students reported higher levels of health-promoting behaviors than non-nursing students (Can, Ozdilli, Erol, Unsar, Tulek, Savaser, Ozcan, & Durna, 2008). Can et al. (2008) theorized that the nursing students' higher scores may be due to their exposure to health-promotion content within the nursing curriculum (p. 275).

Edward & Hercelinskyj (2007) discussed the use of reflective practice to promote resilience and positive stress management for nurses. Candela & Bowles (2008) surveyed RNs in their first five years of practice regarding their perceptions of how well their educational programs prepared them for nursing practice. They reported that a majority of respondents indicated the need for more preparation for leadership and management in practice and the authors included self-care as an essential management and leadership concept within nursing education (Candela & Bowles, 2008, p. 270).

### Rural Nurses and Caring Theory

A search for literature published between 2007 and 2010 which combined the concepts “rural”, “nurse”, “theory of human caring”, and “caring theory” yielded two full-text, English language articles on CINAHL. Evans, Crogan, & Bendel (2008) reported results of a study in which nurse-facilitated storytelling was used as an intervention for patients with cancer. The study utilized Watson’s theory of human caring as its theoretical framework. Storytelling, as developed for this study, was determined to be a positive intervention for the participating patients. The authors suggested the storytelling intervention might be useful for nurses in rural areas, as it required little additional formal training, could be implemented in small communities where patients may be hesitant to self-disclose and other similar resources may not be available (p. 263).

Messmer & Turkel (2010) discussed the relationship between American Nurses Credentialing Center (ANCC) Magnet® designation, high-quality patient care, and exemplary nursing practice. Watson’s theory of human caring was identified as one nursing practice model supporting exemplary professional nursing practice. The authors state “professional models of care define and promote the professional role and incorporate evidence-based practice” (p. 242). While the pursuit of Magnet® designation requires considerable financial and human resources, the ANCC Pathway to Excellence® credential was identified as a way for small or rural hospitals to “demonstrate their excellent nursing environments” (Messmer & Turkel, 2010, p. 247).

### Self-Care Practices and Caring Theory

A literature search for articles published between 2007 and 2010 which combined the concepts “self-care practices”, “self-care” and “caring theory” yielded no results on CINAHL. A second search using the same concepts as search terms was completed on MEDLINE/PubMed with three applicable articles yielded. Vitale (2009) conducted a phenomenological study to explore the lived experience of nurses who practice the complementary therapy, Reiki, for self-care. The researcher noted that many nurses struggle to attend to their self-care needs and maintain optimal physical and mental health in the midst of demanding work situations (p. 130). According to Vitale (2009) “there is growing literature that self-care is an important proactive strategy for nurses that may have a positive influence on burnout, attrition, and nursing satisfaction” (p. 131). As well, the author states that Watson’s caring theory “offers theoretical dimensions that assist in guiding the contemporary calls for nursing self-care practices” (p. 132).

Warelow, Edward, & Vinek (2008) explored the concepts of caring and caring theory within the context of contemporary nursing practice in Australia and Canada. Financial strains and a shortage of experienced nurses plague the health care systems in Australia and Canada, as well as the United States. The authors state that stressful work environments hinder nurses’ ability to provide safe care, contribute to job strain, and lead to long term health costs (p. 151). The authors state that “strong leadership from the nursing profession...will lead to positive system reform” (p. 151). According to Warelow, Edward, & Vinek (2008), caring theory supports “the natural human potential

and capacity for healing and self-care” and if embraced, has the potential to “revolutionize” healthcare (p. 152).

Pipe (2008) engages caring theory and its caritas factors in describing the importance of “self-nurturing” or self-care for nursing leaders (p. 123). The author writes that nursing leaders must see that “the mind, body, and spirit are well cared for and in the most optimal condition in preparation for the challenges of high-performance leadership” for both themselves and the nurses they are leading (p. 123).

### Rural Nurses, Self-Care Practices, and Caring Theory

A search for literature published between 2007 and 2010 which combined the concepts “rural”, “nurse”, “self-care practices”, “self-care”, “theory of human caring”, and “caring theory” yielded no results on CINAHL. A second search using the same concepts as search terms was completed on MEDLINE/PubMed, yielding no results either.

### Summary

Rural nurses are uniquely suited to address community needs for health care and leadership. Despite challenges in recruiting and retaining rural nurses, this review of current literature indicates that the experience of rural nursing practice is not well understood. Recent nursing literature reflects interest in the value and role of self-care practices for nurses. Interest in the topic is timely, as an ongoing nursing shortage continues in the United States and practicing nurses find themselves working in a health

care system where quality, equity, and accessibility are more often the exception than the norm. Acknowledgement of the critical role of self-care for nurses, in a health care environment that appears to be in transformation, makes caring theory particularly relevant. Current literature reflects a keen interest in examining the ways that caring theory might provide guidance and structure during this time of transformation in health care. Caring theory calls the nurse to focus on the therapeutic nurse-patient relationship, to apply one's whole self artfully to one's healing practice of nursing, and to the awareness that healing and curing are not one and the same. For many nurses, these are the elements that give meaning to practice and allow them to overcome situational difficulties while holding fast to a personal vision of nursing and health.

The literature review presented in this report revealed no current nursing research studying or examining the self-care practices of rural nurses specifically. It is acknowledged that a body of nursing knowledge regarding rural nursing practice exists, but this study assumes that self-care practices by nurses are integral to effective nursing practice and seeks information about the self-care practices of nurses in the rural areas of Montana. Knowledge and understanding of the self-care practices of rural nurses is critical in determining the most effective strategies for recruiting and retaining highly effective nurses in rural areas of Montana.

## CHAPTER 3

## METHODS

Introduction

Personal and professional growth, including self-care practices, is a component of ethical nursing practice (American Nurses Association, 2001). Through their self-care practices and behaviors, nurses can model health promotion and wellness for patients and other healthcare workers (Watson, 2008, p. 47). This exploratory, descriptive, extension replication study examined the self-care practices of rural nurses practicing in Montana. “Replication studies are considered valuable, valid, and legitimate scientific inquiry and are important for ascertaining the usefulness of research findings for evidence-based practice” (Norwood, 2010, p. 106). Fahs, Morgan, & Kalman (2003) call for increased replication studies to validate nursing research and build the foundation of nursing science.

Design

This study used a univariate cross-sectional descriptive design, in that it examined the occurrence and frequency of a variety of self-care practices among nurses without inferring interrelationships (Polit & Beck, 2008, p. 283). A revised survey questionnaire, based on a tool developed by Chow & Kalischuk (2008) was developed to collect self-reported data in order to begin to describe the self-care practices of the rural nurses sampled.

### Selection of Participants

The target population for this study was actively licensed registered nurses (RNs) practicing in selected rural counties in Montana. The rural-urban continuum codes (RUCC) range from 1 (most urban/metro) to 9 (most nonmetro/completely rural) and are commonly used to identify the rurality or degree of remoteness of a particular county or other designated area (Economic Research Service/USDA, 2004). Two rural counties from each of four regions in Montana (northeast, northwest, southeast, and southwest), with a RUCC code of 8 or 9, were selected to obtain representation from nurses in geographically diverse areas of Montana. All actively licensed RNs residing in each of the eight selected counties were invited to participate in this study. It is not known how many of Montana's RNs actually practice in rural settings; therefore it is not possible to determine the number needed for a representative sample of the target population. The questionnaire, accompanied by a cover letter explaining the study and a self-addressed stamped envelope in which to return the completed questionnaire, was sent to the licensees whose addresses populated the list purchased from the Montana State Board of Nursing (MT SBON).

### Instrumentation

Survey questionnaires distributed through postal mail offer the advantages of cost, coverage, anonymity and higher accuracy in recall (Norwood, 2010, p. 280). Additionally, self-administered questionnaires are less costly than interviewing large numbers of subjects and remove interviewer bias (Polit & Beck, 2008, p. 423-424). In

Montana, the names and mailing addresses of licensed nurses are available for purchase through the State Board of Nursing according to county of residence and license type.

The survey instrument used for this research was adapted from the self-care questionnaire developed for the original study by Chow & Kalischuk (2008). Permission was obtained to use the original tool from the lead investigator (see Appendix A) (J. Chow, personal communication, February 11, 2011). The original survey used by Chow & Kalischuk included 41 open-ended and closed-ended items addressing nursing students' self-care practices as well as demographic information. Chow & Kalischuk (2008) state that self-care practices can be categorized as "meeting daily needs, health-promotion activities, and engagement in health and healing modalities" and that responses to questions about those categories' activities are indications of one's self-care practices (p. 33). Validity of the original tool was addressed by Chow & Kalischuk (2008) with the statement that the instrument was designed by the authors, based on the literature and input from students, and approved by the institution's Ethical Review Committee (p. 33). Psychometric properties of the questionnaire were not included in the report of the original study. The current study's conceptual definition of self-care practices is consistent with that used by Chow & Kalischuk in the development of the existing questionnaire.

Surveys use self-reported data to describe and tally characteristics of a group (Norwood, 2010, p. 206). "Threats to validity with surveys include problems with self-report data such as memory, selective recall of events, and responding in such a way to make one look favorable" (Norwood, 2010, p. 206). Anonymity of response and the

straightforward quality of the data collection instrument were the control strategies employed in this study to address threats to validity (Norwood, 2010, p. 207).

Through the survey, rural nurses in Montana were asked about a variety of health habits and practices that are considered self-care. Health habits and practices that were queried included: sleep habits, physical activity, nutrition, fluid consumption, health checkups, relaxation activities, stress management strategies, short and long term health goals, use of vitamins and/or herbal preparations, use of complementary or alternative therapies, alcohol consumption, tobacco use, and spiritual and/or religious practices. Subjects were asked to identify one change that would positively impact their health. Additionally, the nurses were asked to report their general health status, height, weight, and demographic information.

Adaptations made to the original tool were: the deletion of two items which referred to the subjects' student status, deletion of an item asking subjects about self-care in general rather than about specific self-care activities, deletion of an item of a sensitive nature asking about sexual practices, rewording of another item to reflect the subjects' self-care activity at work, rather than during clinical practicum, and insertion of an item asking the number of years of nursing experience (see Appendix B). Additionally, subjects were asked to indicate the zip code for the location of their primary workplace, and their educational preparation for nursing practice. For example, question 1 of the survey reads: "Overall, I feel that I take measures to look after myself: a. Consistently b. Occasionally c. Unsure d. Not at all". Question 2 of the survey reads: "Usually, I get enough sleep: a. Consistently b. Occasionally c. Unsure d. Not at all".

### Data Collection

The survey questionnaire, accompanied by an explanatory cover letter and a self-addressed stamped envelope in which to return the completed survey, was sent to a list of actively licensed RNs residing in eight rural Montana counties via postal mail. Subjects were asked to voluntarily complete the questionnaire and return it in the enclosed envelope within one week. The purpose of the study was fully explained to participants in the cover letter that accompanied the survey questionnaire (see Appendix C). The mailing label on the self-addressed stamped envelope, provided for return of the completed survey, was numerically coded to the list of licensees invited to participate in the survey. Coding of the return envelopes allowed the researcher to send a follow-up postcard (Appendix D) one week later to each subject in the sample who had not yet returned a survey. The follow-up postcard thanked subjects for returning the survey and reminded those who had not, to complete and return the survey “right away” (Dillman, 2009, p. 252). The coded list of subjects was kept secure in a locked file cabinet drawer when not in use and was available only to the researcher. The coded list was destroyed at the completion of the study. The survey was estimated to take approximately 15 minutes to complete.

Completed surveys were returned by mail to the researcher. Raw data from the completed surveys was prepared and entered to a computer data file for statistical analysis by the researcher.

### Data Analysis

Survey data was entered to a spreadsheet file and analyzed with Microsoft Excel® 2007 by the researcher for descriptive statistics. Quantitative data was analyzed with descriptive statistics: frequencies, means, percentages, and standard deviation (SD). The qualitative data was explored for content.

### Human Subjects Consideration

Study approval was obtained from the Institutional Review Board of Montana State University-Bozeman (Appendix E). The purpose of the study was fully explained to participants in the cover letter that accompanied the survey questionnaire. Questionnaire items were not of a sensitive nature and there was no anticipated risk of harm to the participants. Return of the completed survey implied consent. The self-addressed stamped envelopes provided for return of the completed survey were numerically coded to the list of subjects invited to participate. The coded list of subjects was kept secure in a locked file cabinet drawer when not in use and available only to the researcher. The coded list was destroyed at the completion of the study.

### Summary

The quality of a nurse's self-care is reflected in the care provided to patients in the course of nursing practice (Chow & Kalischuk, 2008). This study used a mailed, self-report survey to collect information about self-care activities, seeking to explore and describe the self-care practices of rural RNs in Montana. A list of all actively licensed

RNs residing in eight rural counties in Montana was obtained from the MT SBON. Survey questionnaires and informed consent cover letters were mailed to licensees residing in the eight rural counties selected from four regions in Montana. A follow up thank-you/reminder postcard was mailed one week following the mailing of the actual survey. Survey data was entered by the researcher into a computer data file and analyzed using descriptive statistics.

## CHAPTER 4

## RESULTS

Introduction

This study intended to collect data about the self-care practices of rural nurses in Montana. Nurses' self-care is integral in the pursuit and promotion of personal and professional development and is a component of ethical nursing practice (American Nurses Association, 2001). This exploratory, descriptive, extension replication study examined the self-care practices reported via paper survey by a sample of rural nurses practicing in Montana. "Replication studies are considered valuable, valid, and legitimate scientific inquiry and are important for ascertaining the usefulness of research findings for evidence-based practice" (Norwood, 2010, p. 106). Replication studies are needed to validate nursing research and build the foundation of nursing science (Fahs, Morgan, & Kalman, 2003). It was established that little has been reported in the professional literature regarding the self-care practices of rural nurses. This study used a univariate descriptive design, in that it examined the occurrence and frequency of a variety of self-care practices among nurses without inferring interrelationships (Polit & Beck, 2008, p. 283).

Survey questionnaires were distributed through postal mail and offered the advantages of cost, coverage, anonymity and higher accuracy in recall (Norwood, 2010, p. 280). Self-administered questionnaires are less costly than interviewing large numbers of subjects and remove interviewer bias (Polit & Beck, 2008, p. 423-424). In Montana,

the names and mailing addresses of licensed nurses are available for purchase through the State Board of Nursing according to county of residence and license type, providing the sample for this survey of rural nurses.

### Descriptive Statistics

In July 2011, the survey questionnaire, accompanied by an explanatory cover letter and a self-addressed stamped envelope in which to return the completed survey, was sent via postal mail to each nurse on a list of 360 actively licensed RNs residing in eight rural Montana counties. Five questionnaires (1.4%) were returned unopened to the researcher marked “Return to sender/Moved Left No Address/Unable to Forward”. One hundred ninety-four questionnaires were at least partially completed and returned to the researcher in the self-addressed stamped envelope provided for this purpose, yielding a response rate of 53.9%. Of the respondents who provided a zip code for their primary worksite (n=171), 29.8% (n=51) listed a zip code with a RUCC of 8 and 39.2% (n=67) listed a zip code with a RUCC of 9, demonstrating that at least 60.8% (n=118) of the participating nurses were working in rural locations at the time the survey was completed. Subjects’ responses as a whole (“All respondents”) are reported, followed by the responses provided by the 118 subjects that reported working in a location with a RUCC code of 8 or 9 at the time the survey was completed (“Rural respondents”).

Demographic Information

Subjects' responses to the questions regarding gender, age, and marital status are reported in Table 1- Demographic information. The survey did not include questions about subjects' ethnicity.

Table 1- Demographic Information

Subject's response	All respondents Number of subjects (percentage)	Rural respondents Number of subjects (percentage)
Gender Female	184 (94.8%)	115 (97%)
Gender Male	5 (2.5%)	3 (2.5%)
Gender no response	5 (2.5%)	0 (0%)
Age < 20 years	1 (<1%)	0 (0%)
Age 21-30 years	17 (9%)	6 (5%)
Age 31-40 years	24 (12.7%)	18 (15.2%)
Age 41-50 years	29 (15.3%)	20 (16.9%)
Age 51-60 years	68 (36%)	41 (34.7%)
Age 61-70 years	40 (21.1%)	27 (22.9%)
Age >70 years	10 (5.2%)	6 (5%)
Age No response	5 (2.5%)	0 (0%)
Marital status: single	19 (10.1%)	12 (10%)
Marital status: married	150 (79.8%)	97 (82.2%)
Marital status: separated	2 (1%)	1 (<1%)
Marital status: divorced	17 (9.0%)	8 (6.8%)

### Nursing Education, Employment, and Work Experience

Subjects' responses to questions about nursing education, employment, and years of nursing experience are reported in Table 2-Nursing education, experience and current employment. Five respondents did not answer the question about years of nursing experience or nursing education completed. Seven respondents did not answer the question about current employment status. Some subjects wrote "retired" as it was not listed as an option.

### Overall Health Status

Respondents were asked to identify their health status. Over twenty-eight percent (28.7%, n=54) indicated excellent health; 63.3% (n=119) indicated good health; 7.4% (n=14) indicated fair health; and one respondent indicated poor health status. Six respondents did not answer the question about health status. Another question asked subjects to rate their health on a scale of 1 to 10, with 1 indicating "poor health" and 10 indicating "excellent health". Three subjects did not answer the question asking them to rate their health. Of the 191 subjects who did answer this question, responses ranged from 3 to 10, with a mean rating of 7.56 and a SD of 1.48. Subjects were asked to indicate how often they have been sick over the preceding six months. Five subjects did not answer this question. Thirteen subjects (6.9%) indicated they had been sick over three times in the past six months; twenty-nine subjects (15.3%) indicated they had been sick twice in the past six months; sixty-three subjects (33.3%) indicated they had been sick once in the past six months; and eighty-four (44.4%) indicated they had not been sick at all in the

Table 2-Nursing Education, Experience, and Current Employment

Subjects' response	All respondents Number of subjects (%)*	Rural respondents Number of subjects (%)*
Nursing education: Diploma	25 (13.2%)	15 (12.7%)
Nursing education: Associate degree	62 (32.8%)	42 (35.6%)
Nursing education: Bachelor's degree	92 (48.7%)	57 (48.3%)
Nursing education: Master's degree	10 (5.2%)	4 (3.4%)
Nursing education: Doctoral degree	0 (0%)	0 (0%)
Years of nursing experience: 0-3	14 (7.4%)	8 (6.8%)
Years of nursing experience: 4-6	14 (7.4%)	6 (5.1%)
Years of nursing experience: 7-10	14 (7.4%)	11 (9.3%)
Years of nursing experience: 11-15	19 (10%)	11 (9.3%)
Years of nursing experience: 16-20	27 (14.2%)	16 (13.6%)
Years of nursing experience: 21+	101 (53.4%)	66 (56%)
Working full-time	97 (51.9%)	62 (52.5%)
Working part-time	51 (27.3%)	32 (27.1%)
Casual/Relief/Per diem basis	11 (5.9%)	9 (7.6%)
Not employed	28 (15%)	14 (11.9%)
*numbers/percentages reflect those providing information		

past six months. There was not a significant difference in responses from nurses practicing in rural counties compared to the responses from the total sample.

### Sleep Patterns

Subjects were asked three questions specifically about sleep habits: whether they get enough sleep usually; how much they sleep, on average, per night/day; and whether they considered the amount of sleep they obtain to be adequate or inadequate. When asked if they get enough sleep usually, 103 (53.4%) indicated “consistently”; 80 (41.5%) indicated “occasionally”; none indicated “unsure”; and 10 (5.2%) indicated “not at all”. Subjects were asked to write in how many hours they sleep, on average, per night/day. Responses ranged from 4 hours to 10 hours, with a mean of 6.99 hours and a SD of 1.06. Subjects were then asked to indicate whether they considered the amount of sleep they reported obtaining to be adequate or inadequate. One hundred twenty-eight (66.7%) indicated they considered the amount to be adequate, and sixty-four (33.3%) indicated their sleep to be inadequate. Rural respondents were slightly more likely to report dissatisfaction with sleep patterns, with 36.4% indicating their average amount of sleep to be inadequate.

### Biometrics

Subjects were asked to provide their height in inches and their weight in pounds. Additionally, they were asked to indicate whether they were satisfied with their weight, considered themselves underweight, overweight or unsure. One hundred eighty-eight

subjects provided their height and weight. The heights and weights provided were used to determine each subject's body mass index (BMI). BMI is a number calculated using a person's height and weight and is used to indicate body fatness. Biometric statistics for this sample are reported in Table 3-Biometric Measurements. Weight status categories associated with BMI measurements for adults are: less than 18.5 is underweight, 18.5 to 24.9 is normal weight, 25.0 to 29.9 is overweight, and 30.0 and greater is obese (Centers for Disease Control and Prevention, 2012). The mean BMI calculated for participants in this study was 27.4, indicating overweight status. Frequencies for BMI categories follow: one subject was underweight (BMI less than 18.5), seventy subjects were normal weight (BMI between 18.5 and 24.9), fifty-nine subjects were overweight (BMI between 25.0 and 29.9), and fifty-eight subjects were obese (BMI of 30 or greater). Mean height, weight, and BMI were slightly higher for the rural respondents, as indicated in Table 3.

Table 3- Biometric Measurements

	Total respondents Range	Total respondents Mean (SD)	Rural respondents Range	Rural respondents Mean (SD)
Height	59-72 inches	65.1 inches (2.75)	59-71.5 inches	65.2 inches (2.91)
Weight	100-304 pounds	165 pounds (36.2)	100-304 pounds	166 pounds (37.8)
Body Mass Index	18.3-55.6	27.4 (6.17)	18.3-55.6	27.5 (6.48)

One hundred ninety-two subjects responded to the question asking about their own perception of their weight. Sixty (31.3%) indicated they were satisfied with their

weight. One subject indicated he/she considered him/herself underweight. One hundred thirty (67.8%) subjects indicated they perceived themselves to be overweight. One subject indicated he/she was unsure of their weight status. Rural respondents reported slightly less satisfaction with weight: thirty-two (27.1%) indicating “satisfied with my weight”, and eighty-four (71%) indicating “overweight”.

### Physical Activity

Three questions in the survey asked directly about the subjects’ physical activity patterns. Subjects’ reported exercise, or physical activity, patterns and perceived adequacy of reported exercise are reported in Table 4. Subjects were asked to report how many times per week they exercise, on average, and for how many minutes, on average, they exercise each time. Responses for how many times per week subjects exercised ranged from 0 to 14 times per week, with a mean of 3.4 times per week and SD of 1.98. Minutes per exercise session ranged from 0 to 120 minutes, with a mean of 35 minutes per session and SD of 19.84. Considered separately, rural respondents reported exercising a mean of 3.5 times per week, an average of 33.8 minutes per session.

Subjects were asked to write in a response to the question of what types of exercise they do. A wide variety of activities were listed by respondents. The most frequent activities listed were: walking, bike riding, weight lifting/training, gardening/yard work, hiking, running/jogging, treadmill, and going to the gym. Fifteen subjects (7.7%) did not write in any response to this question.

Table 4-Physical Activity Patterns and Perceived Adequacy

Subjects' response	Total respondents Number of subjects (%)	Rural respondents Number of subjects (%)
Exercises "consistently"	50 (25.8%)	34 (28.8%)
Exercise "moderately"	57 (29.4%)	36 (30.5%)
Exercises "occasionally"	71 (36.3%)	36 (30.5%)
Exercises "not at all"	16 (8.2%)	12 (10.2%)
Reported exercise is perceived to be "enough"	55 (29.2%)	39 (33.1%)
Reported exercise is perceived to be "not enough"	123 (66.8%)	69 (58.5%)
Reported "unsure" of perceived adequacy of exercise	6 (3.2%)	4 (3.4%)

### Nutrition

Subjects were asked to respond to four questions regarding nutrition and fluid intake. Subjects were asked to indicate whether they eat what they consider to be a balanced diet; seventy-three (37.8%) indicated they eat a balanced diet "consistently", ninety-five (49.2%) indicated they eat a balanced diet "moderately", twenty-three (11.9%) indicated they eat a balanced diet "occasionally", and two (1%) indicated they eat a balanced diet "not at all". There was no significant difference in response from rural respondents compared to responses from the total group.

The remaining three nutrition questions related to fluid intake. Subjects were asked to write in how many glasses of water or juices they drink per day, on average. Responses ranged from zero to sixteen glasses of water or juices per day with a mean of 5.6 glasses of water or juice per day, SD of 2.6. Subjects were asked how many glasses of water or juice they drink on an average day at work. Responses to this question ranged from zero to twelve glasses of water or juice while at work, with a mean of 3.1 glasses and a SD of 2.4. Subjects were also asked how many servings of caffeinated drinks (cola, coffee, tea) they drink per day, on average. Responses ranged from zero to 12.5 servings of caffeinated drinks per day, with a mean of 2.6 servings and a SD of 1.9. There was no significant difference in response from rural respondents compared to responses from the total group.

#### Relaxation and Coping Strategies

Subjects were asked to write in activities they engaged in for relaxation purposes. The most frequent responses were: watch TV/movies; listen or play music; hobbies; spend time with family/friends; spiritual practices; exercise; read; spend time outside; clean my house; take care/spend time with animals; sleep; and have quiet time by myself.

Subjects were asked to write in strategies that help them cope when they feel stress. The most frequent responses were: walk; talk or vent with close family/friends; spiritual practices; read; breathing exercises; listen to or play music; eat; eat chocolate; spend quiet time by myself; and none. There were no appreciable differences in responses from rural respondents compared to the total group.

Alcohol and Tobacco Use

Subjects were asked four questions specifically regarding use of alcohol and tobacco. When asked if they consume alcohol on a weekly basis, eighty (42.1%) indicated “occasionally”, twenty-three (12.1%) indicated “regularly”, five (2.6%) indicated “unsure”, and eighty-two (43.2%) indicated “never”. Responses from the rural respondents were: forty-eight (40.7%) indicated “occasionally”, twelve (10.2%) indicated “regularly”, four (3.4%) indicated “unsure”, and fifty-two (44.1%) indicated “never” regarding their weekly consumption of alcohol. Subjects were asked to write in the number of alcoholic drinks they consume on a weekly basis. One hundred eighty subjects responded to this question with a range of zero to thirty alcoholic drinks per week, a mean of 1.6 alcoholic drinks per week and a SD of 3.2. Rural respondents indicated a range of zero to ten alcoholic drinks per week with a mean of 1.4 drinks and a SD of 2.14.

Subjects were asked if they smoked cigarettes. Five subjects did not respond to this question. Three (1.6%) indicated they smoked “occasionally”, four (2.1%) indicated they smoked regularly, zero subjects indicated they were “unsure”, and 182 (96.3%) indicated they “never” smoked cigarettes. Subjects were asked to write in the number of cigarettes they smoke per day. The range of cigarettes smoked per day by those who reported smoking was 2 to 15, with a mean of 9.4 cigarettes smoked per day. Four of the seven respondents who reported smoking cigarettes were among the rural respondents.

### Spiritual and/or Religious Practices

Subjects were asked two questions specifically about spiritual/religious practices. When asked if their spiritual/religious practices are important to their well-being, 146 (76.4%) indicated “yes”, 14 (7.3%) indicated “no”, 30 (15.7%) indicated “sometimes”, and one subject indicated “other”. Responses from the rural group were not significantly different from the total group. Subjects were asked to write in their religious/spiritual practices. The most frequent responses included: prayer; attend church services; read spiritual/religious materials; involvement in spiritual/religious groups; none; reflection; meditation; playing or listening to music; and time in nature.

### Health Maintenance Practices

Subjects were asked five questions specifically about their health maintenance practices. When asked if, overall, they feel that they take measures to look after themselves, 121 (63%) indicated “consistently”, 68 (35.4%) indicated “occasionally”, two (1%) indicated “unsure”, and one subject indicated “not at all”. Responses from the rural group were not significantly different. When asked if they attend regular health checkups, 102 (53.1%) indicated “consistently”, 78 (40.6%) indicated “occasionally”, 12 (6.3%) indicated “never”, and no subjects indicated “unsure” to this question. The rural group reported less use of regular health checkups: 61 (51.7%) indicated “consistently”, 45 (38.1%) indicated “occasionally”, and 11 (9.3%) indicating they “never” attend regular health checkups.

Subjects were asked to write in their own short term health goal and long term health goal. In response to the short term health goal, the most frequent responses were: maintain current health status; lose weight; increase exercise; drink enough fluids/eat a healthier diet. In response to the question asking them to write in their own long term health goal, the most frequent responses were: start/maintain an exercise program; remain as active as possible; maintain my current health and weight; adopt lifestyle changes including weight loss, more exercise, and a healthier diet; and successfully manage a chronic health condition. There was not an appreciable difference in responses between the rural nurses and the total group.

Subjects were asked to write in one change that would have a positive impact on their health. The most frequent responses to this question included: improve nutrition/diet; exercise; weight loss; less stress; improve personal relationships; work less/fewer night shifts; and none.

#### Use of Complementary and/or Alternative Therapies

Subjects were asked four questions specific to the use of complementary and/or alternative therapies. When asked if they used vitamins or herbal preparations, 108 (56.2%) indicated “consistently”, 22 (11.5%) indicated “moderately”, 42 (21.9%) indicated “occasionally”, and 20 (10.4%) indicated “not at all”. When asked to write in the vitamins and herbal preparations used, the most frequent responses included: multivitamins; B vitamins; vitamin C; calcium; vitamin D3; magnesium; fish oil/Omega 3 oils; and glucosamine.

Subjects were asked if they use alternative therapies in the care of their own health. Twenty (10.5%) indicated they used alternative therapies “consistently”, 22 (11.6%) indicated they used alternative therapies “moderately”, 69 (36.3%) indicated they used alternative therapies “occasionally”, and 79 (41.6%) indicated they used alternative therapies “not at all”. Rural subjects were more likely to report using alternative therapies, with 16 (13.6%) indicating they “consistently” use alternative therapies, 11 (9.3%) indicating “moderately”, 43 (36.4%) indicating “occasionally”, and 46 (39%) indicating they use alternative therapies “not at all”. Subjects were asked to write in the types of alternative therapies they used, the most frequent responses included: chiropractor; acupuncture; massage therapy; herbal preparations; diet/nutritional interventions; and none.

#### Additional Comments

Subjects were given the opportunity to write in any additional comments they wanted to share about the care of their health. Responses varied by individual with no appreciable difference between the rural group and the total group of subjects. Many included personal comments about their health or life situation, information they wanted to share but were not asked specifically in the course of the survey. Many comments were in regard to chronic health conditions the subjects were living with and attempting to manage.

Summary

This replication extension study sought to collect information directly from rural nurses in Montana in order to describe the self-care practices of those rural nurses. Paper surveys were mailed in July 2011 to 360 actively licensed registered nurses living in eight frontier counties, two counties in each of four geographic areas of Montana. One hundred ninety-four completed surveys were returned to the researcher yielding a response rate of 53.8%. Worksite ZIP codes demonstrated that 60.8% (n=118) of subjects who returned the survey were working in a rural community with a RUCC of 8 or 9. Subjects responded to survey questions about a variety of self-care practices, including: spiritual/religious practices, relaxation/coping strategies, alcohol and tobacco use, perceptions of overall health, health maintenance practices, use of complementary and alternative therapies, biometric measurements, sleep patterns, physical activity, and nutrition and fluid intake.

Overall, most (63%) respondents reported that they consistently took measures to look after themselves, indicating positive attempts to maintain or practice self-care. When asked to rate their health on a scale of 1 (poor health) to 10 (excellent health), the mean score reported was 7.56. As well, 92% (n=173) of the subjects identified their personal health status as “excellent” or “good”.

Subjects were invited to write in responses to a question about one change they thought would have a positive impact on their health. The most frequent responses were: improve nutrition/diet; exercise; weight loss; less stress; improve personal relationships; work less/fewer night shifts; and none. A few subjects indicated that long commutes to

work negatively impacted their efforts to maintain their health. Some responses were very telling, with the subject writing that “new lungs”, “new knees” or “finding the fountain of youth” was the one change that would positively impact their health. Seven subjects reported current tobacco use within the course of the survey, and five indicated “stop smoking” would be the one change that would have a positive impact on their health.

Only 25.8% (n=50) of the respondents reported consistently engaging in exercise and 66.8% (n=123) indicated they considered their current level of exercise to be “not enough”. One hundred twenty (62.1%) subjects reported they ate what they considered to be a balanced diet less than consistently. The mean BMI of 27.4, indicating overweight, may be a reflection of food energy imbalance among the subjects. While some subjects reported attempting to manage one or more chronic health conditions within their narrative responses, not one who listed a chronic health condition reported full satisfaction with their ability to manage their health conditions, instead, they cited health conditions as barriers to engaging in the full spectrum of self-care practices queried.

## CHAPTER 5

## DISCUSSION

Introduction

This study was a replication, extension nursing research study intended to collect data about and explore the self-care practices of rural nurses in Montana. Ethic standards require professional nurses to continue personal and professional growth, including self-care (American Nurses Association, 2001). This study used a paper survey tool to collect information directly from a sample of rural nurses practicing in Montana. Replication studies are valuable scientific inquiry and are important for promotion of evidence-based practice (Norwood, 2010, p. 106; Fahs, Morgan, & Kalman, 2003). It was established through the review of literature that little has been reported in the professional literature regarding the self-care practices of rural nurses. This study employed a univariate descriptive design, in that it examined the occurrence and frequency of a variety of self-care practices among nurses without inferring interrelationships (Polit & Beck, 2008, p. 283).

Paper survey questionnaires were distributed by mail, offering the advantages of cost, coverage, anonymity and higher accuracy in recall over other methods of data collection (Norwood, 2010, p. 280). In Montana, the names and mailing addresses of licensed nurses are available for purchase through the State Board of Nursing according to county of residence and license type, providing the sample for this survey of rural nurses.

The survey asked subjects to respond to questions about a variety of health habits and practices that are considered self-care. Health habits and practices that were queried included: sleep habits, physical activity, nutrition, fluid consumption, health checkups, relaxation activities, stress management strategies, short and long term health goals, use of vitamins and/or herbal preparations, use of complementary or alternative therapies, alcohol consumption, tobacco use, and spiritual and/or religious practices. Subjects were also asked to identify one change that would positively impact their health. Demographic information as well as nursing education completed, employment status, and years of nursing experience was also queried.

### Summary of the Study

Through educational preparation, clinical experience, and professional development, rural nurses are uniquely suited to address community needs for health care and leadership. Challenges in recruiting and retaining rural nurses highlight the need to better understand the experience of rural nursing practice. Recent nursing literature reflects interest in the value and role of self-care practices for nurses, but it is not known if there are differences in nurses' acquisition of self-care depending on location of practice. Interest in the topic is timely, as an ongoing nursing shortage continues in the United States and practicing nurses are increasingly challenged as professionals to ensure quality, equity, and accessibility of health care for their clients.

Acknowledgement of the critical role of self-care for nurses, in a health care environment that appears to be in a process of transformation, makes Watson's caring

theory particularly relevant at this time. Caring theory emphasizes “the need for self-care as crucial to caring for others” (Birk, 2006, p. 1). Watson’s model “requires nurses to attend to self-caring and practices that assist in their own evolution of consciousness for more fulfillment in their life and work” (Watson, 2008, p. 47). Caring theory, reflecting the critical importance of the therapeutic relationship and full utilization of the nursing role, is poised to provide guidance and structure during this time of transformation in health care. The fact that over half of the respondents in this survey were age 50 years or older raises the concern that there may be inadequate numbers of younger nurses to replace those retiring from rural practice. Adequate self-care is critical for maintaining health and a satisfying nursing practice. Watson (1997) exhorts nurses working within this model that “if one is to work from a caring-healing paradigm, one must live it in daily life....this living authentically requires a commitment to self care at that deep level of personal practice and discipline” (p. 51). Application of Watson’s caring theory in rural nursing practice would draw attention and resources to the importance of nurses’ self-care from within nursing itself and the healthcare system as a whole, which may attract new nurses to rural practice and prevent burnout in nurses currently in practice.

The literature review discussed previously in this paper revealed no current nursing research specifically studying or examining the self-care practices of rural nurses. This study assumed self-care practices by nurses to be integral to effective nursing practice and sought to identify and explore the self-care practices of nurses in rural areas of Montana. Knowledge and understanding of the self-care practices of rural nurses may

be useful in determining the most effective strategies for recruiting and retaining highly effective nurses in rural areas of Montana.

The proposal for this study was accepted by the researcher's thesis committee and received institutional review board (IRB) approval from Montana State University-Bozeman. Once IRB approval was secured, a total of 360 surveys were distributed to actively-licensed rural nurses living in eight rural counties in Montana at the end of July 2011. One hundred ninety-four completed surveys were returned to the researcher yielding a response rate of 53.8%. Worksite ZIP codes provided by the subjects demonstrated that 60.8% (n=118) of the subjects were working in a rural community with a RUCC of 8 or 9 at the time of the survey. Survey data was entered by the researcher to a spreadsheet file and analyzed for descriptive statistics using Microsoft Excel®.

### Discussion of Findings

This study provided rich data for the exploration of the self-care practices of rural nurses in Montana. Subjects reported engaging in a variety of self-care practices, as did the undergraduate nursing students who participated in the study by Chow & Kalischuk (2008) which this study replicated. Findings from the study by Chow & Kalischuk (2008) are compared to findings from this study in Table 5- Comparison of Findings by Chow & Kalischuk (2008) and Current study.

Chow & Kalischuk (2008) reported that their subjects cited busy schedules as a barrier to engaging in self-care activities. Subjects in the current study cited busy schedules, in addition to working night shifts, long commutes to work, and limitations

posed by chronic health conditions as barriers to pursuing desired self-care activities. Short- and long-term health goals reported by Chow & Kalischuk (2008) included: greater physical fitness, exercise, and weight loss. The most frequently listed short-term health goals identified in the current study included: maintain current health status; lose weight; increase exercise; and drink enough fluids/eat a healthier diet. The most frequently listed long-term health goals identified in the current study included: start/maintain an exercise program; remain as active as possible; maintain my current health and weight; adopt lifestyle changes including weight loss, more exercise, and a healthier diet; and optimally manage a chronic health condition.

### Implications for Practice

A number of possible implications for practice have been identified through the course of this study. A significant percentage of this study's respondents were older than 50 years and living with chronic health conditions. Social support, possibly in the form of online support groups, has been identified as integral in the effective management of chronic health problems by rural women (Sullivan, Weinert, & Cudney, 2003). It may be helpful to identify the chronic health conditions most prevalent among rural nurses, with the goal of preventing those health problems if possible, designing workplace interventions that may improve the conditions that contribute to the development of these health issues, or at the very least ameliorate the symptoms associated with health

Table 5-Comparison of Findings by Chow &amp; Kalischuk (2008) and Current study

Subjects' response	Chow & Kalischuk (2008)	Current Total Respondents	Current Rural Respondents
Percent of subjects over age 30 years	16%	90.3%	95%
Mean number of hours of sleep per day	6.7 hours	6.99 hours	6.95 hours
“Consistently” get enough sleep	25%	53.4%	53.4%
Percent of subjects that “consistently” exercise	27%	25.8%	28.8%
Percent that consider their amount of exercise to be “enough”	35%	29.9%	33.1%
Percent reporting “never” smoking cigarettes	85%	96.3%	94.9%
Percent reporting some use of complementary or alternative therapies	76%	58.4%	59.3%
Reporting “satisfied” with current weight	48%	31.3%	27.1%
Reporting current weight is “overweight”	40%	67.8%	71%
Reporting “excellent” or “good” health status	86%	92%	91.5%

problems common among rural nurses. It may be possible to make changes in a nurse's work functions, possibly allowing a nurse to successfully manage chronic health issues while working rather than being forced to leave nursing.

Many of the subjects in this study reported talking/venting with close friends, family members, and coworkers as a coping strategy they used during times of stress, which supports findings reported earlier by Roberge (2009) suggesting social and professional networks promote the retention of rural nurses (p. 88). Conger & Plager (2008) also reported that for rural nurses, having supportive interpersonal relationships increases the opportunity for a positive experience with rural nursing practice.

Additionally, some subjects in this study reported that long commutes to work were a barrier to health promotion for them. Roberge (2009) stated that if "if a rural community does not have the population base to support a full-time nurse, salaries need to increase and/or other part-time employment needs to be arranged" (p. 85).

While this survey tool did not ask about specific elements of a nutritionally balanced diet, responses indicated that only 37.8% (n=73) of the subjects consistently ate what they considered to be a balanced diet. Practice implications suggested by this finding indicate that rural nurses' workplaces should place high priority on making healthy food the most easily accessible snack or meal available to their employees while at work (Centers for Disease Control and Prevention, 2009). Highly processed and vending machine foods should be replaced with fresh fruits and vegetables, whole grain foods, lean protein foods, and other nutrient-dense foods. Subjects in this study reported drinking a mean of 3.1 glasses of water or juice per average work day. General health

guidelines recommend six to eight 8-ounce glasses of water per day (MedlinePlus, 2012). To promote adequate hydration during the work day, free access to clean, fresh drinking water should be assured at all times rural nurses are at work, along with ad lib access to restrooms.

Most of the subjects in this study (66.8%) indicated the amount of exercise they obtained was “not enough”. Among the rural respondents, 58.5% indicated they considered their usual amount of exercise to be “not enough”. Andrews & Wan (2009) suggested that the culture, policies, and structure of nurses’ workplaces be revised to support efforts toward retention of nursing staff. Workplace culture, policy, and structure could also be remodeled to support nurses in their efforts toward self-care. As well, rural nurses serve as leaders and role models for health behaviors in their communities (Stanton, 2009, p. 2; Jackman, Myrick, & Yonge, 2010, p. 66). A practice implication to arise from this study is for rural healthcare facilities to provide space, equipment, and financial support toward efforts to increase opportunities for physical activity/exercise by rural nurses. Employers should provide incentives and opportunities for rural nurses to engage in health-promoting physical activity on a regular basis. Healthcare agencies could provide space and equipment for staff to exercise before or after shift, or during breaks. Employers could sponsor instructors or activity leaders (i.e., yoga instructor, fitness coach, etc.) to provide easy-to-access instructional sessions to rural nurses during nonworking hours.

### Recommendations for Further Research

The findings of this study are not generalizable to licensed practical nurses, advanced practice nurses or registered nurses practicing in other areas, therefore replication of this study of nurses' self-care practices is recommended with other populations. For further research using this survey tool to be most effective, the following changes are recommended:

- formal validation of the survey tool for content validity should be completed for future use of the tool, including expansion beyond descriptive statistics and analysis of differences among respondents;
- subjects should be asked to write in their age in years, rather than marking an age range;
- subjects should be asked to write in their number of years of nursing experience, rather than marking a range of years;
- the option of "widowed" should be included as a marital status;
- the option of "retired" should be included as an employment status;
- queries about tobacco use should include spit or chewing tobacco as well as tobacco cigarettes;
- direct query about consumption of specific dietary elements should be included (i.e., servings of fruits/vegetables per day, servings of whole grain products per day, servings of lean protein sources per day, servings of candy/sweets per day, servings of fried/greasy foods per day, servings of highly processed foods per day, etc.), in addition to questions about the subjects' perceptions about the balance in their diets.

This study intended to address and explore the question: what are the self-care practices of rural nurses in Montana? While this study did not focus on demographics of rural nurses, questions were asked about age, nursing education, years of experience in nursing, and marital status. Subjects' responses indicated that 60.8 % (n=118) of the sample were age 51 years or older. More than half, or 53.9% (n=102) of the sample held a baccalaureate degree or higher as their completed nursing education. Likely reflecting the age of the respondents, 53.4% (n=101) reported 21 or more years of nursing experience. Again, reflecting the age of the subjects, 79.8% (n=150) indicated they were currently married. Some respondents wrote in "widowed" for their marital status as the survey tool did not include this option. Additionally, 15% (n=28) of the subjects indicated they were not employed at the time they completed the survey. Some of those subjects may have indicated "retired", providing a more accurate impression of their employment status, if that had been an option on the survey tool.

### Conclusions

This extension replication study collected information about and explored the self-care practices of rural nurses in Montana. As called for by Bushy (2008), this work adds to the knowledge base of what is known about rural culture, specifically rural nursing culture. Rural nurses responded positively to this author's interest in learning more about their self-care practices and shared their experiences related to promoting and managing their health while practicing as rural nurses in Montana. The rural nurses who participated in this study reported engaging in a variety of self-care activities and

reported some of the barriers to self-care that they have encountered. Employers of rural nurses and the health care system in general could positively impact rural nurses' efforts for self-care by providing opportunities and support, including incentives, for health promotion and by using opportunities to make the healthy choice, the easy and most accessible choice for their employees. As noted by Sherwood (2005), nurses' self-care is not a luxury to be afforded when resources are plentiful, but is instead essential to assuring nurses' personal and professional development and high quality of care for patients.

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APPENDICES

APPENDIX A

PERMISSION TO USE SELF-CARE SURVEY TOOL



**FACULTY OF NURSING**

**Dr. Jean Chow**

**Assistant Professor**

Telephone: (403) 220-4630

Fax: (403) 284-4803

Email: j.chow@ucalgary.ca

Jeanne R. Conner, BSN, RN  
Montana State University-Bozeman  
PO Box 964  
Big Timber, MT 5901

Dear Jeanne,

Thank you for your interest in RN self care. I acknowledge that you would like to use the self care survey on-line for your MN research project about self-care practices of rural nurses in Montana. I appreciate that you will share how you will alter the tool to match your research population. Please keep me up to date with the changes that you will be making to the survey. I look forward to discussing your findings with you.

All the best with your studies and your research project.

Yours respectfully,

Jean

Jean Chow

Ruth Grant-Kalischuk

APPENDIX B

SELF-CARE QUESTIONNAIRE

Participation is voluntary, and you can choose to not answer any question that you do not want to answer, and you can stop at anytime.

1. Overall, I feel that I take measures to look after myself
  - a. Consistently
  - b. Occasionally
  - c. Unsure
  - d. Not at all
  
2. Usually, I get enough sleep
  - a. Consistently
  - b. Occasionally
  - c. Unsure
  - d. Not at all
  
3. On the average, I sleep \_\_\_\_\_ hours per night/day.
  
4. I consider the amount of sleep I entered in Question 3
  - a. adequate
  - b. inadequate
  
5. On the average, I exercise
  - a. Consistently
  - b. Moderately
  - c. Occasionally
  - d. Not at all
  
6. On the average, I exercise \_\_\_\_\_ times per week for \_\_\_\_\_ minutes.  
I consider this amount of exercise to be
  - a. Enough
  - b. Not enough
  - c. Unsure
  
7. The types of exercise that I do are: (please list)
  
  
8. I eat what I consider to be a balanced diet
  - a. Consistently
  - b. Moderately
  - c. Occasionally
  - d. Not at all
  
9. On the average I drink \_\_\_\_\_ glasses of water or juices per day.

10. When I am at work, I drink \_\_\_\_\_ glasses of water or juice per day.
11. On the average, I drink \_\_\_\_\_ servings of drinks with caffeine (colas, coffee, tea) per day.
12. My height is \_\_\_\_\_ (feet and inches).
13. My weight is \_\_\_\_\_ lbs.
14. In terms of my weight, I am
  - a. Satisfied with my weight
  - b. Underweight
  - c. Overweight
  - d. Unsure
15. I attend regular health check ups
  - a. Consistently
  - b. Occasionally
  - c. Never
  - d. Unsure
16. For relaxation, I do the following activities.
17. My short term health goal is:
18. My long term health goal is:
19. I use vitamins or herbal preparations
  - a. Consistently
  - b. Moderately
  - c. Occasionally
  - d. Not at all
20. Please list the vitamins and herbal preparations used.
21. I use alternative therapies in the care of my health.
  - a. Consistently
  - b. Moderately
  - c. Occasionally
  - d. Not at all
22. Please list the types of alternative therapies used.



35. Age: < 20 years \_\_\_\_\_  
 21-30 years \_\_\_\_\_  
 31-40 years \_\_\_\_\_  
 41-50 years \_\_\_\_\_  
 51-60 years \_\_\_\_\_  
 61-70 years \_\_\_\_\_  
 > 70 years \_\_\_\_\_
36. Nursing education completed: Diploma \_\_\_\_\_  
 Associate degree \_\_\_\_\_  
 Bachelor's degree \_\_\_\_\_  
 Master's degree \_\_\_\_\_  
 Doctoral degree \_\_\_\_\_
37. Years of experience in nursing: 0-3 years \_\_\_\_\_  
 4-6 years \_\_\_\_\_  
 7-10 years \_\_\_\_\_  
 11-15 years \_\_\_\_\_  
 16-20 years \_\_\_\_\_  
 21+ years \_\_\_\_\_
38. Health Status: Excellent \_\_\_\_\_  
 Good \_\_\_\_\_  
 Fair \_\_\_\_\_  
 Poor \_\_\_\_\_
39. Marital Status: Single \_\_\_\_\_  
 Married \_\_\_\_\_  
 Separated \_\_\_\_\_  
 Divorced \_\_\_\_\_  
 Common Law \_\_\_\_\_
40. Employment Status: Working full-time \_\_\_\_\_  
 Working part-time \_\_\_\_\_  
 Casual/Relief/Per diem basis \_\_\_\_\_  
 Not employed \_\_\_\_\_
41. Please enter the ZIP code for the location of your primary worksite: \_\_\_\_\_  
 This is the end of the survey. Thank you for participating.  
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APPENDIX C

SUBJECT INFORMATION FORM FOR PARTICIPATION IN HUMAN RESEARCH

AT MONTANA STATE UNIVERSITY

Month 25, 2011

Study Title: What are the Self Care Practices of Rural Nurses in Montana?

Dear Fellow Montana Registered Nurse:

I am writing to invite you to participate in a research study exploring the self-care practices of actively licensed registered nurses (RNs) in rural Montana. I am conducting the study as part of my pursuit of a Master of Nursing degree at Montana State University-Bozeman. Little is known about how nurses in rural Montana practice self-care and health promotion, and the results from this study may help us understand this better. You have been randomly identified through the State Board of Nursing as a registered nurse living in a rural county of Montana. Participation is voluntary. You may choose to not answer any question that you do not want to answer and you may withdraw at anytime.

The enclosed questionnaire requests information about the self-care and health promotion practices in which you engage. The questionnaire should only take you about 15 minutes to complete. Please return the completed questionnaire in the self-addressed stamped envelope provided in this mailing.

There are no foreseen risks to you for participating in the study. The list of participants is known only to me, and each survey is identified only by numerical code. The code sheet is available only to me. The code sheet will kept in a locked file cabinet when not in use and destroyed at the completion of the study. The results obtained from this study may be published in scholarly journals or presented at scholarly conferences and meetings. However, all data will be reported in aggregate and your specific responses to the survey questions will remain anonymous.

This project has no external funding and there are no costs to you to participate, other than your time. There are no direct benefits to you for participating in this study. However, information gleaned from this study may provide insight into how self-care of rural nurses might be enhanced.

Your participation in this study is completely voluntary. You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the investigators or Montana State University. Your decision will not result in any loss of benefits to which you are otherwise entitled.

This study has been reviewed and approved by the Montana State University-Bozeman Institutional Review Board. If at any time you have any questions about the study, you may contact me by telephone at 406-932-5134 or by email [jeanne.conner@msu.montana.edu]. You may also contact my advisor, Dr. Susan Luparell in the College of Nursing at 406-771-4459. If you have questions about your rights as a participant in this study, you may contact the Institutional Review Board by telephone at 406-994-6783.

By taking a few minutes to complete this questionnaire, you will be helping me a great deal in learning about the self-care and health promotion practices of Montana's RNs. I hope you enjoy completing the survey and look forward to receiving your responses.

Respectfully,

Jeanne R. Conner, RN, Graduate Student, Montana State University-Bozeman

APPENDIX D

FOLLOW-UP POSTCARD

Month 1, 2011

Last week a questionnaire was mailed to you as part of a graduate student research study requesting information about your self-care practices.

If you have already completed and returned the questionnaire, please accept my sincere thanks. If not, please complete the questionnaire right away and return it in the self-addressed stamped envelope included for that purpose. I am especially grateful for your help with my nursing research.

If you did not receive a questionnaire, or it was misplaced, send me an email at [jeanne.conner@msu.montana.edu](mailto:jeanne.conner@msu.montana.edu) with your name and address and I will send you a replacement.

Sincerely,

Jeanne R. Conner, RN

Graduate Student, Montana State University-Bozeman

APPENDIX E

INSTITUTIONAL REVIEW BOARD APPROVAL



**INSTITUTIONAL REVIEW BOARD**  
**For the Protection of Human Subjects**  
**FWA 00000165**

960 Technology Blvd. Room 127  
 Immunology & Infectious Diseases  
 Montana State University  
 Bozeman, MT 59718  
 Telephone: 406-994-6783  
 FAX: 406-994-4303  
 E-mail: cherylj@montana.edu

*Chair:* Mark Quinn  
 406-994-4707  
 mquinn@montana.edu  
*Administrator:*  
 Cheryl Johnson  
 406-994-4706 or 6783  
 cherylj@montana.edu

**MEMORANDUM**

**TO:** Jeanne Conner

**FROM:** Mark Quinn, Ph.D. Chair *Mark Quinn*  
 Institutional Review Board for the Protection of Human Subjects

**DATE:** July 26, 2011

**SUBJECT:** *What are the Self-Care Practices of Rural Nurses in Montana?* [JC072611-EX]

The above research, described in your submission of July 21, 2011, is exempt from the requirement of review by the Institutional Review Board in accordance with the Code of Federal Regulations, Part 46, section 101. The specific paragraph which applies to your research is:

- (b)(1) Research conducted in established or commonly accepted educational settings, involving normal educational practices such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.
- (b)(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.
- (b)(3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of this section, if: (i) the human subjects are elected or appointed public officials or candidates for public office; or (ii) federal statute(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.
- (b)(4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available, or if the information is recorded by the investigator in such a manner that the subjects cannot be identified, directly or through identifiers linked to the subjects.
- (b)(5) Research and demonstration projects, which are conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.
- (b)(6) Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed, or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the FDA, or approved by the EPA, or the Food Safety and Inspection Service of the USDA.

Although review by the Institutional Review Board is not required for the above research, the Committee will be glad to review it. If you wish a review and committee approval, please submit 3 copies of the usual application form and it will be processed by expedited review.