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The Effectiveness of Yoga in Preventing and Managing Back Pain

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THE EFFECTIVENESS OF YOGA IN PREVENTING AND MANAGING BACK
PAIN

SONJA M. BROCKMAN

Submitted in partial fulfillment of
the requirement for the degree of
Doctor of Nursing Practice

AUGSBURG UNIVERSITY
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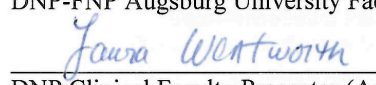
**Augsburg University
Department of Nursing
Doctor of Nursing Practice Program
Scholarly Project Approval Form**

This is to certify that **Sonja Marie Brockman** has successfully presented her scholarly doctoral project entitled: **“The Effectiveness of Yoga in Preventing and Managing Back Pain”** and fulfilled the requirements of the Doctor of Nursing Practice degree.

Date of presentation: March 21, 2018

Scholarly Project Committee Members:

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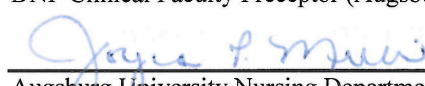
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Presentations

The Effectiveness of Yoga in Preventing and Managing Back Pain: A Self-Care Program
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Abstract

In this Doctorate of Nursing Practice-Family Nurse Practitioner (DNP-FNP) scholarly project, a yoga program was developed and implemented to educate how the practice of yoga can be utilized to manage or prevent back pain in nurses. Back pain in nurses is a common condition that can cause nurses to become unable to work and ultimately affect the nursing work unit. The practice of yoga has gained popularity in Western culture for improving health and back pain. A review of the recent research literature from 2000-2015 that investigated back pain in nurses, back pain management, treatment, and yoga, is provided to determine if yoga could be utilized as an effective modality for back pain management. Jean Watson's Human Caring Science theory of nursing was the theoretical framework used to help guide the exploration of this topic. Seven of the eight DNP Essentials set forth by the AACN were directly fulfilled through this project and are explained. The implications and importance this project has for the clinical work of an Integrative Family Nurse Practitioner are provided.

Keywords: back pain, nurses, yoga, back pain management, back pain treatment, self-care

The Effectiveness of Yoga in Preventing and Managing Back Pain

Chapter One: Introduction

This DNP-FNP scholarly project involves taking a health concern prevalent in a population, developing a program to address the concern, and implementing it in a clinical setting as an educational resource. The health concern is back pain and nurses. A yoga program is to be developed to educate nurses on how the practice of yoga can be utilized to prevent and manage back pain. If nurses become healthier through self-care initiatives like yoga programs to address common problems that affect them and their work unit like back pain, the impact could be significant. Mētis knowledge is gained through lived experience. This author's mētis knowledge indicates that self-care activities can increase productivity, improve morale, and create more beneficial nurse-patient caring and healing relationships. These are some of the potential benefits of self-care that could make a significant difference in nursing practice.

Problem Statement

Back pain in nurses is a common condition that can cause nurses to become unable to work and ultimately affect the nursing work unit. According to the American Nurses Association (ANA) (2015) back pain is costly and affects over fifty percent of nurses. The ANA (2015) identifies nurses as having the highest number of workers compensation claims related to back conditions compared to other occupations. Back pain is uncomfortable and debilitating whether it is acute, chronic, or recurrent in nature. Nurses tend to be an at-risk population for suffering from back pain due to the complexities of the profession. Most nursing jobs are physically demanding on nurses by requiring them to be upright on their feet most of the shift. In addition, lifting and

repositioning patients and medical equipment repeatedly during a single shift when providing patient care can be demanding.

The practice of yoga has gained popularity in Western culture for improving health and back pain. Yoga is a compilation of physical postures, meditation, and breathing techniques that have been shown to have various health benefits in individuals who partake in the activity (Cowen & Adams, 2004). According to Cowen and Adams (2004) a pilot study, including 26 adults who practiced yoga over a six-week timeframe saw improvements in diastolic blood pressure, upper body and abdominal muscle strength, increased endurance, flexibility, and perceived stress to create feelings of improved overall health. These outcomes suggest that yoga may be able to be used as a modality to help strengthen muscles and improve flexibility, both important aspects of treating back pain in nurses. Strengthening core and back muscles could result in decreased pain and increased productivity in nurses. Yoga is a non-invasive therapy that can be practiced in many settings. Yoga is unique in that it does not require any special equipment or a licensed practitioner. The effectiveness of yoga will be described as one approach to managing and preventing back pain.

Purpose

The purpose of this scholarly project is to provide education and implement an experiential program to determine if yoga practice can help manage or prevent back pain in nurses. All nurses are eligible to participate. The nurses included may have chronic or recurrent back pain (persistent or ongoing pain for three months or more), or they may be pain-free. There is a lack of evidence in the research literature reviewed supporting the effectiveness of standard medical care for nurses with back pain. Through clinical

observation and mētis knowledge, the standard medical care typically consists of rest and “light duty” which is lifting no more than ten pounds while at work.

Objectives

The objectives of this project are to 1) provide education about the benefits of yoga to nurses in an effort to help manage or prevent back pain in nurses 2) obtain feedback through a questionnaire as to whether the information is useful for their self-care purposes in managing or preventing back pain.

Clinical Question

The clinical question is: In nurses who have chronic or recurrent back pain or are at risk for back pain due to occupational duties, is a routine yoga practice (performed every other day) effective at managing or preventing back pain?

Patient Population and Implementation Setting

The project will be implemented at a Rochester, Minnesota integrative community health clinic that specializes in alternative healing modalities. Nurses from area hospitals and clinics will be eligible to participate and will be recruited through word of mouth networking. The project will occur over the course of a six-week time span. Participants will be asked to attend two meetings: one at the beginning and one at the end of the project. At the initial meeting, the participants will be asked to fill out a questionnaire (Appendix A) reflecting on what their beliefs are in regards to yoga and back care. Participants will then have the yoga routine that is to be performed during the duration of the project demonstrated during the initial meeting by an experienced yoga practitioner. Participants will also receive a pamphlet (Appendix B) detailing the routine to serve as their guide for at home use. The routine will focus on yoga postures that

strengthen and improve flexibility in back and abdominal muscles. Participants will be instructed to complete a 20-30 minute routine every other day for the six weeks. At the end of the six weeks, during the final meeting, participants will be asked to complete an evaluation questionnaire (Appendix A). This questionnaire will help the participants evaluate the program, plans for continuing the self-care practice in the future, and any suggestions for future program improvements. All data collected will be de-identified. The aggregate data will help explain the projects usefulness.

This project can potentially be expanded to other populations at risk for back pain. Many occupations have physical components that can cause or potentiate back pain. Physical therapists, construction workers, military personnel, and furniture movers are a few occupations that come to mind through mētis-based knowledge. Back health is important for anyone in society because it spans and connects to virtually every part of the physical body.

This type of program development and implementation may be beneficial for the studies in transcultural, holistic, and integrative primary care as well as for the clinical work of integrative family nurse practitioners. The research literature in these three areas related to yoga and back pain will be reviewed in the literature review chapter of this scholarly paper. Through reviewing and combining evidence-based and mētis-based practices, new solutions to creating improved patient outcomes are illuminated. Evidence-based practice is knowledge proven through research studies while mētis-based practice is knowledge gained through direct experiences and observations. This enhances the role of the nurse practitioner by expanding the knowledge base by which health care decisions are formulated. Increased solutions for patient concerns are created to

accommodate individual desires regarding personal health care. Furthermore, this scholarly project compliments the eight DNP Essentials set forth by the American Association of Colleges of Nursing (AACN) in 2006 (Appendix C). How this project fulfills the eight requirements will be expanded upon and individually addressed as this paper about this scholarly project unfolds.

Chapter Two: Literature Review

Through exploring the existing research literature from 2000-2015 about back pain in nurses, back pain management, treatment, and yoga, it will assist in determining if yoga can be utilized as an effective modality for back pain prevention and management. The following sections will highlight what was identified from a recent comprehensive research literature review performed on the topic of interest. Findings and limitations of existing research studies will be discussed as well as the implications this has for advanced practice nursing.

Back Pain in Nurses

There is a lack of recent research knowledge within the past five years on back pain in nurses. Due to the scarcity of recent research articles, two older research studies from 2003 and 2006, and one more recent research study from 2010 will be discussed in this section for comparison purposes.

Prevalence

The prevalence of back pain in nurses varies among research articles. A 2006 quantitative study with a sample size of 1226 nurses was completed in Iran. The purpose of the study was to identify the prevalence and risk factors for low back pain in nursing personnel and to analyze how individual and occupational characteristics contribute to the risk of developing low back pain (Mohseni-Bandei et al., 2006). The findings of this study were that the overall prevalence in nursing personnel for developing low back pain was 62% (Mohseni-Bandei et al., 2006).

A different study completed in 2003 with the purpose to describe the course of low back pain in nurses found an annual prevalence rate of 73-76% (Maul, Laubli,

Klipstein, & Krueger, 2003). This eight-year quantitative longitudinal study had three different cohorts in which data was collected. The sample size of nurses from which data was obtained ranged from 269-729 depending on the cohort (Maul et al., 2003).

June and Cho (2010) completed a quantitative study in Korea with a sample size of 1345 nurses working in intensive care units (ICUs). The purpose of the study was to examine the relationship between back pain prevalence and treatment to personal and work-related characteristics within the intensive care unit nursing population (June & Cho, 2010). They found an overall prevalence of 90.3% of nurses who had back pain once a month or more (June & Cho, 2010). The variance found in the reported prevalence of back pain in nurses among these studies is likely due to multiple factors.

Chronological Age and Job Experience

Various things can contribute to the development of back pain in nurses which the three studies mentioned previously in this section discuss at varying degrees. One of those potentially contributing factors is the chronological age and years of on the job experience. June and Cho (2010) had subjects that were relatively young with a mean age of 27.2 years and a small standard deviation of 4.3 years. Because participants were of similar age, they could not examine the effects of age on back pain in nurses. June and Cho (2010) identified there was a non-linear relationship between the number of years working in ICUs and back pain. Higher rates of back pain were found in nurses with 2-4 years of working experience in ICUs than those nurses with five or more years of ICU experience (June & Cho, 2010). Maul et al. (2003) found no association between age and back pain in nurses. In contrast, Mohseni-Bandei et al. (2006) revealed a significant correlation between age and back pain in nurses. The longer nurse's work on units that

require frequent lifting, the greater their risk is of suffering from back pain (Mohseni-Bandei et al., 2006).

Work Setting

The work setting is another factor that can contribute to back pain in nurses. Maul et al. (2003) included nurses working at a large university hospital. Similarly, Mohseni-Bandei et al. (2006) included nurses from thirteen general hospitals affiliated with a university. Mohseni-Bandei et al. (2006) found a strong correlation between low job satisfaction and back pain in nurses. June and Cho (2010) found that nurses working in ICUs had a significant amount of back pain. Nurses working in adult ICUs had more back pain than their counterparts working in pediatric or neonatal ICUs (June & Cho, 2010). June and Cho (2010) also noted that nurses who worked six or more night shifts in a month period and perceived staffing as inadequate had a greater likelihood of suffering from back pain.

Back Pain Management and Treatment

Back pain is subjective in nature, making it difficult to manage and treat in a regimented way. What works for one person may not work for another. However, there were some common themes on how to manage and treat back pain that were revealed in existing research literature.

Muscle Strengthening

Strengthening core muscles to decrease back pain through stretches and low impact exercise was a common theme in the existing research studies. The purpose of a 2010 qualitative study by Crowe, Whitehead, Gagan, Baxter, and Panckhurst was to identify self-management strategies of people with chronic low back pain and how their

healthcare providers perceived their role in facilitating self-management. The results of the study were that low impact exercise like walking, Pilates, and performing exercises taught by physiotherapists was a favorable strategy utilized by participants (Crowe et al., 2010). Crowe et al. (2010) had a sample size of 64 subjects with chronic low back pain and 22 healthcare professionals with data being collected through semi-structured interviews.

In 2014, a quantitative study by Chen, Wang, Chen, and Hu included a sample size of 127 nurses in Taiwan with low back pain for greater than six months. The purpose of the study was to examine the effectiveness of a stretching exercise program on low back pain and self-efficacy (Chen et al., 2014). The results of the study were that the 64 subjects who were randomly assigned to the experimental group and participated in the stretching exercise program reported a significant reduction of back pain (Chen et al., 2014). Data was collected at three different time periods during the study: 2 months, 4 months, and 6 months (Chen et al., 2014). Data collected was compared to the control group who participated in their usual activities without the stretching program (Chen et al., 2014).

In a 2012 quantitative study by Kumar, Putti, and Bindhu the purpose of the study was to examine the efficacy of core stabilization exercises compared to conventional back care exercises in subjects with back pain. The sample size included 40 subjects, and half were randomly assigned to the control group, which were instructed to perform conventional back care exercises (Kumar et al., 2012). Kumar et al. (2012) found conventional back care exercises and core stabilization exercises were both effective in the management of back pain. The results of the study also found that the participants

who were in the core stabilization exercise group had greater benefits, which included improved back function and greater pain relief (Kumar et al., 2012).

Heat Application and Medication

Heat application and medication use was another theme identified in existing research studies for the management and treatment of back pain. Pharmacological interventions alone including analgesics and muscle relaxants have limited effectiveness and leave patients dissatisfied (Chen et al., 2014). Crowe et al. (2010) identified anti-inflammatory and analgesic medication use as a common strategy for managing back pain. Direct application of heat through methods like taking showers, soaking in baths, or electric blankets were identified by participants as a common strategy for treating their back pain (Crowe et al., 2010).

Limitations of Research on Back Pain

There are limitations of the existing research studies about back pain in nurses. As previously mentioned, research studies about back pain in nurses within the past five years was difficult to uncover in the recent research literature review. More recent research is needed on this topic. Gender representation in these studies is misleading. There are more female than male participants. If the nursing profession as a whole consists of more females than males, the studies should clearly identify this. There are varying definitions of “prevalence” and “back pain” among the studies. To ease the comparison of results to determine best practices, it would be helpful if the studies had standardized definitions for such terms. These studies were of nurses in other countries. Everything from health care systems, working conditions, and patient populations can vary in different countries. All of these factors make it difficult to generalize their results

to greater nurse populations in different settings and cultures. There is a gap in knowledge in regards to back pain in nurses in the United States, which warrants greater exploration in future research studies to better serve the nursing profession and, therefore, patients.

The existing research studies about the management and treatment of back pain have limitations. The studies uncovered during the extensive research literature review mentioned in this section all had small sample sizes ranging from 40-127 subjects. Another limitation is the studies were researching chronic low back pain. Acute or recurrent back pain was not included in these studies. Definitions of “chronic” and “low back pain” varied from one research article to the next. To ease the comparison of research results to determine best practices, it would be helpful if the studies had standardized definitions for terms such as “chronic” and “low back pain”. These limitations make it difficult to analyze whether their research study results are representative of the population as a whole or if one would get the same results in other populations.

Yoga as a Healing Modality

Yoga is a multi-dimensional exercise practice, which makes it difficult to study its potential effects on a particular problem. Yoga is defined for the purpose of this scholarly project as a compilation of physical postures, meditation, and breathing techniques (Cowen & Adams, 2004). There are also different styles of yoga. Some styles are more physically rigorous in nature while others are more calming to the mind.

Back Function Improvement

In the existing research literature an improvement in back function was a common theme seen in subjects with back pain who participated in yoga. Tilbrook et al. conducted a quantitative study with a sample size of 313 adults in 2011. The purpose of the study was to compare the effectiveness of yoga and usual care for the treatment of chronic or recurrent low back pain (Tilbrook et al., 2011). The results of the study were that there was an improvement in back function at all three points of data collection over the course of one year in the yoga group when compared to the usual care group who did not participate in yoga (Tilbrook et al., 2011). Data was collected at 3, 6, and 12 months (Tilbrook et al., 2011). The results were based on the 24-question Roland-Morris Disability Questionnaire (RMDQ) participants completed (Tilbrook et al., 2011). Another study found similar results and used the same scale.

A 12-week quantitative study by Sherman et al. in 2011 included a sample size of 228 adults with chronic low back pain. The purpose of the study was to determine whether yoga was more effective at treating back pain than conventional stretching exercises or a self-care book (Sherman et al., 2011). Participants were randomly assigned to one of three groups. The three groups included weekly classes of yoga or conventional stretching exercises, and the third group received a self-care book for at home use (Sherman et al., 2011). Sherman et al. (2011) found back function improved in all three groups based on the RMDQ scores. The participants in the yoga group had greater improvements in functional status compared to the other groups (Sherman et al., 2011).

Yoga and Pain Management

Another common theme identified in existing research studies involving people with back pain participating in yoga is its effects on pain symptoms. In 2012 Groessl, Weingart, Johnson, and Baxi conducted a 10-week quantitative study with a sample size of 53 veterans. The purpose of the study was to assess the impact of yoga intervention on women and men with chronic low back pain (Groessl et al., 2012). The results of the study found an overall decrease in perceived levels of pain when measured on a numeric scale at the beginning and end of the study (Groessl et al., 2012).

The study by Sherman et al. in 2011 that was detailed in the previous section had similar results. Sherman et al. (2011) implemented interventions for 12 weeks and continued to collect data on subjects for 26 weeks. They found an improvement in perceived bothersome symptoms in all groups during the 12 week intervention period but only continued improvement between 12 and 26 weeks in the yoga group (Sherman et al., 2011).

Improved Mental Focus to Increase One's Awareness

Yoga is a physical exercise often coupled with intentional breathing cues or guided meditation. Mental focus as a tool to increase one's awareness of things that may cause a back pain flare up is another theme identified in existing research studies. Sherman et al. (2011) identified in the yoga participant group that mental focus induced by yoga increased one's awareness of maladaptive body position patterns and ability to identify tense muscles to cultivate more immediate relaxation. Groessl et al. (2012) found significant improvements in energy levels, depression, and pain in female participants who participated in yoga in class and at home that asked them to focus their

attention on body alignment and envision positive images, emotions, and thoughts while doing so.

Limitations of Research on Yoga

The limitations of existing research studies examining yoga as a healing modality for back pain are similar to the limitations seen in the existing research on the other aspects examined within this topic. Relatively small sample sizes and the inclusion of more women than men was found in two out of the three research studies mentioned in this section. There were also follow-up issues with these studies perhaps because participants experience less immediate benefits from interventions implemented. There was a tendency for missing data from questionnaires not being returned by the participants. These limitations make it difficult to extrapolate the studies' findings to different, larger populations.

There are many implications for nurse practitioners that come out of this thorough examination of existing research literature in regards to back pain in nurses, back pain management and treatment, and yoga. Nurse practitioners are in a unique position to care for people during times of extreme joy as well as sorrow across the lifespan. To be fully present and helpful in the nurse-patient relationship, nurses must first take good care of themselves. Anybody can be a patient, and it is important to remember nurses are not excluded from this. If a nurse is not feeling well or is in pain, it will likely negatively impact the nurse-patient interaction within the caring relationship. There is not one prescriptive cure for back pain management and treatment. Both complementary and conventional therapeutic interventions should be explored on an individual basis to identify what regimen works best for the specific patient at hand. Yoga as an alternative

or complementary component in the management and treatment of back pain may be a suitable option that also warrants further exploration in future research studies. Through examining the results within the existing research related to this topic, it appears as if yoga could be utilized as an effective modality for back pain management or prevention.

Mētis-Based Findings

As a professional nurse with over ten years of experience, the author has witnessed many colleagues affected by back pain. It not only affects the back pain sufferer, but it also affects the people working around and with them, including colleagues and patients. It seems to be a common condition and one that cannot be kept private because it affects one's ability to perform job duties.

There are common themes identified within these colleagues affected by back pain. Nurses with back pain often get evaluated by a medical provider for treatment options due to the physical requirements of the nursing occupation. It is difficult to perform common nursing duties like repositioning patients, walking around the unit or hospital, and standing for long periods of time when experiencing back pain. The result of such evaluations often concludes with a work release form detailing restrictions on how much weight the nurse with back pain can safely lift and on their physical activities that they can safely engage in based on type and severity of back pain. The term used for such restrictions when nurses return to work is "light duty", which typically means lifting no more than ten pounds at a time. This author's mētis knowledge identifies this is not very much weight in the nursing profession when caring for adolescent or adult patients who need assistance repositioning, and duties include moving heavy medical equipment like IV pumps, portable heart monitors for transport, and hospital beds. These

restrictions are particularly troublesome for their fellow colleagues who do not suffer from back pain for it tends to increase their workload. The non-back pain colleagues feel obligated to do additional duties that the back pain colleagues are restricted from doing for the sake of patient care and safety. It becomes a vicious cycle because the repetitive movements of nursing duties and increase in workload put the nurses who do not have back pain at greater risk for developing it. These nurses often feel overworked leading to feelings of animosity toward the colleagues with back pain. This creates tensions in the work unit, causing increased stress in an environment that typically is already stressful. The author has observed this increase in stress has lead to depression, anxiety about coming to work, and absenteeism in both nurses with back pain and their colleagues.

Chapter Three: Conceptual and Theoretical Framework

The practice of yoga was studied in depth as a self-care tool for nurses to utilize for the prevention and management of back pain. Jean Watson's Human Caring Science theory of nursing was the theoretical framework used to help guide the exploration of the yoga culture and the development of this scholarly project. The Human Caring Science theory emphasizes the importance of self-care through what Watson (2012) describes as the ten *caritas* processes. Through the processes, a foundation is created that allows for healing, helpful, harmonious transpersonal caring relationships with self and others to occur (Watson, 2012). This chapter discusses how Jean Watson's theory applies to this scholarly project.

The practice of yoga has many different styles. Some styles are more physically rigorous in nature while others are more calming to the mind. All styles comprise the same three components to some degree: physical poses, guided meditation, and intentional breathing. The caring and curing modality of yoga is centered on self-care, self-love, and self-acceptance. The culture encourages people to live in the present moment. One is not supposed to let the past affect the future. The practice of yoga teaches people to release and let go of outside tensions and or past experiences that are threatening inner peace. The idea is to release the bad to make room for more good in one's life to achieve balance. The altered state of consciousness yoga elevates one to be in is looked at as a haven where one can let go of thoughts and feelings that are no longer of benefit to the person. Intentionality is another key component of the yoga culture. One is encouraged to set intentions in all aspects of life. This is practiced by establishing

a silent intention at the beginning of each yoga class. Yoga practitioners send energy through their intention to a person or people in need, perhaps even themselves.

It is necessary to discuss the theoretical framework used to help guide the exploration of yoga and development of this scholarly project. Jean Watson's Human Caring Science theory of nursing was developed in the mid-late 1970s (Watson, 2012). The theory has evolved and expanded since then. The three concepts that encompass other defining characteristics of the theory are the ten caritas processes, transpersonal relationships, and moments or occasions of caring (Watson, 2012). Watson (2012) acknowledged there are multiple ways of knowing and interpreting human experiences during times of illness in addition to wellness for both nurses and patients. Watson (2012) emphasized the wholeness and interconnectedness of people with the universe by acknowledging the spiritual dimension through the continual process that occurs of growth and change throughout the lifespan. The ten caritas processes assist people with inner healing and improved self-awareness despite external disease process or condition they are experiencing (Watson, 2012). The nurse is a co-participant in the individual caring-healing process rather than an authoritative figure (Watson, 2012). The nurse and patient are co-creators of the caring environment, which fosters health and wellbeing (Watson, 2012). Caring is a conscious act created through love and authentic presence during nurse-patient interactions (Watson, 2012). These caring moments or occasions are the foundations of healing, balanced, and beneficial transpersonal relationships, which are reciprocal for all involved (Watson, 2012).

The Human Caring Science theory supplied several principles to guide the development of this scholarly project, which utilizes yoga as a self-care tool to enhance

the nurse-patient relationship through preventing and managing back pain. The theory was applied to the development with emphasis on a few key factors. The idea that caring is conscious was at the forefront of the development. Another aspect of the theory that guided the development of this project was the notion that all people are co-creators of the environment and influence it through their personal energy field. Being authentically present through intentionality during interactions with others is a necessity for reciprocal relationships to occur. Self-care strategies through the ten caritas processes assist individuals in being energetically balanced within oneself and with the universe as a whole. This was one of the most important principles utilized during the development of this project. The fundamental principles of the Human Caring Science theory and culture of yoga complement each other through similarities.

The Human Caring Science theory provided a foundation for a deeper understanding of the culture of yoga to occur. Through comparing the theory's conceptual framework with the major concepts of the healing and caring philosophy of the yoga culture similarities were illuminated between the two that were not obvious on the surface. Life coach and spiritual guide William Doran (2015) summarizes the culture of yoga as an art and science that creates cohesion between the body, mind and spirit of individuals. The objective of yoga is to assist people in using one's breath and body to gain awareness of oneself as a person connected to others within the entire universe (Doran, 2015). Yoga is about creating balance and equanimity so individuals can live in peace and good health with the universe (Doran, 2015). This is very similar to what Watson (2012) describes in the Human Caring Science theory. Watson (2012) emphasized nurses must act out of a place of love rather than fear, and to accomplish that

one must first be balanced and whole in the sense of body, mind, and spirit dimensions. This equanimity has healing and caring capabilities for the outside environment including others in which all is inherently interconnected to create the whole. The Human Caring Science theory is both an art and science, as is nursing. This is expressed through acknowledging there are multiple ways of knowing and the theory identifies skills and processes to assist in bringing meaning to lived experiences. Yoga and nursing are both “practices” that are not supposed to be mastered throughout one’s lifespan but rather should grow, evolve, and change with time. Watson’s (2012) ten *caritas* processes focus on self-love, indicating that if one cares for themselves, they may be better equipped to care for others. Yoga instructors often say a mantra similar to this idea. They emphasize that the sixty minutes of yoga one dedicates to care for themselves may allow them to better serve others in their life. It may be expressed in the ability to be more present, open, and caring toward others.

Nurses can utilize the practice of yoga as a self-care tool to enhance the nurse-patient caring relationship. This idea is supported by the concepts of Jean Watson’s Human Caring Science theory of nursing, the philosophical principles of the yoga culture, and through the existing research on yoga and Jean Watson’s theory. To have a healthy and wholesome influence on a patient’s energy field the nurse must first be healthy and whole. This may be accomplished through the practice of yoga. Watson (2012) explains the expression of love has the highest frequency in life. If one holds compassion and love within their field, then inner peace builds. That energy can then be projected onto others in the environment since human beings are all interconnected. Nurses help their patients by helping themselves and vice versa. The capacity this has to facilitate healing

and increase the ability to care for others is quite extraordinary and unique to the nursing profession.

The practice model proposed uses yoga to enhance the nurse-patient caring relationship emphasizes less of the physical benefits of yoga practice and more of the spiritual, mental, and emotional benefits one gains through the process of yoga. Yoga may, among other things, increase one's awareness, mindfulness, intentionality, and mental focus. The idea is the spiritual, mental, and emotional gains from the practice of yoga can be carried over into the nurse-patient relationship. The general idea of using yoga as a self-care tool to strengthen relationships can be applied to other populations.

Nurses in advanced practice roles should have multiple ways of gathering information to provide appropriate care to patients. One way of acquiring professional knowledge is through nursing theory. Nursing theory plays a significant role in advanced practice nursing because it provides a professional blueprint of how to go about caring for individuals. This type of knowledge is difficult to extrapolate from other areas of the traditional nursing curriculum. Through nursing theory culturally congruent care can be delivered with more fluidity. Nursing theory has no borders or boundaries. It can apply to all genders, all religions, and all environments, to name a few. Nursing theory should be embedded in everything nurses do, either consciously or subconsciously. It is the foundation of the nursing profession in which everything is possible.

Many insights were gained throughout this process of examining the Human Caring Science theory of nursing with the culture of yoga. It brought to light the fact that this nursing theory is a theory of the interactions and relationships between people. Whether it is a nurse-patient relationship or another type of relationship, it translates well

to many life experiences. It also explains other relationships that occur in life. For example, the link between a person and earth or surrounding environment; or the relationship between the personal energy fields of people and objects. The same applies to the culture and practice of yoga. Yoga has a philosophical foundation grounded in the unique intricacies of individual human beings and the relationships that occur among them and the universe. All aspects of a person are addressed in the practice of yoga including mental, emotional, physical, and spiritual dimensions. The various facets of a person must be balanced to be well. The Human Caring Science theory addresses this idea as well and is something that appears to be lacking in the Western medical model. This decreased emphasis of focusing on the whole person is leaving patients dissatisfied with their health care.

Concepts of Jean Watson's Human Caring Science theory and the culture of yoga could be more obviously integrated into patient care settings to enhance the nurse-patient relationship. These ideas informed the development of this scholarly project. This nursing theory in particular and the culture of yoga have many conceptual similarities that could not only benefit patients but nursing professionals as well. All beings are interconnected and influence not only each other but the surrounding environment in a reciprocal manner. Balance creates peace and is achieved through meeting the basic needs of individuals on physical, emotional, mental, and spiritual dimensions. This equanimity creates a sense of health and wellbeing. This feeling of health and wellbeing is the ultimate goal of all nurse-patient encounters. It is also something individuals are seeking on a personal level. Through translating the knowledge gained from yoga practice into the nurse-patient relationship, this can be achieved in its fullest expression.

Chapter Four: Methodology and Evaluation

The subjects who participated in the implementation of this scholarly project were either bachelor or master's degree prepared nurses. The participants were a convenience sample recruited through informal communication. Eighteen participants were included in the initial data collection.

This scholarly project was implemented at an integrative community health clinic in Rochester, Minnesota. The clinic specializes in alternative healing modalities. The practitioners at the clinic offer retreats, workshops, and programs in group-like settings, in addition to individualized treatments and integrative primary care services.

There were three tools utilized to support and evaluate the intervention that was implemented in this scholarly project. The program included a pre- and post-intervention questionnaire that participants anonymously completed (Appendix A). The participants received a pamphlet detailing the yoga routine demonstrated during the initial meeting to serve as their guide for at home use (Appendix B).

The participants came to the initial meeting at the implementation site. The yoga routine was created by the author of this scholarly project through the mentoring of an experienced certified yoga instructor. After the participants had filled out the pre-intervention questionnaire, the self-care yoga routine was demonstrated by the author. The participants had the opportunity to follow along and ask questions. At the end of the demonstration, the participants were provided with a copy of the pamphlet detailing the poses in the yoga routine with pictures for at home use. They were instructed to do the routine of ten poses twice, every other day for six weeks. If the step-by-step instructions

in the pamphlet are followed, it should take approximately 20-30 minutes every other day to complete the routine.

The answers to the pre- and post-intervention questionnaires were reviewed. Pre-intervention questionnaire data revealed seven out of the eighteen participants currently practice yoga and sixteen out of the eighteen promote their own back health through a variety of techniques. Their reasons for practicing yoga included for enjoyment, strength, flexibility, abdominal tone, relaxation, good low impact workout, improved balance, and weight loss. The eleven participants who said they did not practice yoga currently stated a variety of reasons as to why, including lack of time, interest, knowledge, and patience; and a preference for other forms of exercise. Sixteen participants said they promote their back health through techniques including stretching, walking, running, weight lifting, BioMat, traction, back brace, massage, acupuncture, chiropractic care, yoga, and the use of assistive devices at work. The two participants who said they do not do anything currently to promote their own back health stated it was due to lack of time and the absence of back problems.

Post-intervention questionnaire data was collected from sixteen of the original eighteen participants. All sixteen respondents found the information provided in the yoga program helpful. Of the sixteen respondents eleven people plan to continue the self-care practice in the future, four people replied they might continue the program, and one participant said they have no plans to continue the program. Thirteen of the sixteen post-implementation questionnaire respondents had suggestions for program improvement moving forward. Two common suggestions among the respondents are to have the program consist of easier yoga poses geared more toward beginners and to create an

online video that demonstrates the poses with audible cues, including the link printed on the pamphlet for participant use. Other suggestions included having the program last longer than six weeks, checking in on participants at more frequent intervals, suggesting a music list for participants that coincide with the poses, and wider distribution of the content throughout the community.

Implementation of this scholarly project was well received by participants. The initial in-person meeting was effective at engaging participants and identifying interest to foster follow-through with the program. The final in-person meeting at the conclusion of the program was effective for the evaluation of the program by the participants. Based on the data collected and feedback received some things worked well and other things could be adjusted to improve the program in the future. The in-person demonstration and pamphlet were mediums that were welcomed by participants. In the future, creating an online video of the in-person demonstration may be helpful for participant use at home and encourage adherence to the self-care program. All participants seemed interested in participating in yoga but the difficulty of the poses may have steered some of them away from complying with the program instructions. The yoga poses in the program could be altered to include more beginners-level variations, so it appeals to people of all physical abilities.

Chapter Five: Significance and Implications

This scholarly project has far-reaching significance and implications in clinical practice for the role of advanced practice nurses, patient care, and the prevention and management of the disease process surrounding back pain. The significance and implications for clinical practice will be described throughout this chapter. Seven of the eight Essentials of Doctoral Education for Advanced Nursing Practice set forth by the American Association of Colleges of Nursing (AACN, 2006) and six of the nine Nurse Practitioner Core Competencies created by the National Organization of Nurse Practitioner Faculties (NONPF, 2014) will be identified as they directly apply and are described throughout this scholarly project.

Essential I (Appendix C) was described throughout this project in a variety of ways. The literature review highlighted researched methods used to treat, prevent, and manage back pain. Nursing theory was examined, specifically Jean Watson's Human Caring Science theory of nursing, to help explain the lived experience of the disease process and impact on one's overall health. The yoga community was another discipline that added knowledge to assist in finding a solution to this disease process through mentorship and immersion into the culture of yoga. When knowledge from the researched literature, nursing theory, and yoga discipline was combined, a new practice approach developed through the self-care yoga program.

Essential II (Appendix C) was described throughout this scholarly project during the planning, creating, and implementation phases. The initial idea for the project was brainstormed through observing current practice and witnessing an overall lack of improvement in people who suffer from back pain. Through stepping into a leadership

role to research alternative methods for quality improvement, for example, improving the health of employees and therefore providing better care to patients, a potential solution formulated. A low-cost alternative solution with the self-care yoga program was created with a plan to implement.

Essential III (Appendix C) was described throughout this project in a couple of different ways. The extensive literature review required a critical examination of the evidence supporting or disproving various methods of treating, preventing, and managing back pain. Dissemination and integration of the new knowledge in clinical practice gained through the literature review was accomplished through developing and implementing the self-care yoga program based on findings from the research to improve health outcomes.

Essential IV (Appendix C) was fulfilled in this scholarly project through the project design. Various mediums were used during the implementation phase to appeal to participants who learn in different ways. For example, some people are visual learners while others are audible learners. Repetition of information is also useful during the learning process. In-person demonstration and explanation of the yoga poses was done initially. Participants were given the opportunity to try the poses themselves and ask questions during this time. A pamphlet detailing the self-care yoga program in a step-by-step format was issued to participants to utilize during the duration of the implementation phase following the in-person demonstration. The pamphlet created was essential to disseminate pertinent information to participants for at home use and guidance. It also provided additional learning mediums including pictures and written instructions for ease of use.

Essential VI (Appendix C) was displayed within this scholarly project through communication, collaboration, and leadership. Extensive and effective communication and collaboration occurred both inter-professionally and intra-professionally. This was necessary to facilitate the development and implementation of an improved practice model for the prevention and management of back pain. This collaborative effort demonstrated leadership skills to create change.

Essential VII (Appendix C) was demonstrated in this project through critical evaluation. The current healthcare delivery strategies surrounding back pain were evaluated using concepts related to occupational and socioeconomic dimensions of health. Interventions surrounding health promotion and disease prevention efforts regarding back pain were evaluated. The interventions were evaluated for how they could be improved to foster better health outcomes and access in the future.

Essential VIII (Appendix C) was described throughout this scholarly project in various ways. A therapeutic intervention was designed, implemented, and evaluated in this project. The pamphlet was created to disseminate the information with ease. Pre- and post- intervention implementation questionnaires were completed by participants to collect data in regards to the usefulness of information provided and future improvements for the program going forward. Collaboration with inter- and intra-professionals throughout the project provided credibility. Education was provided to nurses at risk for developing the problem during the pre- and post- implementation in-person meetings at the implementation site. Partnerships with other professionals were developed and sustained to facilitate optimal care provided and improve nurse health outcomes. These partnerships were created through meetings with yoga professionals, participating in yoga

classes taught by yoga mentors, photographing the pictures utilized in the pamphlet, and meeting with integrative health advanced practice nurse practitioners for guidance throughout the project.

Core Competency I (Appendix D) was described throughout this project in multiple ways. Through the extensive literature review researched methods used to prevent, treat, and manage back pain were identified. Jean Watson's Human Caring Science theory of nursing was critically examined to help explain the lived experience of the disease process as well as the impact such disease processes have on one's overall health. Valuable knowledge was gained through mentorship and immersion into the culture of yoga within the local yoga community. All three of these separate inquiries assisted in finding a solution to this disease process. When knowledge from the research literature, nursing theory, and yoga discipline was combined, a new practice approach was formulated through the creation of the self-care yoga program.

Core Competency II (Appendix D) was demonstrated during the planning, creating, and implementation phases of this scholarly project. The idea for the project was created after observing current practice and witnessing an overall lack of health improvement in nurses who suffer from back pain, which was affecting patient care. Stepping into a leadership role created the opportunity to research different methods for quality improvement, allowing a potential solution to be formulated. A comparatively low-cost alternative solution with the self-care yoga program was created with plans to implement.

Core Competency IV (Appendix D) was described throughout this project in a variety of ways. The literature review required critical examination of the evidence

supporting or disproving various methods of treating, preventing, and managing back pain. Dissemination and integration of the new knowledge in clinical practice acquired through the literature review was accomplished through developing and implementing the self-care yoga program based on findings from the research to improve health outcomes. Furthermore, the current healthcare delivery strategies surrounding back pain in addition to the interventions surrounding health promotion and disease prevention efforts regarding back pain were all evaluated. These topics were evaluated for how they could be improved to foster better health outcomes and greater access in the future.

Core Competency V (Appendix D) was fulfilled in this scholarly project through the project design. Various mediums were used during the implementation phase to appeal to participants who learn in different ways. In-person demonstration and explanation of the yoga poses was done initially. During this time, participants were given the opportunity to try the poses themselves and ask questions. Following the demonstration, a pamphlet detailing step-by-step the self-care yoga program was issued to participants to utilize during the duration of the implementation phase. The pamphlet created was essential to disseminate pertinent information to participants for at home use. It also provided different mediums including pictures and written instructions for ease of use.

Core Competency VII (Appendix D) was displayed within this scholarly project through communication, collaboration, and leadership. Extensive and effective communication and collaboration occurred both inter- and intra-professionally during the various phases of the project. These were necessary steps to take to facilitate the development and implementation of an improved practice model for the prevention and

management of back pain. This combined effort demonstrated leadership skills to affect change in practice.

Core Competency IX (Appendix D) was described throughout this scholarly project in a variety of ways. A therapeutic intervention was created, implemented, and evaluated in this project. The pamphlet was constructed to disseminate the information with ease. Pre- and post- intervention implementation questionnaires were completed by participants to collect data about the usefulness of the information provided and suggested improvements for the program. Credibility was established through collaboration with inter- and intra-professionals throughout the project. Education was provided to nurses at risk for developing back pain during the pre- and post- implementation in-person meetings. Partnerships with other professionals were developed and sustained to assure optimal care was being provided and to foster improved nurse health outcomes. Such partnerships were created through meetings with yoga mentors, participating in yoga classes, photographing the pictures used in the pamphlet, and meetings with integrative health advanced practice nurses for additional guidance throughout the project.

This scholarly project exists because there was an observed disconnect in the current healthcare practice regarding back pain in nurses. It was observed that there were more opportunities to help nurses experiencing back pain. Nurses are an at-risk population for developing back pain due to their professional duties. It was observed that nurses were not sufficiently educated in regards to the prevention and management of back pain.

The critical appraisal of the current research literature surrounding back pain, back pain in nurses, and yoga, guided the creation of the self-care yoga program that was implemented in this project. The self-care yoga program was envisioned to help with the prevention and management of back pain through putting the patient in charge of their health care. Through providing patients with a condensed collaborative knowledge base of the problem at hand and a convenient solution, they gain the tools required to alter their health outcome through participation. This empowerment is essential for the prevention and management of potentially chronic diseases like back pain.

The yoga program developed within this project was imagined as a self-care tool for patients to utilize to minimize the necessity for repeated healthcare-related office visits. This program could help reduce healthcare costs and free up practitioners for other types of office visits. Back pain can present in an acute, recurrent, or chronic nature. Back pain often cannot be cured but requires management to prevent flare-ups and maintain mobility. The imagined purpose of this self-care tool is to prevent and manage back pain through keeping people as agile and as strong as possible in the areas that often produce the most back pain.

This scholarly project is imagined to influence the role of the advanced practice registered nurse (APRN) in multiple ways. Patient care provided by APRNs will be improved through empowering patient's to take greater responsibility for their health outcomes where suitable. The direct patient care provided by APRNs can then be focused on the most complex intricacies of conditions that require the APRNs expertise attained only through extensive research and critical appraisal of research, practical experience, and formal education.

Disease management within patient care will be influenced in similar ways. Patients will be encouraged to engage in more self-care interventions to promote health, as well as prevent and manage disease. APRNs will guide both health promotion and the more complex disease management regimens.

This project is expected to affect clinical education provided to patients by APRNs. Through increasing dissemination of information from APRNs to patients, patients will be better equipped to participate more efficiently in their healthcare. Self-care programs like the one implemented in this project place greater responsibility on patients to make appropriate healthcare decisions and lifestyle choices depending on their personalized health goals.

The overall clinical practice within the role of the APRN is envisioned to be influenced by this scholarly project. Higher compliance with treatment regimens may be fostered through providing patients with evidenced-based, less invasive interventions to facilitate the prevention and management of a disease. Control and responsibility within clinical practice will be distributed more evenly among practitioners and patients through incorporating self-care interventions like the one implemented in this project. APRNs will provide more education to patients during the clinical visit time to increase their comfort level of carrying out such self-care interventions independently.

This project exemplifies an increased leadership role of APRNs in clinical practice. Leadership was demonstrated through researching the topic, critical appraisal of the research, compiling data from multiple sources, and creating a medium where the information could be easily disseminated and understood. This type of leadership action is needed in the APRN role to improve care provided to patients with common diseases

for which they seek care from their primary care provider. Leadership is demonstrated through example. Patients observe APRNs for their actions in regards to health management, promotion, and prevention measures. APRNs lead through example by participating in the interventions they recommend to patients, if applicable.

Future improvements for the success of this scholarly project were identified after implementation. The difficulty of the yoga poses in the self-care program may have steered some participants away from complying with the program instructions. The yoga poses recommended in the pamphlet could be altered to include more beginners-level variations. Less difficult substitutions would make the program more accessible to people of all physical abilities and may improve compliance. The program implemented may be more beneficial if it was longer in duration. This would facilitate a more definitive behavior change in participants because it would create a routine habit in their daily life. Creating an online video of the in-person demonstration with verbal cues that is readily available to participants may be helpful for use at home and encourage adherence to the self-care program. Checking in with participants more frequently through mediums like email and phone calls may stimulate greater compliance to the self-care program by creating more accountability. It would also provide an opportunity to make individualized adjustments to the program to address specific needs.

For expansion of this project, it can translate to other populations who have or are at-risk for developing back pain. Back pain is a common condition people seek medical treatment for from their primary care provider. Many populations within society are at-risk for developing back pain, largely due to occupational duties and lifestyle. To name a few, construction workers, those who sit at a desk the majority of the day, military

personnel, furniture movers, and landscapers, are among those at-risk populations for developing back pain. Populations like obese individuals, athletes, and pregnant women are some other at-risk groups within society for developing back pain. The self-care yoga program this project implemented can be applied to many populations to prevent and manage back pain. The informational pamphlet detailing the yoga routine can be quickly disseminated to these populations during routine clinic visits, within the community, and at their places of employment. Distributing the information to a broader audience may be beneficial and effective for more people.

The self-care yoga program for the prevention and management of back pain within this scholarly project can be easily integrated into the primary care APRN clinical practice on a routine basis. APRNs can have copies of the pamphlet readily available in the clinic where patients are examined to disseminate. APRNs can briefly explain the program to any at-risk patient, with a special focus on the risks and benefits of the program. Emphasis should be on educating patients about back pain, the short and long-term effects it can have on an individual, and the importance of prevention and management of the disease process throughout the lifetime.

Primary care APRNs are in an ideal position to provide healthcare education and self-care tools to patients. They see patients for a multitude of reasons through clinic visits. Routine clinic visits make it easier to follow-up on various aspects of one's healthcare regimen, not just the issue the patient is being seen for during that particular office visit. Health promotion and prevention initiatives are needed to keep patients in an optimal state of health. Ultimately, it is the patient's decision to participate in such efforts. Primary care APRNs need to support such initiatives and educate patients

appropriately. Patients will, in turn, be more likely to adhere to such interventions, creating a state of optimal health and wellbeing.

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Appendix A: Pre- and Post-Intervention Questionnaires

Pre

1. Do you currently participate in yoga? Why or why not?
2. Do you currently do anything to promote your own back health? If so, what? If not, why?

Post

1. Was the information provided in the program helpful?
2. Do you plan to continue this self-care practice in the future?
3. Do you have any suggestions for this program moving forward? If so, what?

Appendix B: Pamphlet

**7. Seated spinal twist**

- Sit upright with feet out in front of you
- Cross right leg over left, place foot flat on ground parallel to left knee
- Can bend opposite leg so foot is resting by opposite hip (as pictured) or keep leg straight
- Place right arm behind back, hand flat on ground, or fingers tented (as pictured)
- Place left elbow on outside of right knee and twist to the right keeping back as straight as possible
- Hold for a count of 30
- Repeat on other side with opposite leg and arm positioning

**8. Pigeon**

- Stomach down bring right leg parallel with floor
- Bend forward over leg, resting head on arms or floor
- Variation: lay on back, bend legs and place right heel on left knee, pull with hands behind left knee toward stomach while keeping back on ground
- Hold position for a count of 60
- Repeat with opposite leg parallel to floor

**9. Thread the needle**

- On knees and hands in table-top position
- Right arm reaches under left arm, butt goes up in air
- Rest right side of face on ground
- Hold for a count of 30
- Repeat on opposite side

**10. Extended child's pose**

- Toes together, knees spread wide
- Reach arms forward while pushing butt down toward feet
- Hold for a count of 60

Repeat entire sequence.
Do every other day.

Model pictured: Lauren Hopps, ERYT-200
Photographed by: Sonja M. Brockman

YOGA FOR PREVENTING & MANAGING BACK PAIN

Sonja M. Brockman,
BSN, RN, DNP-FNP student



1. Rag doll pose

- Feet: shoulder distance apart
- Knees: bent or straight
- Arms: bent, hands hold opposite elbows
- Sway from side to side 5 times
- Let head hang loose, shake head "no" 5 times, shake head "yes" 5 times
- Bounce up and down 5 times



2. Downward facing dog

- Hands: shoulder width apart, fingers spread
- Suck stomach into spine
- Feet: hip width apart, reach heels to ground, keep back flat
- Pedal feet, alternating back and forth 5 times then hold still for a count of 60, reaching both heels to ground



3. Plank

- Hands: directly below shoulders or elbows below shoulders on forearms
- Feet: hip width apart
- Suck stomach into spine
- Keep back, shoulder, and butt in straight line
- Hold still for a count of 60



4. Cobra pose

- Stomach down on ground
- Hands: on ground under shoulders
- Feet: tops pressing on ground, push hands down as you arch chest up
- Hold for a count of 60



5. Bow pose

- Stomach down on ground
- Bend knees
- Grab feet with hands
- Kick feet up while holding on to them with your hands, let upper stomach lift off ground if possible keeping soft part on lower stomach on the ground
- Hold for a count of 30



6. Cow and cat pose

- Get on your hands and knees in a table-top position
- Place hands down on ground, bend elbows slightly, bring stomach down and arch back the other way while looking up (cow)
- Suck stomach in, arch back up, look down, come to the tops of your fingers (cat)
- Do this combination move 10 times, hold each cat/cow position for a count of 10 each time

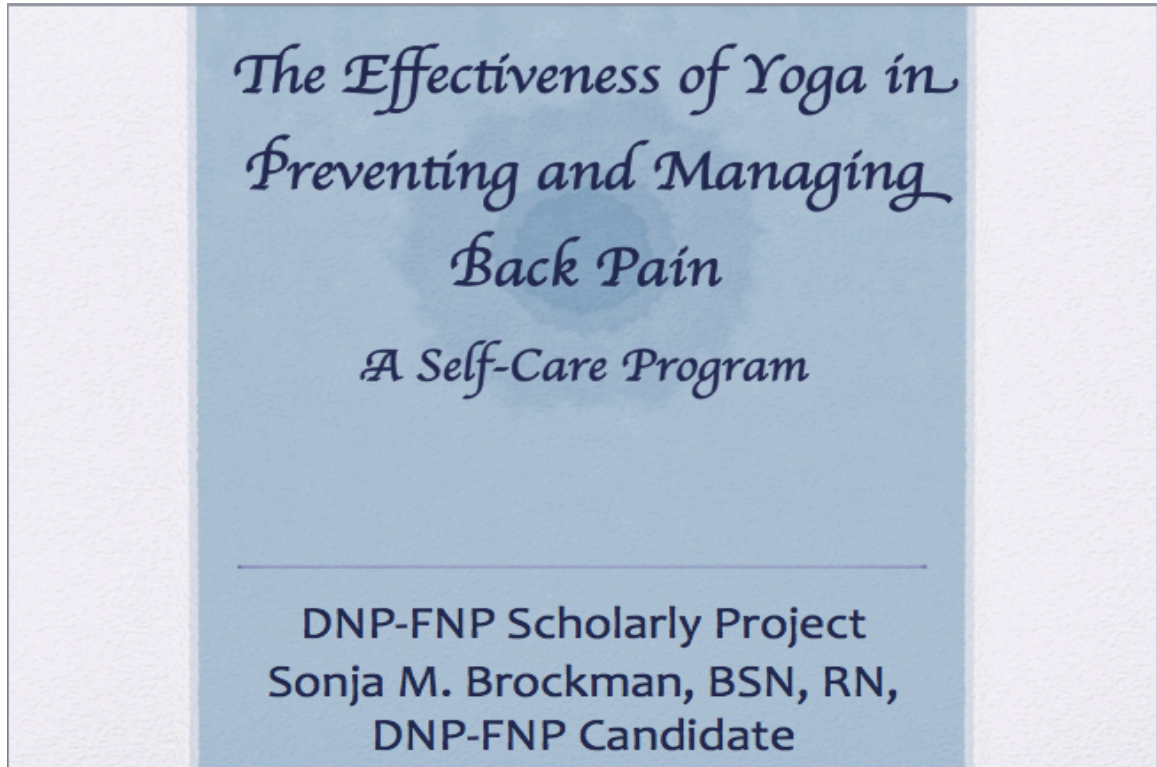
Appendix C: The Essentials of Doctoral Education for Advanced Practice Nursing
(AACN, 2006)

- I. Scientific Underpinnings for Practice
- II. Organizational and Systems Leadership for Quality Improvement and Systems Thinking
- III. Clinical Scholarship and Analytical Methods for Evidence-Based Practice
- IV. Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care
- V. Health Care Policy for Advocacy in Health Care
- VI. Inter-professional Collaboration for Improving Patient and Population Health Outcomes
- VII. Clinical Prevention and Population Health for Improving the Nation's Health
- VIII. Advanced Nursing Practice

Appendix D: Nurse Practitioner Core Competencies (NONPF, 2014)

- I. Scientific Foundation Competencies
- II. Leadership Competencies
- III. Quality Competencies
- IV. Practice Inquiry Competencies
- V. Technology and Information Literacy Competencies
- VI. Policy Competencies
- VII. Health Delivery System Competencies
- VIII. Ethics Competencies
- IX. Independent Practice Competencies

Appendix E: PowerPoint Slides



Importance of Topic

- Back pain in nurses
 - Statistics from the ANA & BLS
 - CDC & OSHA's response to problem
 - Reasons for occurrence
 - Far reaching affects



(US Bureau of Labor Statistics [BLS], 2014)
(American Nurses Association [ANA], 2015)
(United States Department of Labor [DOL], n.d.)
(Centers for Disease Control and Prevention [CDC], 2015)
(Photo by Sarah Julius, 2013)

Importance of Topic

- Yoga for prevention and management of back pain
 - Popular
 - Accessible
 - Non-invasive
 - Self-care
 - Health benefits
 - Mind, body, soul



(Cowen & Adams, 2004)
(Photo by Sarah Julius, 2013)

Research Findings

- Back Pain in Nurses
 - Prevalence varies (62-90.3%)



(Mohseni-Bandei et al., 2006)
(Maul, Laubli, Klipstein, & Krueger, 2003)
(June & Cho, 2010)

- Back Pain Management and Treatment
 - Strengthening core muscles
 - Heat application & medications

(Crowe et al., 2010)
(Chen, Wang, Chen, & Hu, 2014)
(Kumar, Putti, & Bindhu, 2012)
(Photo by Stephanie Gulbranson, 2015)

Research Findings

- Yoga as a Healing Modality
 - Back function
 - Decreased pain
 - Improved mental focus
- Limitations

(Tilbrook et al., 2011)
(Sherman et al., 2011)
(Groessler, Weingart, Johnson, & Baxi, 2012)

- Mētis-Based Findings
 - “Light duty”
 - Depression, anxiety, absenteeism
 - Non-back pain sufferers = greater risk

Introduction to Project

- 6 weeks
- Pre-meeting
 - Questionnaire
 - Demonstration
- Pamphlet
 - Pictures
 - Written cues
- Self-care tool
 - Use at home
 - Every other day
 - 20-30 minute routine
- Post-meeting
 - Questionnaire
 - Feedback

Nursing Theory Guidance

- Dr. Jean Watson
- Human Caring Science (HCS) theory of nursing
 - Developed mid-late 1970s
 - Evolved & expanded since origination
 - 10 caritas processes, transpersonal relationships, & moments of caring



(Watson, 2012)

(Photo by Stephanie Gulbranson, 2015)

HCS & Yoga Merge

- Mind, body, & spirit cohesion
- Improved relationships
- Continuous process
- Physical gains



(Watson, 2012)

(Photo by Stephanie Gulbranson, 2015)

Methodology & Evaluation – Subjects & Clinical Setting

- Nurses
- Convenience sample
- 18 participants: initial data
- 16 participants: final data
- Implemented at an integrative community health clinic
- Clinic specializes in alternative healing modalities

Methodology & Evaluation – Tools

- 3 tools utilized
- Pre- and post-intervention questionnaires anonymously completed
- Pamphlet
- Pre-Intervention Questionnaire
 - 2 questions
- Post-Intervention Questionnaire
 - 3 questions

Methodology & Evaluation – Intervention

- Routine created with certified yoga instructor
- Gathered at implementation site
- Self-care yoga routine demonstrated
- Follow along and ask questions
- Received pamphlet
- Do 10 poses twice, every other day for 6 weeks

Methodology & Evaluation – Data Collection

- Pre-intervention questionnaire data
 - 7 out of 18 currently practice yoga
 - 16 out of 18 promote their own back health
- Post-intervention questionnaire data
 - All 16 found the information helpful
 - 11 plan to continue the self-care practice

Significance & Implications

- Educated about research knowledge
- Convenient solution
- Empowerment
- Self-care tool
 - Decrease costs
 - Decrease office visits
 - Management vs. cure



(Photo by Stephanie Gulbranson, 2015)

Significance & Implications

- APRN role
 - Empower patients
 - Clinical education & practice
 - Disease management
 - Leadership
- AACN Essentials of Doctoral Education for Advanced Nursing Practice
 - Eight essentials
 - Fulfilled

(American Association of Colleges of Nursing, 2006)

Future Ideas for Project

- Improvements
 - Beginners-level variations
 - Longer duration
 - Different mediums
 - Frequent follow-up
- Expansion
 - Applicable to other at-risk populations
 - Disseminate pamphlet to broader audience
 - Educational focus

Instrumental Contributors to Project

- Thank you!
 - Scholarly Project committee
 - Yoga mentors & instructors
 - Integrative Medicine APRNs
 - My family
 - My colleagues



(Photo by Sarah Julius, 2013)

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Comments or Questions?

