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Clinical Leadership of Staff Nurses and Influence on Job Satisfaction and Intention to
Stay in Rural Nursing Practice

by

Kathy Jean Roth

A dissertation

submitted in partial fulfillment

of the requirements for the degree of

Doctor of Philosophy in the School of Nursing

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To the Graduate Faculty:

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RE: regarding study number IRB-FY2019-144: Clinical Leadership of Staff Nurses and Influence on Job Satisfaction and Intention to Stay in Rural Nursing Practice

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Sincerely,

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Clinical Leadership of Staff Nurses and Influence on Job Satisfaction and Intention to
Stay in Rural Nursing Practice

Dissertation Abstract--Idaho State University (2019)

The purpose of this research was to quantify clinical leadership among staff nurses working in rural areas, examine its determinants and impact on job satisfaction and retention. The nursing shortage is growing and is heightened in rural areas. Retention of nurses due to job dissatisfaction contributes to the shortage and negatively impacts patient care. Clinical leadership has been acknowledged as being important for job satisfaction, and retention. Clinical leadership behaviors, including clinical expertise, communication, coordination, collaboration, and interpersonal understanding, are important for staff nurses in providing quality, safe patient care. Clinical leadership is imperative for rural nurses due to the generalist role of caring for the spectrum of patients, and role overlap. This study was a nonexperimental cross-sectional survey, designed to allow for concurrent measurement of variables including clinical leadership, satisfaction, and intent to stay, and explore the associations between them. Data were collected using instruments designed to measure clinical leadership, satisfaction with work and career, and intent to stay. The sample consisted of 85 registered nurses employed at critical access hospitals. Analysis utilized descriptive statistics to quantify clinical leadership and professional satisfaction of rural staff nurses. Structural equation modeling was done to assess the association between clinical leadership and professional satisfaction of nurses and intent to stay in their job. Results indicated that staff nurses in critical access hospitals utilize clinical leadership when providing patient care (4.6 ± 0.3).

The majority of staff nurses reported work and career satisfaction (4.2 ± 0.6), and intent to stay in their current job (69.4%). As hypothesized, there was a direct positive association between clinical leadership and professional satisfaction ($\beta=0.50, p<0.001$), which in turn, had a direct effect on intent to stay ($\beta=0.72, p<0.001$). The results of this study provide understanding into the use of clinical leadership by staff nurses in critical access hospitals, and the need for the development of clinical leadership to enhance satisfaction and intention to stay, which could improve patient care. Further studies should be completed to continue to learn about clinical leadership of staff nurses and areas that could be developed to support satisfaction and intent to stay.

Key Words: Rural Staff Nurse, Clinical Leadership, Satisfaction, Intent to Stay

CHAPTER I: Introduction

Over the past few decades the role for nurses has expanded, increasing nurse responsibility. With the ageing population of the United States, nurses care for more complex patients with higher rates of chronic diseases and comorbidities, causing nurses to spend less time with each patient, which decreases the quality of patient care (American Association of Colleges of Nurses [AACN], 2017). Given the resulting increased responsibilities and expanding role of nurses in healthcare, the need for fostering leadership among nurses, starting with new graduates, has been formally recognized by national health care leaders as a priority (Institute of Medicine [IOM], 2010; AACN, 2008). The IOM (2010) report states that all nurses need to be leaders. In the Essentials of Baccalaureate Education for Professional Nursing Practice, Essential II speaks to the need for new graduates to have basic system and organizational leadership abilities to support patient safety and quality of care (AACN, 2008). Knowledge and skills in leadership are emphasized as important to high quality patient care delivery (AACN, 2008). While this applies to baccalaureate degree nurses, leadership development has also been emphasized for nurses who are prepared at the associate degree level in recent years (Organization for Associate Degree Nurses [OADN], 2018).

“...to be a nurse requires each licensed individual to lead, manage, and follow when practicing at the point-of-care and beyond” (Yoder-Wise, 2015, p. 4). According to Yoder-Wise (2015) leadership in nursing can be defined as the use of abilities to interpret a situation, enter the situation, and improvise solutions while providing patient care. Leadership is further defined as a person who provides assistance to others, including staff nurses who lead patients and clients (Curtis, de Vries, & Sheerin, 2011). Leadership

behaviors of the staff nurse includes the provision of direction and support to clients and the health care team in the delivery of patient care (Patrick, Laschinger, Wong, & Finegan, 2011). Nurses face the unknown every day and have to be effective leaders at the bedside in order to be adaptable and support safe high quality patient care (Yoder-Wise, 2015).

Leadership behaviors in staff nurses can be labeled clinical leadership. There have been many attempts to define clinical leadership. One of the earliest definitions of clinical leadership suggests that a clinical leader uses clinical expertise in specialist practice domains and uses interpersonal communication skills to support nurses and other healthcare providers to deliver high quality patient care (Harper, 1995). Chavez and Yoder (2015) provided a concept analysis of the staff nurse as a clinical leader and defined clinical leadership as the “intentional influence exerted by one person over other people to guide, structure, and facilitate activities and relationships in a group or organization” (p. 98). The clinical leader has no formal authority. This definition supports the thought that staff nurses can be leaders who focus on providing quality and safe patient care (Chavez & Yoder, 2015). Patrick et al. (2011) state that every registered staff nurse is a clinical leader. According to Patrick et al. (2011) “clinical leadership is a process of leadership embossed in the professional practice behaviors of staff nurses” (p. 450).

There are five common leadership behaviors found in the literature that nursing students are taught and that staff nurses should possess. These behaviors include effective communication, clinical expertise, coordination of patient care, interprofessional collaboration, and empowerment/interpersonal understanding (AACN,

2008; Assessment Technologies Institute [ATI], 2016; Patrick et al., 2011; Yoder-Wise, 2015). Effective communication is the ability to articulate and clarify information and is important as nurses are often the key communication source in health care teams between patients, families, and other health care providers (Patrick et al., 2011). Clinical expertise describes the clinical knowledge and clinical competence of staff nurses. Nurses should use their clinical expertise to influence others. Coordination of patient care involves the ability to coordinate the processes of the health care team and serve as the liaison between health care team members and patients. Collaboration between different health care professionals is essential as nurses need to influence others to understand situations from various perspectives. The final leadership behavior can be described as empowerment or interpersonal understanding. This is the nurse's ability to empathize with others and manage one's self and others. Staff nurses must create supportive relationships by taking time to listen to all members of the health care team and recognize the contributions of others, including providing positive feedback (Patrick et al., 2011).

Leadership is particularly important for nurses who practice in rural areas. The practice of rural nursing has been described as being a generalist role due to the need to provide care to those who enter the rural hospital setting, across the wellness and illness spectrum, acuity level, and age groups (Molinari, Monserud, & Hudzinski, 2008). Nurses practicing in rural hospitals move across patient care areas and may be at the bedside one minute and then in a management role the next as there is role overlap in rural hospitals (Seright, 2011). New nurses in rural hospitals need leadership abilities as they can be placed in positions of high accountability early in their careers (Seright, 2011). These new graduate nurses are novice and advanced beginner as described by Benner (1982).

These nurses have typically been in professional practice two years or less and are still experiencing many new situations. They have little discretionary judgement and rely on the rules they had been taught in the learning environment prior to graduation, or by other more experienced nurses in practice, when caring for patients. These nurses need support in the clinical setting and require the guidance of others to learn how to apply the knowledge they have learned in school to real-life nursing practice experiences (Benner, 1982). Enhancing leadership abilities in new graduate nurses prepare them for the generalist role critical to rural nursing practice and professionalism in a highly complex work environment (Seright, 2011).

Statement of the Problem

Registered nurse (RN) is one of the top occupations for job growth (AACN, 2017). The RN workforce need is expected to grow by 16% or over 400,000 people by the year 2024 and this growth in the RN workforce demand is creating a nursing shortage that is expected to surpass 1,000,000 nurses by the year 2024 (AACN, 2017). The profession of nursing is looking to new nurses graduating from nursing programs to alleviate the nursing shortage. Despite the fact that new nurses are graduating from colleges across America every year, the nursing shortage is still projected to grow (AACN, 2017).

Nurses face the unknown every day and have to be effective leaders at the bedside in order to be adaptable and provide safe patient care (Yoder-Wise, 2015). Patient safety is an essential part of the job of registered nurses, however, patient safety is jeopardized by the nursing shortage (AACN, 2017). The profession of nursing is experiencing a nursing shortage that is anticipated to surpass 1,000,000 by the year 2024 (AACN, 2017).

This shortage is compounded by the job growth in the workforce and the need for replacement nurses. While the nursing shortage is affecting all areas of nursing, there is a greater shortage of nurses in rural areas than in urban areas. Approximately sixteen percent of nurses work in rural areas, and per 10,000 people there are 85.3 nurses in rural areas and 93.5 nurses in urban areas (Rural Health Information Hub [RHIfhub], 2017).

The nursing shortage is evident in North Dakota with approximately 14,000 registered nurses working in the state, with a predicted workforce shortage of 850 nurses. There are approximately 600 new graduate registered nurses in North Dakota each year, however more nurses are leaving the profession than are joining the profession (Moulton, 2018). Rural hospitals in North Dakota employ approximately 600 registered nurses with a shortage of 60 registered nurses in 2016, or approximately 10% of positions vacant (Hart, Besse, & Peterson, 2017). The median time to fill these positions was 4 months with some positions open longer than a year, and RN jobs in the rural areas being classified as very difficult to fill (Hart et al., 2017).

One of the main problems with the nursing shortage and subsequent insufficient nurse staffing is that this is negatively impacting patient care. According to the AACN (2017) there is a direct connection between adequate levels of staffing and safe patient care. Multiple studies have been done to learn about the impact of nurse staffing on patient care. These studies indicate that when nurses have higher patient loads there are multiple adverse effects including higher readmission rates, extended hospital stays, increase in infection rates, patient mortality, failure-to-rescue rates, and nurse burnout (AACN, 2017). Inadequate staffing leads to overall compromised patient safety. Efforts to address the nursing shortage and improve levels of staffing will positively impact

access for patients to high-quality and safe care. Decreasing the nursing shortage will support improved nurse staffing which can increase patient safety and quality of patient care (AACN, 2017).

The problem of retention of new graduate nurses due to job dissatisfaction has been recognized as a contributing factor to the nursing shortage (AACN, 2017). Studies have shown that retention is a problem among new graduate nurses (Casey et al., 2011; Cleary, Horsfall, Jackson, Muthulaskshmi, & Hunt, 2013; Duchscher, 2008; Kovner et al., 2007; Molanari, Jaiswal, & Hollinger-Forrest, 2011; Wu, Fox, Stokes, & Adam, 2012). New graduate registered nurses are changing jobs and leaving the profession of nursing at alarming rates, due to the difficult transition that they must make into the professional practice which creates feelings of being overwhelmed and frustrated, leading to job dissatisfaction (Casey et al., 2011; Cleary et al., 2013; Duchscher, 2008; Kovner et al., 2007; Molanari et al., 2011; Wu et al., 2012). There are many factors that have been found to contribute to poor nurse retention. One factor is insufficient staffing in part an outcome of the nursing shortage, which leads to increased stress, decreased job satisfaction, and ultimately influences nurses to leave the profession (AACN, 2017). This is particularly important to new graduate nurses because when student nurses transition into the role of staff nurse, they experience a stressful role adjustment. Research describes the experience of new graduate nurses as a reality shock (Dyess & Parker, 2012). These studies show that retention for new graduate nurses must be addressed if these nurses are a suggested solution to the nursing shortage, as dissatisfaction is causing them to change jobs and leave the profession of nursing.

This problem is greater in rural areas as new graduate registered nurses face an increasingly complex population to care for with fewer resources, and leave the profession if not supported in transitioning to practice. Nurses moving into practice in rural hospitals must be able to provide care across the life span at the bedside, as well as collaborate with colleagues, coordinate, and direct patient care all of which are recognized leadership behaviors (Molanari et al., 2011; Seright, 2011). Rural hospitals are facing a greater nursing shortage with an increasingly difficult transition into practice for new graduate nurses (RHlhub, 2017).

Clinical leadership is an area of nursing that has been acknowledged as being important for patient care and job satisfaction, but few studies have explored the leadership abilities of staff registered nurses (AACN, 2017). Leadership behaviors in nurses could increase job satisfaction and enhance retention, however few studies have explored the clinical leadership of staff nurses in rural hospitals. Defining the clinical leadership of registered nurses in rural areas may assist in identifying leadership development needs of new graduate nurses in preparation for transitioning to rural practice following graduation from an associate or baccalaureate degree program. Building knowledge to advance the clinical leadership of registered nurses can lead to improvements in practice, quality of care, increased job satisfaction and patient safety, as well as supporting retention and decreasing the nursing shortage.

Research has been done on the transition that nurses make from student to professional and strategies have been discussed to improve this transition in hopes of increasing job satisfaction and retention. Leadership is an area of nursing that has been acknowledged as being important for patient care and job satisfaction, but few studies

have explored the clinical leadership of new graduate nurses (AACN, 2017). Yoder-Wise (2015) contends that nurses often view leadership as belonging to those in management positions and do not recognize that leadership is necessary for the bedside nurse. Leadership is necessary in the bedside nurse as they are responsible for patient safety and are at the forefront of patient care (AACN 2017; Fardellone, Musil, Smith, and Click, 2014; Patrick et al., 2011; Yoder-Wise, 2015). The development of clinical leadership has been shown to not only improve patient safety, but also create healthy work environments, job satisfaction, and increased retention rates (Curtis et al., 2011). Nurses face the unknown every day and they have to be effective leaders at the bedside in order to be adaptable and provide safe patient care (Yoder-Wise, 2015).

The need for leadership in new graduates is made explicitly clear in the IOM report of 2010, as well as in the Essentials of Baccalaureate Education for Professional Nursing Practice by AACN (2008). Nursing programs, both baccalaureate and associate degree programs, are asked to prepare leaders, and leadership is taught to undergraduate nursing students (AACN, 2008; OADN, 2018). Dyess and Parker (2012) describe that nursing students are taught about leadership and making clinical decisions but that the reality of nursing practice is different, and the transition that nurses make from student to professional is difficult. Leadership emphases needed in nursing includes advocating, collaborating, critical decision making, communication, delegating, coordinating care, and quality improvement (AACN, 2008). It is critical for new graduate nurses to incorporate clinical leadership from the beginning of their career as they are expected to lead the delivery of patient care services (Dyess & Sherman, 2011). Nurses must be able to direct and support patients, and coordinate health care teams in providing collaborative

care (Patrick et al., 2011). Interprofessional approaches to care are increasingly recognized as important to quality care and an essential leadership behavior (Patrick et al., 2011). Fardellone et al. (2014) state that staff nurses are the leaders at the bedside and that these nurses need to collaborate effectively and create change to transform patient care.

Research has demonstrated that nurses who work in rural areas face greater challenges as nursing practice is broad in these more remote settings (Molinari et al., 2008; RHlhub, 2017). Utilizing clinical leadership behaviors upon graduation are even more important for nurses who practice in rural areas. The multifocal nature of rural nursing is rarely acknowledged when preparing nursing students who plan to transition into nursing practice in a low population area (MacLeod, Lindsey, Ulrich, Fulton, & John, 2008). Critical to this transition into practice in the rural setting is the ability to integrate clinical leadership behaviors such as communication, collaboration, expertise, coordination, and relationship building. Many nurses felt their education had been ineffective in preparing them for rural practice and the unique nursing role, associated with intent to move away from less populated areas (Molanari et al., 2011). Developing clinical leadership of nurses at all degree levels is important in supporting transition to practice in rural hospitals as the nurses will need these capabilities early in their career (Seright, 2011).

Consideration of the level of preparation of nurses is important, as the new nurses who go to work in rural hospitals may be prepared at the associate degree or baccalaureate degree level. Approximately 51.6% of RNs working in rural areas have an associate degree as their highest level of education as compared with 35.3% of urban

nurses (RHHub, 2017). This aspect needs to be considered as the educational level of nurses has been linked to patient safety. According to the AACN (2015), multiple research studies have shown that positive patient outcomes are linked to nurses being prepared at the baccalaureate level. While the AACN (2015) states that baccalaureate prepared nurses are better prepared to work in the complex healthcare system, they acknowledge that graduates from baccalaureate and associate degree programs sit for the same licensing exam. These nurses are all prepared to work in the same jobs. Many nurses who transition to practice in a rural setting are prepared at the associate degree level, with leadership development emphasized for associate degree nurses in recent years (OADN, 2018).

This research was focused on clinical leadership of associate and baccalaureate degree prepared registered nurses practicing in critical access hospitals, and their job satisfaction and intent to stay in practice. The preparation of nurses at the associate and baccalaureate level includes an emphasis on the development of leadership for transition into the nursing role (AACN, 2008; AACN 2015; AACN, 2017; Dyess & Parker, 2012; Dyess & Sherman, 2011; OADN, 2018; Patrick et al., 2011; Seright, 2011). The development of clinical leadership is important to the nursing role as new graduate nurses are expected to lead the delivery of patient care services (Dyess & Sherman, 2011). The development of clinical leadership has been shown to improve patient safety, healthy work environments, job satisfaction, and retention rates (Curtis et al., 2011).

Understanding the clinical leadership behaviors that nurses have can serve to inform, and provide opportunity for continued development of clinical leadership for improved

patient care practices, increased job satisfaction, retention of nurses, and to positively impact the nursing shortage.

Due to the specific challenges faced by staff nurses in rural areas, the setting for this study was rural critical access hospitals. A critical access hospital is a hospital that is located in a rural area and located more than 35 miles from the nearest hospital (Centers for Medicare & Medicaid Services [CMS], 2013). A rural area is defined as being an area with a population of less than 50,000 (Health Resources & Services Administration [HRSA], 2017). Critical access hospitals provide care to the residents in the area, can have up to 25 inpatient beds with an average length of stay of 96 hours or less for acute patients, or provide swing-bed services in their inpatient beds. A critical access hospital must provide emergency care services at all times (CMS, 2013). The population that is served by these hospitals are often elderly, have higher rates of chronic illness and may require more care. This population includes a higher rate of those uninsured, and individuals often have to travel a long distance to access health care (RHIfhub, 2017). The nurses who work in critical access hospitals need to be prepared to care for individuals across the life span who may need care in the rural area and want to stay close to home.

Study Framework

Understanding the clinical leadership of nurses can serve to inform, and provide opportunity for continued development of clinical leadership for improved patient care practices, increased job satisfaction, retention of nurses, and to positively impact the nursing shortage. The clinical leadership behaviors include effective communication, clinical expertise, coordination of patient care, interprofessional collaboration, and

empowerment/interpersonal understanding. Patrick et al. (2011) describe how these behaviors align with the model of transformational leadership developed by Kouzes and Posner (1995). This transformational leadership model states that leaders get tasks done in organizations by inspiring others to work together and achieve common goals (Kouzes and Posner, 1995). Patrick et al. (2011) use this model to describe how nurses are leaders of the health care team and ensure that patients receive quality care. Staff nurses are called to be clinical leaders to improve patient care, and as nurses take pride in their accomplishments of influencing the health care team and patients, their job satisfaction increases (Grindel, 2016). Job dissatisfaction has been recognized as creating problem with retention of new graduate nurses, and this is a contributing factor to the nursing shortage (AACN, 2017). These nurses are changing jobs and leaving the profession of nursing at alarming rates (Casey et al., 2011; Cleary et al., 2013; Duchscher, 2008; Kovner et al., 2007; Molanari et al., 2011; Wu et al., 2012). The development of clinical leadership behaviors has been shown to improve patient safety, job satisfaction, and retention rates (Curtis et al., 2011; Dyess & Sherman, 2011; Laut, Wiknik, LaCroix, Bunting, & Pettorini-D'Amico, 2018). Retention of nurses, keeping nurses employed, can be described through intent to stay, or the likelihood of nurses continuing their employment in an organization. The long term goal is increasing retention of nurses will improve the nursing shortage which will positively impact patient care. Figure 1 depicts the relationship between these variables.

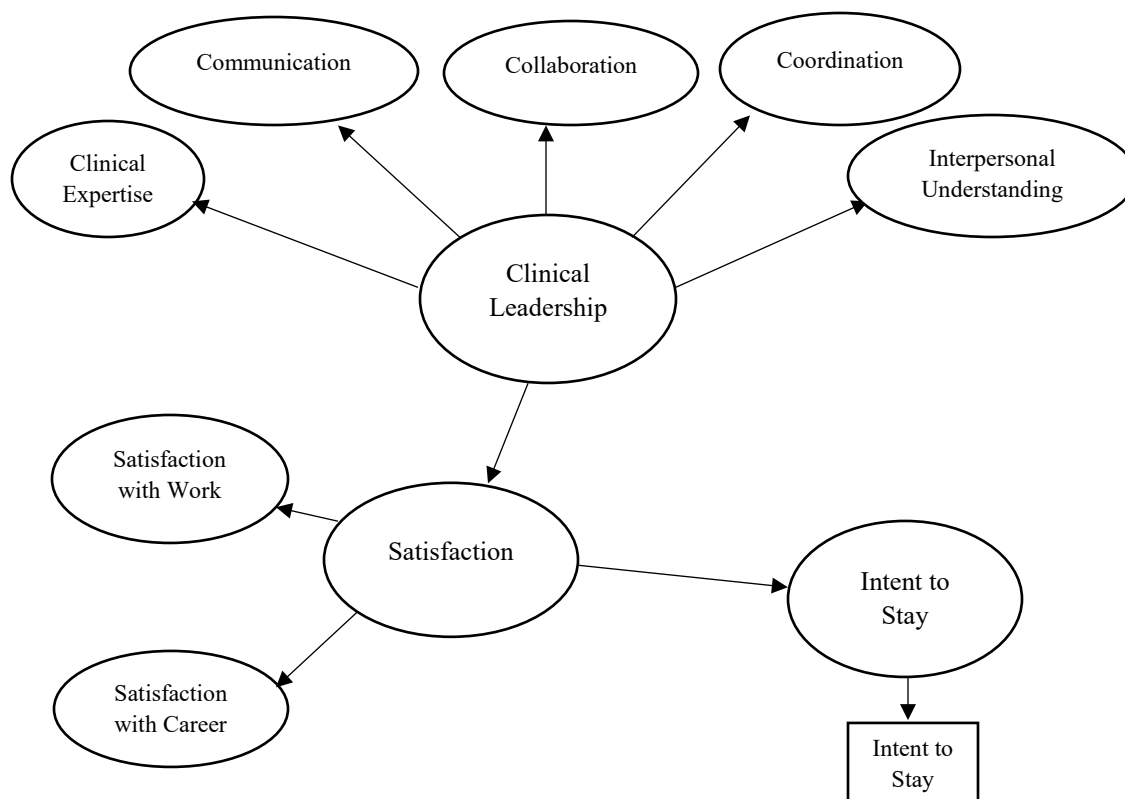


Figure 1. Hypothesized association between clinical leadership, satisfaction, and intent to stay.

Research Purpose

The purpose of this study was to quantify clinical leadership among staff nurses working in rural areas, examine its determinants, and impact on job satisfaction and retention. This study builds the knowledge base regarding leadership role preparation needs of the new graduate nurse transitioning into rural practice, and informs nurse managers for the creation of an empowered work environment supporting the transition of new graduate nurses into the rural practice setting. This study contributes to building the knowledge base around the clinical leadership of nurses in rural practice in critical access hospitals, and the relationship of these behaviors on nurses' job satisfaction and intent to stay. Building the knowledge base around leadership preparation particularly of

new graduate nurses moving onto rural practice is important to the future education and preparation of nurses for rural practice, and to support retention in rural critical access hospitals. Addressing the nursing shortage by improving the transition that nurses make into the rural practice setting can positively impact patient care and safety through retention of well qualified nurses for the unique rural nursing role.

Research questions. This study utilized a nonexperimental cross-sectional survey design to address the following research questions:

1. What are the clinical leadership behaviors of staff nurses practicing in rural areas?
2. What is the job satisfaction of staff nurses practicing in rural areas?
3. Does clinical leadership influence professional satisfaction and retention among staff nurses practicing in rural areas?

Hypothesis 3a: Greater clinical leadership of staff nurses is associated with greater professional satisfaction and employment retention.

Hypothesis 3b: Professional satisfaction is a mediator in the association between clinical leadership and employment retention.

Definition of Terms

Clinical leadership: “Process of leadership embedded in the professional practice behaviors of staff nurses,” “Staff nurse behaviors that provide direction and support to clients and the health care team in the delivery of patient care” and “a RN who influences and coordinates patients, families and health care team colleagues for the purpose of integrating the care they provide to achieve positive patient outcomes” (Patrick et al., 2011, p. 450).

Staff nurse: All registered nurses in clinical practice roles whose job includes providing direct patient care, specifically individuals who are not in formal leadership positions (Patrick et al., 2011).

New graduate nurse: Nurse in the first two years of practice, with licensure to practice as an RN, who has graduated with an associate degree or baccalaureate degree in nursing from a nursing program. These nurses have typically been in professional practice two years or less and are still experiencing many new situations. New graduate nurses will be defined as novice and advanced beginner as described by Benner (1982). A novice nurse is nurse who is at the beginning of a new job and has the minimum competency needed to complete entry level nursing care and is in the first two years of practice. An advanced beginner nurse is the nurse who “can demonstrate marginally acceptable performance” but still needs assistance in determining priorities (Benner, 1982, p. 403).

Transition: The “process, direction, and change in fundamental life patterns” and “changes occurring in identities, roles, relationships, abilities, and patterns of behavior” (Schumacher & Meleis, 2007, p. 119).

Job satisfaction: The feelings of staff nurses about their employer and about nursing as a job (Shaver & Lacey, 2003).

Retention: Keeping nurses in an organizations’ employment (Kovner et al., 2007).

Intent to stay: “The estimated likelihood of continued membership in an organization” (Price & Mueller, 1981, p. 546).

Rural area: Area with a population of less than 50,000 (HRSA, 2017).

Critical access hospital: A hospital that is located in a rural area and more than 35 miles from the nearest hospital (CMS, 2013).

Assumptions of the Study

Assumptions of this study are based on the principles that were accepted as truths before this study began (Polit & Beck, 2017). The primary assumption of this study was that the exploration of clinical leadership of staff nurses may provide information to inform clinical leadership preparation and support transition from their nursing program to the professional role of a nurse in rural practice. This could potentially support retention and impact the nursing shortage. Another assumption was that the nurses would be truthful and provide valuable insight into their leadership behaviors in professional practice. It was assumed that new graduate nurses in practice in critical access hospitals align with the description of the novice and advanced beginner as described by Benner (1982).

Limitations of the Study

There were limitations of this study. The nonexperimental cross-sectional design of the study was a limitation as this design has a limited ability to support causal inferences (Polit & Beck, 2017). Humans were used directly as the instrument through which information was gathered. While these humans are assumedly intelligent and conscientious, they could be fallible tools. Participants for the study were recruited by convenience from critical access hospitals in one rural state only which limits generalizability of the findings. The data gathered was specific to the participants of this study and the findings may not be generalizable to other populations. Another limitation was that the researcher cannot account for all potential variables in work conditions and

variation in educational teaching and learning experiences of participants. The method of online surveys may have had a potential bias in access to and comfort with using a computer and the internet. This method of data collection was chosen to allow greater access to the population, and with the thought that all nurses will have some level of comfort with computers and internet as they use them for their jobs. The method of online surveys may have posed a challenge in response rates. According to Polit and Beck (2017) some research has shown that Monday afternoons are the best time to send out email invitations to participate in surveys. The initial email was sent on a Monday, and follow-up reminders were sent every week on Mondays for the duration of data collection.

Delimitations of the Study

There were delimitations of this study. The data collection was conducted in January through the use of online surveys. This research study relied on participation from staff nurses in rural critical access hospitals in North Dakota. Clinical leadership of staff nurses was described with the five behaviors that have been discussed. Job satisfaction and intent to stay were measured with general questions.

Significance of the Study to Nursing

The purpose of this study was to quantify the clinical leadership among staff nurses working in rural areas, examine its determinants, and impact on job satisfaction and intent to stay. This study is important because it leads to identifying clinical leadership behaviors in nurses working in rural critical access hospitals. Understanding gaps in clinical leadership contributes to identifying areas for nursing programs to focus on preparing new nurse leaders, and informs nursing employers in how to support the

transition of new graduate nurses into professional practice. This could ultimately improve job satisfaction and then retention of these nurses, decreasing the nursing shortage and improving patient care in the rural setting.

There is a nursing shortage facing our country, which is worse in rural areas (RHlhub, 2017). The profession of nursing is looking to new nurses graduating from nursing programs to alleviate the nursing shortage. Despite the fact that new nurses are graduating from colleges across America every year, the nursing shortage is still projected to grow (AACN, 2017). The problem of retention of new graduate nurses has been recognized by AACN as a contributing factor to the nursing shortage (AACN, 2017). One of the main problems with the nursing shortage and subsequent insufficient nursing staffing is that this is negatively impacting patient care (AACN, 2017). Multiple studies have been done to learn about the impact of nurse staffing on patient care and these studies indicate that when nurses have higher patient loads there are multiple adverse effects including higher readmission rates, extended hospital stays, increase in infection rates, patient mortality, failure-to-rescue rates, and nurse burnout (AACN, 2017). Efforts to address the nursing shortage and improve levels of staffing will positively impact access for patients to high-quality and safe care.

The development of clinical leadership is recognized as important in associate and baccalaureate degree programs preparing nurses for practice (AACN, 2008; OADN, 2018). Curtis et al. (2011) state that nurses are not adequately prepared to be leaders during their nursing programs, even though leaders are necessary in the clinical setting. Many studies have explored the transition that nurses make from student to professional nurse and new graduate nurses, but few have looked specifically at leadership in new

graduate nurses. No studies were found in the current literature that addressed the leadership practices of new graduate nurses working in rural areas. Clinical leadership is important for new graduate nurses working in rural areas, where the nursing shortage is greater, as the transition to practice is increasingly difficult and the broad nursing practice creates greater challenges for nurses (RHlhub, 2017).

Exploring the clinical leadership of staff nurses in rural areas may assist in identifying leadership development needs in preparation of new graduate nurses for transitioning to rural practice following graduation from an associate or baccalaureate degree program. Building knowledge to advance the clinical leadership of staff nurses in rural practice may lead to improvements in their nursing practice, increasing job satisfaction and patient safety, as well as support retention and potentially decrease the nursing shortage. In North Dakota, largely a rural and frontier landscape, this leadership preparation is essential to the success of rural hospitals to recruit and retain nurses and provide safe patient care.

CHAPTER II: Literature Review

The profession of nursing is experiencing a nursing shortage that is projected to increase without an end in sight (AACN, 2017). Nursing is looking to new graduate nurses to help alleviate this shortage, with the rural areas being more impacted by a continued lack of providers as compared to urban counterparts (RHlhub, 2017). However, new graduate nurses are faced with many challenges as they transition from student to professional nurse, and often feel that they are inadequately prepared which can lead to problems with retention. Clinical leadership is an area of nursing that has been acknowledged as being important for patient care and job satisfaction, but few studies have explored the clinical leadership behaviors of staff nurses (AACN, 2017).

A search for articles was carried out in CINAHL Complete, PubMed/Medline Complete, EBSCO/Academic Search Complete, ProQuest/Nursing, and Allied Health Database. Key terms searched included graduate nurses, transition, staff nurses, rural nurses, rural hospitals, leadership, clinical leadership, job satisfaction, retention, intent to stay, support, and mentoring. References to articles were explored to find additional related literature. The literature search was performed from August 2017 to August 2018.

Many studies have explored the transition that nurses make from student to professional nurse and new graduate nurses, but few have looked specifically at clinical leadership in new graduate nurses. Only one study was found that compared leadership behaviors between associate degree and baccalaureate degree nurses. Few studies were found in the current literature that addressed the leadership practices of new graduate nurses working in rural areas. Exploring the clinical leadership of staff nurses in rural

areas may assist in identifying leadership development needs in preparation for transitioning to rural practice following graduation from an associate or baccalaureate degree program. Building knowledge to advance the clinical leadership of staff nurses in rural practice can inform practice, lead to improvements in leadership development for practice, increase job satisfaction and patient safety, as well as support retention, thereby impacting the nursing shortage.

Rural Nursing

While the nursing shortage is affecting all areas of nursing, there is a greater shortage of nurses in rural areas than in urban areas. Approximately 16% of nurses work in rural areas, and per 10,000 people there are 85.3 nurses in rural areas and 93.5 nurses in urban areas (RHIhub, 2017). This means that the shortage of nurses is even larger in rural healthcare with approximately 8 less nurses per 10,000 people than in urban areas (RHIhub, 2017). A rural area is defined as being an area with a population of less than 50,000 (HRSA, 2017). Rural areas are serviced by critical access hospitals. A critical access hospital is a hospital that is located in a rural area and being located more than 35 miles from the nearest hospital (CMS, 2013). Critical access hospitals provide care to the residents in the area, can have up to 25 inpatient beds with an average length of stay of 96 hours or less for acute patients, or provide swing-bed services in their inpatient beds. A critical access hospital must provide emergency care services at all times (CMS, 2013).

Research has demonstrated that nurses who work in rural areas face greater challenges as nursing practice is broad in remote settings (Molinari et al., 2008; RHIhub, 2017). Rural nursing practice presents unique challenges for the nurses who need to be prepared to care for all individuals who may come to the hospital (Molinari et al., 2008).

The population that is served by these hospitals are often elderly, have higher rates of chronic illness and may require more care. This population includes a higher rate of those uninsured, and individuals often have to travel a long distance to access health care (RHIhub, 2017). The nurses who work in critical access hospitals need to be prepared to care for individuals across the life span who may need care in the rural area and want to stay close to home. The practice of rural nursing is described as being a generalist role due to the need to provide care to those who enter the critical access hospital setting, across the wellness and illness spectrum, acuity level, and age group (Molinari et al., 2008). Critical access hospitals as well as nurses who work in rural areas are facing challenges due to the nursing shortage. These include lack of mentors, internships or orientation programs, long working hours and high nurse to patient ratios, among other challenges (RHIhub, 2017).

Rural hospitals are facing a greater nursing shortage with an increasingly difficult transition into practice for new graduate nurses (RHIhub, 2017). The transition into practice for new graduate nurses who are practicing in rural areas has been described as more difficult than for new graduates who go to work in urban areas. Nurses working in a rural area require a specific skill set due to the generalist role of providing care for all disciplines, acuity levels, and age groups during one shift (Molinari et al., 2008). New graduate nurses who work in rural hospitals may be at the bedside one minute, and then in a management role as role requirements overlap in a critical access hospital (Seright, 2011). The multifocal nature of rural nursing is rarely acknowledged when preparing nursing students who plan to transition into nursing practice in a low population area. (MacLeod et al., 2008). Many nurses felt their education was ineffective in preparing

them for rural practice and the unique nursing role associated with intent to move away from less populated areas (Molanari et al., 2011). The problem of retaining new nurses as they graduate and move into practice in rural areas is impacting the nursing shortage.

Clinical Leadership of Staff Nurses

Leadership has been defined in many different ways by many different disciplines. The concept of leadership is significant to nursing. Leadership is a complex concept with a variety of perspectives. In nursing, leadership often is defined by management roles. Although effective managers must be leaders, effective leaders are not always in management positions (Kouzes & Posner, 1995).

Leadership needs to be part of all professional nursing roles, including nurses who provide direct patient care (AACN, 2008). According to Curtis et al. (2011) all nursing roles are leadership roles, so it is important that all nurses have leadership skills. Nurses who provide direct patient care need to have clinical leadership to ensure that patients are receiving high quality and safe care. Clinical administrators are encouraged to create empowered work environments where nurses can enact leadership behaviors while providing direct patient care, as clinical leadership in staff nurses is viewed as essential to keeping patients safe (Patrick et al., 2011). It is essential that nurses who provide direct patient care have clinical leadership behaviors as this will ensure that they strive to provide high quality safe care to patients (Laut et al., 2018).

There is a need to define leadership in bedside nurses in order to understand the importance of this concept. Curtis et al. (2011) defined a leader as a person who provides assistance to others, including staff nurses who lead patients and clients. Leadership behaviors are the staff nurses' ability to apply concepts, skills, and decision making in

providing and managing nursing care (Curtis et al., 2011). Yoder-Wise (2015) describes leadership in staff nurses as the ability to interpret a situation and enter the situation in the absence of a defined plan, and states that leaders are known by their performance and actions, and not their position. Patrick et al. (2011) extensively studied clinical leadership in staff nurses and described a process of leadership being embedded in the professional practice behaviors of staff nurses. Clinical leadership behaviors are the staff nurse behaviors that provide direction and support to clients and the health care team in the delivery of patient care (Patrick et al., 2011). A nurse leader at the bedside is “a RN who influences and coordinates patients, families and health care team colleagues for the purpose of integrating the care they provide to achieve positive patient outcomes” (Patrick et al., 2011, p. 450).

Clinical leadership of rural nurses. Nurses moving into practice in critical access hospitals must be able to provide care across the life span at the bedside, as well as collaborate with colleagues, coordinate, and direct patient care. Critical to the transition of new graduate nurses into practice in the rural setting is the ability to integrate clinical leadership behaviors such as communication, collaboration, expertise, coordination, and relationship building. Clinical leadership at the bedside or point of care is viewed as essential to keeping patients safe and improving quality of care (Patrick et al., 2011).

Many rural nurses move into leadership roles early in their careers as there are few nurses to fill these roles (Seright, 2011). New nurses in rural hospitals need leadership behaviors as they may be placed in positions of high accountability early in their careers (Seright, 2011). Leadership behaviors improve patient safety outcomes and increase staff nurse retention (Curtis et al., 2011). New graduate nurses who work in

rural hospitals may be at the bedside one minute, and in a management role as role requirements overlap in a critical access hospital (Seright, 2011). Preparing graduate nurses at the associate degree and baccalaureate level who have clinical leadership for the uniqueness of the rural setting might support retention of new nurses moving into practice in less populated areas.

Clinical Leadership of New Graduate Nurses

The preparation of nurses at the associate and baccalaureate level includes an emphasis on the development of leadership behaviors for transition into the nursing role (AACN, 2008; AACN 2015; AACN, 2017; Dyess & Parker, 2012; Dyess & Sherman, 2011; OADN, 2018; Patrick et al., 2011; Seright, 2011). Leadership is taught to undergraduate nursing students as behaviors that they will need to perform in their new roles as bedside nurses.

The development of leadership behaviors are important to the nursing role as new graduate nurses are expected to lead the delivery of patient care services (Dyess & Sherman, 2011). The standards for nursing which are taught to all registered nurses include the need for being able to provide leadership when caring for patients (American Nurses Association [ANA], 2015). The AACN (2008) published *The Essentials of Baccalaureate Education for Professional Nursing Practice* which describes the role of the generalist nurse and the education that nursing schools need to provide to ensure that nurses are ready for general nursing practice. One notable area in this document is the establishment of nurses as leaders. The AACN (2008) states that new graduate nurses at the baccalaureate level need to be prepared to be leaders of the healthcare team and integrate leadership principles in care delivery including direct patient care. Nursing

programs need to prepare nurses to apply leadership in overseeing patient care, as well as in implementing patient safety and quality improvement initiatives. Leadership emphases needed in nursing include advocating, collaborating, critical decision making, communication, delegating, coordinating care, and quality improvement (AACN, 2008). These areas of leadership are found throughout the National Council of State Boards of Nursing (NCSBN, 2016) NCLEX-RN test plan, which is necessary for licensure for associate degree and baccalaureate degree nurses. Leadership has been emphasized for associate degree nurses in recent years, as they need to be able to advance nursing practice and create change (OADN, 2018). The ANA (2015) defines the standards of nursing practice for all registered nurses including baccalaureate and associate degree nurses. These standards are often used to guide nursing education programs in educating nursing students on what is necessary to become a safe competent nurse. Specifically, standard 11 presented in this document is related to the need for leadership preparation of registered nurses for practice. The registered nurse is expected to provide leadership in the practice setting (ANA, 2015).

While the AACN (2015) states that baccalaureate prepared nurses are better prepared to work in the complex healthcare system, they acknowledge that graduates from baccalaureate and associate degree programs sit for the same licensing exam. These nurses are all prepared to work in the same jobs. Many nurses who transition to practice in a rural setting are prepared at the associate degree level. Approximately 51.6% of RNs working in rural areas have an associate degree as their highest level of education as compared with 35.3% of urban nurses (RHIhub, 2017).

It is critical for new graduate nurses to develop leadership behaviors from the beginning of their career (Dyess & Sherman, 2011). Nurses must be able to direct and support patients and health care teams when providing care (Patrick et al., 2011). Fardellone et al. (2014) state that staff nurses are the leaders at the bedside and that these nurses need to collaborate effectively and create change to transform patient care. Leadership in nursing has been found to have a positive correlation with many factors including patient safety, healthy work environments, job satisfaction, and retention rates (Curtis et al., 2011). Leadership behaviors are needed in nurses transitioning to practice in order to ensure that new graduate nurses provide safe patient care (Curtis et al., 2011; Fardellone et al., 2014; Patrick et al., 2011). Curtis, Sheerin, and de Vries (2011) state that leadership can be taught and should be taught in nursing education and continually developed in nurses in practice. Research demonstrates that when leadership is integrated into practice it improves the leadership and scope of what nurses can accomplish (Curtis et al., 2011). Student nurses are taught about leadership and as they transition to staff nurse in the clinical setting they need to strengthen their leadership behaviors as they may be expected to rapidly take on leadership roles (Laut et al., 2018).

Curtis et al. (2011) state that nurses are not adequately prepared to be leaders during their nursing programs, even though leaders are necessary in the clinical setting. Dyess and Parker (2012) describe that nursing students are taught about leadership and making clinical decisions but that the reality of nursing practice is different, and the transition that nurses make from student to professional is difficult. It is critical for new graduate nurses to incorporate clinical leadership from the beginning of their career as they are expected to lead the delivery of patient care services (Dyess & Sherman, 2011).

Developing clinical leadership of nursing students at all degree levels is important in supporting transition to practice in rural hospitals as these nurses will need these skills early in their career (Seright, 2011).

Clinical leadership. Clinical leadership as conceptualized most recently by Patrick et al. (2011) is the “process of leadership embedded in the professional practice behaviors of staff nurses” and the “staff nurse behaviors that provide direction and support to clients and the health care team in the delivery of patient care” (p. 450). This leadership is an area that has been emphasized as necessary for nurses prepared at all levels (AACN, 2017). Leadership is taught to undergraduate nursing students as behaviors that they will need to perform in new roles as bedside nurses, and are integral to all nurses for providing competent, safe care to patients. There are five common clinical leadership behaviors found in educational curricula at the associate and baccalaureate degree levels, and which include: effective communication, coordination of care, clinical expertise, collaboration, and empowerment/interpersonal understanding (AACN, 2008; ATI, 2016; Yoder-Wise, 2015).

Effective communication. The leadership behavior of effective communication is described as the ability to deal with people skillfully and being able to teach and interpret information to promote the care of patient and family (Patrick et al., 2011; Yoder-Wise, 2015). Nurses need to be able to explain and teach aspects of health care to patients and be cognizant of nonverbal communication (Yoder-Wise, 2015). Nurses must be able to communicate effectively and sometimes powerfully, especially when resolving conflicts (Yoder-Wise, 2015). Staff nurses are often the key communicators in the health care team, relaying information between patients and other healthcare providers (Patrick et al.,

2011). Effective communication is important for new graduate nurses in being able to provide safe patient care (Yoder-Wise, 2015).

Research demonstrates that this leadership behavior is important for nurses, but no recent studies were found specific to rural nurses or rural new graduate nurses. According to Fardellone et al. (2014) nurses with varying levels of experience at the bedside reported that they interact with patients and families and collaborate with all members of the healthcare team. In a study by Olson-Sitki, Wendler, and Forbes (2012), new graduate nurses increased in their communication skills after being part of a residency program. In a study comparing differences between associate and baccalaureate degree prepared new graduate nurses by Thompson (2011) there were no differences in their communication skills. According to Yoder-Wise (2015) communication skills in new graduate nurses can be increased by having a mentor that models good communication.

Coordination of care. The leadership behavior of coordination of care requires nurses to manage all aspects of patient care, while nursing education teaches nurses about individual, family, and community needs and how all aspects require coordination of care (Yoder-Wise, 2015). Nurses need to be able to coordinate the health care team processes and direct and support patients in providing safe patient care (Patrick et al., 2011). Nurses must assist patients and families to plan and make decisions about care and ensure that the healthcare system works on the patient's behalf (Yoder-Wise, 2015). According to Yoder-Wise (2015) nurses lead when they intervene with courage for patients.

Research demonstrates that this leadership behavior is important for nurses, but few studies were found on this behavior in new graduate nurses and no recent studies

were found specific to rural nurses or rural new graduate nurses. In new graduate nurses who participated in an orientation program there were no significant differences in their health care delivery or patient safety after the program was complete (Olson-Sitki et al., 2012). When comparing associate and baccalaureate degree prepared new graduate nurses there was no difference in their care delivery (Thompson, 2011).

Clinical expertise. New graduate nurses can no longer just follow orders and protocols for care; they need to be actively creating high quality experiences for health care clients (Yoder-Wise, 2015). Nurses need to have the clinical knowledge to step into the unknown as they need to be able to interpret a situation, enter the situation in the absence of a defined plan, and provide safe high quality patient care (Yoder-Wise, 2015). Nurses need to have the clinical knowledge to make decisions as this is required to provide safe patient care (Patrick et al., 2011).

Clinical expertise or having clinical knowledge has been studied in new graduate nurses, however few studies looked at this in relation to being a leader. New graduate nurses who were educated on leadership behaviors as they transitioned into practice improved in their ability to think broadly about issues and challenges that exist in healthcare (Dyess & Sherman, 2011). When comparing differences between associate and baccalaureate degree prepared nurses there was no difference in their problem solving abilities (Thompson, 2011). Sedgwick, Grigg, & Dersch (2014) studied how rural nurses of varying years of experience reasoned through clinical problems. They found that clinical reasoning varied considerably and did not depend on years of experience (Sedgwick et al., 2014). Another study with rural new graduate nurses found that staff development and education was necessary to ensure that nurses were providing

safe patient care (Molanari et al., 2011). According to Yoder-Wise (2015) clinical expertise in new graduate nurses can be increased by gaining experience, accepting responsibility for actions, and seeing failures as opportunities to learn and grow.

Collaboration. The leadership behavior of collaboration encompasses the recognition of the contribution of others on the health care team to improve patient care (Yoder-Wise, 2015). Nurses need to be active collaborators with other members of the health care team and with patients and families, and all members of the health care team need to contribute in making decisions and providing care (Yoder-Wise, 2015). Nurses need to be able work to resolve conflict (Yoder-Wise, 2015). Teamwork and the ability to be the liaison between caregivers and patients is essential to safe patient care (Patrick et al., 2011).

Laut et al. (2018) studied leadership in new graduate nurses after education was provided and found that nurses significantly increased in their ability to understand other points of view in the health care team. Seright (2011) found that collaboration with co-workers was essential for new graduate nurses as this was the most frequently used strategy by new nurses for making clinical decisions. New graduate nurses who were paired with an experienced nurse during their first year of practice increase in confidence in their skills (Olson-Sitki et al., 2012). When comparing associate and baccalaureate degree prepared new graduate nurses, associate degree nurses felt that they received more support from coworkers (Thompson, 2011). According to Fardellone et al. (2014) nurses at the bedside with varying years of experience reported that they worked collaboratively with all members of the health care team and that they needed to be able to interact with patients and families. Yonge, Myrick, Ferguson, and Grundy (2013) found that the rural

health care team needs to precept and support nursing students who are transitioning into the role of nurse and that teamwork is essential to rural nursing. New graduate nurses in rural areas relied heavily on others in the decision making process and felt that practice is necessary to become proficient in reasoning skills (Sedgwick et al., 2014).

Empowerment/interpersonal understanding. According to Yoder-Wise (2015) relationships with others are a key aspect of leadership. Nurses at the bedside need to be able to help patients envision goals, set goals for improving healthcare, assist in creating change, have a commitment to self-growth, inspire others, and take time to celebrate accomplishments (Yoder-Wise, 2015). Nurses need to have an understanding of one's self and manage one's self, or have a commitment to self growth (Patrick et al., 2011; Yoder-Wise, 2015). Nurses need to understand one's self so that they can empathize with others (Patrick et al., 2011).

Research demonstrates that this leadership behavior is important for nurses, but few studies were found on this behavior in new graduate nurses and no recent studies were found specific to rural nurses or rural new graduate nurses. Fardellone et al. (2014) found that when leadership skills are developed, clinical nurses feel empowered in making decisions and improving patient care. Laut et al. (2018) found that after leadership education, new graduate nurses were still not confident in taking an active role in creating change. When comparing associate and baccalaureate degree prepared new graduate nurses, associate degree nurses felt more empowered than baccalaureate degree nurses as they described receiving praise and support from coworkers (Thompson, 2011). According to Yoder-Wise (2015) new graduate nurses can develop in their interpersonal understanding and empowerment if they gain respect and trust and share rewards and

successes in their nursing practice with coworkers. New graduate nurses need to be willing to grow and learn (Yoder-Wise, 2015).

Clinical leadership behaviors for new graduate nurses are described, but few studies investigate the behaviors of new graduate nurses. As clinical leadership behaviors are important for new graduate nurses, it is necessary to understand what leadership behaviors new graduate nurses have and the gaps in these behaviors. This will lead to an understanding of how to assist new graduate nurses in developing or building clinical leadership behaviors, and when nurses can be expected to perform as leaders, providing safe patient care. Yoder-Wise (2015) does acknowledge that developing expertise in leadership takes time and should not be expected in new graduate nurses, but that every leader needs to begin with some level of skill. Patrick et al. (2011) found that staff nurses reported that they use the described clinical leader behaviors most of the time, but they did not look at years of practice. Patrick et al. (2011) recommended future studies to investigate the clinical leadership behaviors of staff nurses. Fardellone et al. (2014) found that nurses with more years of RN experience reported fewer leadership behaviors, leading to the belief that nurses need to be aware of their leadership behaviors and continually develop leadership skills, and recommended that further research be done to describe the leadership behaviors of RNs at the bedside to improve patient outcomes. Laut et al. (2018) stated that future research needs to be focused on the leadership development of new graduate nurses, as it is essential that nurses who provide direct patient care have leadership skills to ensure that they strive to provide high quality safe care to patients. When new graduate nurses were part of a leadership program as they were transitioning into practice, all leadership behaviors increased except for enabling

others to act (Dyess & Sherman, 2011). The development of clinical leadership behaviors will improve job satisfaction and increase retention (Dyess & Sherman, 2011; Laut et al., 2018).

Job Satisfaction and Intent to Stay

The premise of job satisfaction is that it is an important concept for keeping staff nurses on the job, and there are many different factors that have been studied as contributors to nursing job satisfaction (Shaver & Lacey, 2003). The factor affecting job satisfaction that is being considered in this study is clinical leadership. One benefit of having clinical leaders at the bedside is an increase in job satisfaction, as nurses take pride in their accomplishments of influencing the health care team and patients to improve care (Grindel, 2016). Job satisfaction is negatively related to employee turnover, and job turnover, which is precipitated by satisfaction levels, contributes to how severe the nursing shortage is (Shaver & Lacey, 2003).

The RN workforce need is expected to grow by 16% or over 400,000 people by the year 2024 and this growth in the RN workforce demand is creating a nursing shortage that is expected to surpass 1,000,000 nurses by the year 2024 (AACN, 2017). The profession of nursing is looking to new nurses graduating from nursing programs to alleviate the nursing shortage. Despite the fact that new nurses are graduating from colleges across America every year, the nursing shortage is still projected to grow (AACN, 2017). The problem of retention of new graduate nurses has been recognized by AACN as a contributing factor to the nursing shortage (AACN, 2017).

Studies have shown that new graduate nurses are changing jobs and leaving the profession of nursing at alarming rates. Up to 40% of new graduate nurses change jobs

or leave the profession within two years of entering the workforce (Cleary et al., 2013). Forty three percent of graduates two to four years post-graduation planned to leave the profession (Cleary et al., 2013). Thirteen percent of new graduate registered nurses had changed jobs within the first year of practice and 37% reported that they felt ready to change jobs (Kovner et al. 2007). Wu et al. (2012) reported that between 18 to 50% of new graduate nurses change jobs or leave the profession within the first year of nursing practice. Thirty to 60% of new graduate nurses seek new jobs or leave the profession within their first year of practice (Casey et al., 2011). Duchscher (2008) found that new nurses are likely to leave their first job within 18 months due to feelings of discouragement and exhaustion. In the rural setting feeling unprepared for practice was negatively associated with intent to move, with 11% of new graduate nurses intending to move from the rural hospital and remote setting (Molanari et al., 2011). These studies demonstrate that there is a problem with nurses being dissatisfied with their jobs and also with their profession of nursing. This dissatisfaction is creating problems with retention, in nursing jobs and in nursing as a career. These studies show that retention for new graduate nurses must be addressed if these nurses are a suggested solution to the nursing shortage.

The difficult transition that new graduate nurses must make into the professional practice is creating difficulty with retention. New graduate nurses feel that there are discrepancies between their educational preparation and their responsibilities as a nurse. This creates dissatisfaction with their job, including feelings of being overwhelmed and frustrated which can lead to them not only leaving their job, but leaving the profession of nursing (Candela & Bowles, 2008; Clark & Holmes, 2007; Cleary et al., 2013;

Duchscher, 2009; Kelly & Ahern, 2009; Newton & McKenna, 2007; Parker, Giles, Lantry, & McMillan, 2014). In a study of job satisfaction over 12 months, new graduate nurses had the highest satisfaction at one month and the lowest satisfaction at 6 months, with satisfaction increasing again by 12 months but not to the original level (Thompson, 2011).

The stresses and challenges that exist for new graduate nurses transitioning from a student into nursing practice are compounded for new graduate nurses in rural areas. The transition into practice for new graduate nurses practicing in rural areas has been described as being more difficult than for new graduates who go to work in urban areas. Nurses working in a rural area requires a specific skill set due to the generalist role of providing care for all disciplines, acuity levels, and age groups during one shift (Molinari et al., 2008). The multifocal nature of rural nursing is rarely acknowledged when preparing nursing students who will transition into nursing practice in rural areas (MacLeod et al., 2008), with many nurses expressing a feeling of ineffectiveness based on educational preparation for rural practice. New graduate nurses who transitioned into practice in rural areas stated that they felt unprepared for practice, overwhelmed, abandoned, and needed clinical supervision (Mellor & Greenhill, 2014). New nurses who participated in a rural nurse residency program rated their undergraduate education as ineffective (Molanari et al., 2011). Feeling unprepared for the role of nurse is associated with the intent to move from a rural area (Molanari et al., 2011).

These studies all show that job satisfaction needs to be addressed to improve retention of new graduate nurses, with leadership recognized as an integral component of leadership. The development of clinical leadership behaviors has been shown to improve

patient safety, healthy work environments, job satisfaction, and retention rates (Curtis et al., 2011; Dyess & Sherman, 2011; Laut et al., 2018).

Need for This Study

Although clinical leadership in new graduate nurses affects job satisfaction and ultimately their intent to stay in the nursing role, little research has been conducted on the leadership behaviors that new graduate nurses have and what specific behaviors influence job satisfaction and intent to stay. Exploring gaps in clinical leadership of nurses in rural practice could enhance leadership preparation opportunities in associate and baccalaureate degree nursing programs to prepare the new graduate nurse for transition into practice in rural settings. Associate degree and baccalaureate degree nurses take the same test for licensure and are often eligible for the same jobs (NCSBN, 2016). Faculty in nursing schools could incorporate learning experiences in the curriculum to address the leadership knowledge gaps and plan clinical experiences to meet the specific needs of students to support successful transition into rural practice and improve job satisfaction and retention.

The literature presents a limited picture of research on understanding clinical leadership in staff nurses and how nurses acquire these behaviors. Clinical leadership has been described as being essential for new graduate nurses to provide safe patient care and improve job satisfaction. Given the difficult nature of rural nursing and the critical nursing shortage in these areas, leadership could be a very important aspect for improving patient care and increasing retention. There is a gap in the literature on clinical leadership of bedside nurses in rural settings. Exploring clinical leadership behaviors of nurses who transition to practice in a rural setting is important, as these behaviors have

been found to be essential to providing quality and safe patient care (AACN, 2017). Understanding the clinical leadership behaviors of new graduate nurses can apprise educators as well as nurse managers, supporting the transition into the professional nursing role in a rural hospital and contributing to the preparation and continued development of leadership.

Theoretical Framework

The concept of leadership has been important to nursing and there are numerous leadership theories with different perspectives (McEwen & Wills, 2014). The leadership theory of transformational leadership was used as a framework for this study. A transformational leader is “a long-term visionary who can inspire and empower others with his or her vision” (McEwen & Wills, 2014, p. 363). The transformational leader has a commitment to nursing with the ability to look at problems in new ways and will assist in reaching goals of their organization (McEwen & Wills, 2014). Transformational leadership is a theory that can be applied to nurses who are working in patient care. Leaders in nursing are often thought of as the nurses who lead and control. A transformational leader has skills for coordinating, integrating and facilitating, which are all tasks of staff nurses (McEwen & Wills, 2014).

One of the earliest descriptions of transformational leadership comes from James MacGregor Burns. Burns (1978) described a view of leadership as an exchange or transactional relationship continued to describe transformational relationships where leaders engage with followers to heighten their awareness of what is really important and move them beyond their own self interests for the good of the organization. Burns (1978) described a transformational leader as one who engages the full attention of the follower

with a shared vision of the future and looks for potential motives to move the follower's attitudes and behaviors beyond those focused on rewards. The result of transformational leadership is a reciprocal relationship that elevates the interaction and transforms both the leader and follower to higher levels of motivation and morality (Burns, 1978). This leads to people exceeding performance expectations. Kouzes and Posner (1995) developed the Five Practices of Exemplary Leadership Model based on this philosophy of transformational leadership where leaders get extraordinary things done in organizations by inspiring others to work together and achieve common goals. The model depicts leadership as a collection of practices and behaviors. Kouzes and Posner (1995) believe that leadership skills are learned behaviors and that anyone can become an effective leader and make a difference.

Kouzes and Posner's (1995) model of leadership can help guide the research question of exploring the leadership behaviors of nurses in rural hospitals. The model of transformational leadership developed by Kouzes and Posner includes five leadership practices that are essential for effective leaders: challenging the process, inspiring a shared vision, modeling the way, enabling others to act, and encouraging the heart (Kouzes & Posner, 1995). Challenging the process is a leadership practice that involves nurses searching for opportunities for change and taking risks to find better ways of doing things. This leader has ideas and takes the steps necessary to create change, improving practice and thinking innovatively. Inspiring a shared vision is a leadership practice that involves nurses envisioning the future and enlisting others to assist in creating change. This leader uses effective communication to inspire others to improve care. Modeling the way is a leadership practice that involves the nurse with detailed plans, setting an

example and goals that can be achieved along the way to the end goal. This leader ensures that participants remain committed to reaching the goal. Enabling others to act is a leadership process that fosters collaboration and strengthens others. This leader builds relationships and empowers others. Encouraging the heart is a leadership process where individual contributions are recognized and accomplishments are celebrated. This leader ensures that people are motivated and encouraged to keep working towards their goals (Kouzes and Posner, 1995).

Kouzes and Posner's (1995) leadership model is consistent with the defining behaviors of clinical leadership. This model of transformational leadership can be applied to the leadership of staff nurses and describes the behaviors that nurses need to be effective leaders. When staff nurses are clinical leaders, they use these behaviors to collaborate and influence their nursing colleagues, other members of the interprofessional healthcare team, their patients and family members to achieve goals with safe and quality patient care. Nurses need to be able to lead the health care team and ensure that patients receive quality care and nurses who learn and develop these behaviors will be leaders while providing direct patient care (Patrick et al., 2011). Patrick et al. (2011) described how the five leadership behaviors of effective communication, clinical expertise, coordination of patient care, interprofessional collaboration, and empowerment/interpersonal understanding that have been defined are linked with the leadership model by Kouzes and Posner (1995). Table 1 depicts the links between Kouzes and Posner model (1995) and the clinical leadership behaviors defined by Patrick et al. (2011).

Table 1. Aligning Kouzes and Posner's leadership practice behaviors with clinical leadership attributes.

Leadership practice behaviors	Clinical leadership attributes
Challenging the process Continuous learning Question the status quo Debrief failures and successes	Clinical expertise Clinical expertise Interpersonal understanding
Inspiring a shared vision Setting vision or purpose Finding a common good	Effective communication, collaboration Effective communication, collaboration
Enabling others to act Sharing information and resources Building trusting relationship	Collaboration Effective communication Interpersonal understanding
Modeling the way Creating shared values Achieving small wins	Interpersonal understanding Collaboration, coordination
Encouraging the heart Creating supportive relationship Recognizing contributions	Interpersonal understanding Effective communication Interpersonal understanding Collaboration

(Patrick et al., 2011)

Leadership, job satisfaction, and intent to stay. The relationship between a transformational leader and clinical leadership of staff nurses has been previously described. Literature states that clinical leadership has a correlation with job satisfaction and retention of staff nurses (Curtis et al., 2011; Dyess & Sherman, 2011; Laut et al., 2018). Clinical leadership has the potential to impact nursing practice and have an influence on satisfaction and intent to stay in rural practice. It is reasonable to expect that if staff nurses are clinical leaders, they will work according to the standard of practice and provide safe high-quality patient care. When nurses are able to effectively perform

their jobs and provide care for patients, this will lead to an increase in job satisfaction and retention.

Summary

Rural hospitals are facing a greater nursing shortage with an increasingly difficult transition into practice for new graduate nurses due to the vast differences in the patient population (RHIhub, 2017). Nurses working in a rural area require a specific skill set due to the generalist role of providing care for all disciplines, acuity levels, and age groups during one shift (Molinari et al., 2008). New graduate nurses who work in rural hospitals may be at the bedside one minute, and then in a management role as role requirements overlap in a critical access hospital (Seright, 2011). The multifocal nature of rural nursing is rarely acknowledged when preparing nursing students who plan to transition into nursing practice in a low population area. (MacLeod et al., 2008). Many nurses feel their education had been ineffective in preparing them for rural practice and the unique nursing role, associated with intent to move away from less populated areas (Molanari et al., 2011). The problem of retaining new nurses as they graduate and move into practice in rural areas is impacting the nursing shortage.

Leadership needs to be part of all professional nursing roles, including nurses who provide direct patient care, as this will ensure that patients receive high quality care and has been shown to improve retention of nurses (AACN, 2017; Curtis et al., 2011; Laut et al., 2018; Patrick et al., 2011). There are five common leadership behaviors found in education that nursing students are taught: effective communication, coordination of care, clinical expertise, collaboration, and empowerment/interpersonal understanding (AACN, 2008; ATI, 2016; Yoder-Wise, 2015). Few studies have explored the clinical leadership

of staff nurses and even less have looked at leadership in new graduate nurses. Only one study was found that compared leadership behaviors between associate degree and baccalaureate degree nurses. Few studies were found in the current literature that addressed the leadership practices of new graduate nurses working in rural areas.

There is a need to understand the clinical leadership behaviors of staff nurses in rural areas given the unique role of the rural nurse, and the need for leadership supporting care at the bedside and transition to this practice environment. Exploring the clinical leadership behaviors of staff nurses in rural areas may assist in identifying leadership development needs in preparation for transitioning to rural practice following graduation from an associate or baccalaureate degree program. Understanding the clinical leadership behaviors that nurses in rural areas have after nursing school and how they develop over time is important in improving the quality of patient care and increasing retention of nurses to assist in decreasing the nursing shortage. Building knowledge to advance the clinical leadership of staff nurses in rural practice may lead to improvements in their nursing practice, increasing job satisfaction and patient safety, as well as supporting retention and decreasing the nursing shortage. In North Dakota, largely a rural and frontier landscape, this leadership preparation is essential to the success of rural hospitals to recruit and retain nurses, and provide high quality patient care.

CHAPTER III: METHODOLOGY

The purpose of this study was to quantify clinical leadership among staff nurses working in rural areas, examine its determinants, and impact on job satisfaction and retention. This study builds the knowledge base regarding leadership role preparation needs of the new graduate nurse transitioning into rural practice, and informs nurse managers for the creation of an empowered work environment supporting the transition of new graduate nurses into the rural practice setting.

This study was conducted to address the following research questions:

1. What are the clinical leadership behaviors of staff nurses practicing in rural areas?
2. What is the job satisfaction of staff nurses practicing in rural areas?
3. Does clinical leadership influence professional satisfaction and retention among staff nurses practicing in rural areas?

Hypothesis 3a: Greater clinical leadership of staff nurses is associated with greater professional satisfaction and employment retention.

Hypothesis 3b: Professional satisfaction is a mediator in the association between clinical leadership and employment retention.

This study contributes to building the knowledge base around the clinical leadership of nurses in rural practice in critical access hospitals, and the relationship of clinical leadership on nurses' job satisfaction and intent to stay. Building the knowledge base around leadership preparation particularly of new graduate nurses moving onto rural practice is important to the future education and preparation of nurses for rural practice, and to support retention in rural critical access hospitals. Addressing the nursing shortage

by improving the transition that nurses make into the rural practice setting can positively impact patient care and safety through retention of well qualified nurses for the unique rural nursing role.

Study Design

To address the aims of this study, a quantitative approach was chosen. A nonexperimental cross-sectional design was used to assess the relationship between concurrent clinical leadership and professional satisfaction of staff nurses practicing in rural critical access hospitals, and retention in current employment. A cross-sectional design allowed for concurrent measurement of a variety of variables of interest for this study and exploring associations between them (Polit & Beck, 2017). Clinical leadership was measured using the *Clinical Leadership Survey*, a questionnaire developed to characterize five dimensions of clinical leadership in staff nurses aligned with leadership practices consistent with the Kouzes and Posner's transformational leadership model (Patrick et al., 2011). Professional satisfaction was measured using the *Satisfaction with Work* and *Satisfaction with Career* scales, which were developed to measure these two dimensions of professional satisfaction in nurses (Shaver & Lacey, 2003). Participants intention to stay in their current employment was used as a proxy measure of retention.

Study Population and Setting

The target population for this study was staff nurses who are employed in rural hospitals in the United States. The sample chosen for this study was recruited from rural critical access hospitals in North Dakota. Critical Access Hospital is a designation given by the Centers for Medicare and Medicaid Services to primary health hospitals providing limited hospital services to rural populations. In order to be eligible for such designation,

the following conditions should be met: 1) have 25 or fewer inpatient beds, 2) be located more than 35 miles from another hospital, 3) maintain an annual average length of stay of 96 hours or less for acute care patients, and 4) provide 24/7 emergency care services (CMS, 2013). Because rurality was the main focus in this study, including nurses working in hospitals with critical access designation only ensured that rurality was met. North Dakota is considered a predominantly rural state and is unique in the high number of hospitals with critical access designation, therefore was the ideal setting to conduct this study. Of the 42 hospitals in North Dakota, 36 (85.7%) have critical access designation; the remaining 6 are tertiary hospitals.

A non-probabilistic, consecutive sampling approach was used to include all accessible nurses, prepared at the associate or baccalaureate degree level, employed at rural critical access hospitals in North Dakota. Based on data from the North Dakota Center for Nursing, it has been estimated that approximately 600 registered nurses are employed in critical access hospitals in North Dakota (Moulton, 2018). Because the average response rate for surveys is approximately 50%, it was expected that a maximum of 300 participants could be included in the study (Polit & Beck, 2017). Consecutive sampling is a type of non-probabilistic approach, similar to convenience sampling, but which seeks to include all accessible, eligible individuals (Polit & Beck, 2017). This seemed a reasonable approach given the small number of individuals eligible for the study after taking into account the expected response rate.

Prior to study initiation, we had estimated that a sample of 300 would be sufficient to calculate our estimates with high precision and confidence, yet despite our efforts, we were not able to achieve our recruitment goal (see Appendix A). The survey

was kept open for 5 weeks and 4 reminder emails were sent after the original email; only two responses were received in the fifth week, so saturation was assumed to be reached. A total of 88 eligible individuals accessed the survey; 3 exit the survey early, therefore our analytical sample is 85.

Instrumentation

The instrument used in this study was an internet-based survey. The survey included questions about the participant demographics, their nursing education, and their professional practice, including their intent to stay in their current employment, as well as scales to measure clinical leadership and professional satisfaction (see Appendix B).

Clinical leadership. Clinical leadership was measured using the *Clinical Leadership Survey (CLS)*. The *CLS* was developed by Patrick et al. (2011) to measure clinical leadership of staff nurses working at the bedside (see Appendix C). It assesses 5 leadership practices: clinical expertise, effective communication, collaboration, coordination, and interpersonal understanding, through 15 items (3 items per practice). Each item describes a specific clinical leadership behavior in the clinical setting. Responses correspond to the frequency of demonstrating such behaviors on a five-point Likert scale (*1 = almost never, 2 = occasionally, 3 = some of the time, 4 = most of the time, 5 = almost always*). The psychometric properties of the *CLS* have been tested upon its development in a sample of 480 nurses employed in acute care hospitals in Canada, and provide initial support for adequacy of the 15-item instrument in conceptualizing clinical leadership in staff nurses. The following aspects were evaluated and seem to be satisfactory: face validity (by research team), content validity (by six experts, content validity index = 85%), concurrent validity (positive correlation between *CLS* scores and a

global measure of clinical leadership, $r = 0.45$), construct validity (structural equation modeling), and internal consistency (Cronbach's alpha = 0.86) of the instrument (Patrick et al., 2011).

Professional satisfaction. Professional satisfaction was assessed using the *Satisfaction with Work* and *Satisfaction with Career* scales developed by Shaver and Lacey (2003) to measure these two dimensions of professional satisfaction. The *Satisfaction with Work* scale consists of 4 items and the *Satisfaction with Career* scale consists of 3 items (see Appendix D). Each item corresponds to a statement showing satisfaction in a specific aspect of a nurse's work (e.g. work environment) or nursing career (e.g. liking being a nurse). Responses correspond to the level of agreement with those statements on a five-point Likert scale ($1 = \text{strongly disagree}$, $2 = \text{disagree}$, $3 = \text{neutral}$, $4 = \text{agree}$, $5 = \text{strongly agree}$). Internal consistency was assessed for each scale in ~600 LPNs and ~600 RNs; all Cronbach's alpha coefficients were above the accepted level of 0.80. Although these scales were developed individually, their developers suggest that they can be combined and used as a single scale, as long as responses are weighted to take into account the difference in item number (4 items for satisfaction with work and 3 items for satisfaction with career) (Shaver & Lacey, 2003).

Intent to stay in current employment. The cross-sectional nature of the study design did not allow to directly measure employment retention, therefore intent to stay in current employment was used as a proxy. This measure of commitment to a job has been previously included in theoretical models for turnover of nurses, and has shown adequate construct validity based on its association with job satisfaction. To assess intent to stay in current job, a single question measuring the nurse's intentions for continued membership

in an organization was used (see Appendix E) (Price & Mueller, 1981). Responses to the question correspond to ordinal statements reflecting likelihood of continued membership in an organization ranging from definitely will not leave to definitely will leave.

Although intent to stay was originally measured using two items, a single item measure has been previously used with comparable performance, therefore we also used a single item (Price & Mueller, 1981).

Data Collection Procedures

Participant recruitment. Recruitment of participants was conducted through the nurse managers. The researcher obtained a list of email accounts of all nurse managers (or equivalent) of the 36 critical access hospitals in North Dakota. An email was sent to each nurse manager, which included a brief explanation of the study, a link to the survey with instructions, and a request to forward the invite to all nurses in their hospital (see Appendix F). The link to the survey for potential participants included details of the study with instructions and an option to complete the survey through an included link (see Appendix G). All RNs at the critical access hospitals were invited to participate in the survey.

Emails, initial and follow-up reminders, were sent on Mondays as research has shown this to be the best time to send out email invitations to participate in surveys (Polit & Beck, 2017). The original email was sent on a Monday in January 2019 and follow up emails were sent on Mondays, or Tuesday if Monday was a holiday, for 5 weeks. The email was sent from the researcher to 48 contacts at the critical access hospitals, with emails sent to two recipients at some of the hospitals due to more than one person in a management role and out of office replies that were received during the data collection

period. The study included an incentive for all participants who completed the survey, they could enter their email at the end of the survey, and then they were entered into a drawing for three \$25 gift cards.

Administration of survey. The survey was administered through the use of the online survey management system, Survey Monkey. Responses were accessible to the researcher through the same survey management system, which was only accessible by the researcher. Participants remained anonymous throughout the data collection as they were not asked for any identifying information during the survey. The average survey completion time was less than 10 minutes.

Data Management

Responses from surveys were exported from the survey management system as an Excel document and stored on the researcher's computer that is password protected and uses McAfee security and Malwarebytes anti-malware software. The surveys and raw data were only accessible by the researcher. The data was accessed and analyzed on the researcher's computer. Data were exported from Excel to Stata for data analysis, and were transferred to an encrypted flash drive after the research study was concluded. The flash drive was stored in a locked file cabinet for at least three years, after which it will be destroyed. Data has been only reported in aggregate form.

Data Analysis Procedures

Data analyses were conducted in Stata IC version 15.1 (Stata Corporation, College Station, TX). Statistical significance was set at $p < 0.05$. Exploratory analyses were focused on data cleaning, describing the study population, and examining the distribution of relevant variables for analysis. Because most continuous variables were

skewed during the initial analysis, they were either categorized or transformed to meet normality assumptions, when considered necessary. Associations between variables of interest were assessed with the transformed and untransformed variables using parametric tests and their non-parametric counterparts. For easier interpretability, when findings were consistent with either approach used, results from the untransformed variables and/or parametric approach were preferred and reported. There were not missing data for professional satisfaction variables or intent to stay and missing data for clinical leadership variables was small ($n = 4$) and seemed to be at random, therefore a list-wise (complete case) approach was used.

Research aim 1: To quantify clinical leadership in staff nurses practicing in rural areas. To address this aim, we estimated measures of central tendency (mean and median) and dispersion (standard deviation, S.D. and interquartile range, IQR) of the scores for each of the 15 individual items, for each of the 5 leadership subscales (clinical expertise, communication, collaboration, coordination, and interpersonal understanding, 3 items per subscale), and for the overall clinical leadership scale (15 items). Subscale and scale scores were calculated using both the mean-based approach (arithmetic mean of items included) and the summative approach (sum of items included).

Differences in clinical leadership scores according to selected demographic, educational, and clinical practice variables of interest were assessed using ANOVA, t-tests, or their non-parametric counterparts; none were significant ($P > 0.05$). Variables were selected based on relationships found in previous research, and included years as a nurse, highest nursing education level, formal education in leadership, years employed at current CAH, and proportion of time in their current job spent in direct patient care.

Years as a nurse was tested in categories. The initial plan was to test between nurses working for less than 2 years and greater than 2 years, because of the difficult transition that nurses make from student nurse to staff nurse. Due to the small sample size, there was not enough responses in the less than 2 years category. Education level was analyzed between associate's degree and nurses with bachelor's and master's degrees. Formal education in leadership was analyzed. Years employed at current CAH was analyzed in categories. Due to the small sample size, there were not enough responses to test less than 2 years with all other nurses. Working in a role other than patient care was analyzed. These variables were assessed due to relationships found in previous research. Other demographics and variables such as years practice in rural areas and previous jobs with leadership roles were not analyzed due to the majority of responses being in one category.

Research aim 2: To quantify job satisfaction in staff nurses practicing in rural areas. To address this aim, we estimated measures of central tendency (mean, median) and dispersion (S.D. and IQR) of responses to each of the 7 individual items, a score for each of the 2 satisfaction scales, and an overall satisfaction score. Scores were created by calculating the arithmetic mean of items included: 4 items for satisfaction at work, 3 items for career satisfaction, and 7 items for overall job satisfaction. The summated scale method (applying a weight of 4/3 for career satisfaction) was also used, to allow comparisons with previous studies using such approach.

Differences in job satisfaction scores according to selected demographic, educational, and clinical practice variables of interest were assessed using ANOVA, t-tests, or their non-parametric counterparts; none were significant ($P > 0.05$). Variables

were selected based on relationships found in previous research, and included years as a nurse, highest nursing education level, years employed at current CAH, employment status, shift worked, marital status, unit worked on, and proportion of time in their current job spent in direct patient care. Years as a nurse was analyzed in categories. The initial plan was to test between nurses working for less than 2 years and greater than 2 years, because of the difficult transition that nurses make from student nurse to staff nurse. Due to the small sample size, there was not enough responses in the less than 2 years category. Education level was analyzed between associate's degree and nurses with bachelor's and master's degrees. Years employed at current CAH was analyzed in categories. Due to the small sample size, there were not enough responses to test less than 2 years with all other nurses. Working in a role other than patient care was analyzed. Employment status was assessed between full-time with a single job, full-time with more than one job, and part time. Shift worked was assessed between days, evenings/nights, and rotating. Marital status was assessed between married and not married. The units worked on were assessed. These variables were assessed due to relationships found in previous research. Other demographics and variables such as years practice in rural areas and receiving formal clinical training were not analyzed due to the majority of responses being in one category.

Research aim 3: To assess the association between clinical leadership and satisfaction in staff nurses practicing in rural areas, and intention to stay in current job. The relation between clinical leadership and intention to stay in current clinical practice has not been previously assessed. In this study, it was hypothesized that: 1) clinical leadership has a direct positive effect on satisfaction, 2) satisfaction has a direct

positive effect on intention to stay in current clinical practice, and 3) clinical leadership has an indirect effect on intention to stay in current clinical practice, mediated by satisfaction (see Figure 1).

To address this aim, we used structural equation modeling (SEM), a group of statistical methods which allow the inclusion of latent variables (variables that cannot be directly measured, such as Clinical Leadership and Professional Satisfaction) taking into account the associated measurement error. Briefly, structural equation models have two components: 1) a measurement piece which characterizes how the latent variable is related to the observed variables used to define it, and 2) a structural piece which characterizes how the latent variable is related to other latent or observed variables (Bollen, 1989). The use of SEM allowed us to: 1) develop measurement models for Clinical Leadership and Professional Satisfaction, 2) assess the association between Clinical Leadership and Nurse Retention (using intent to stay in current employment as a proxy), and 3) test whether Professional Satisfaction is a mediator in the association listed in 2.

All SEMs were specified a priori, based on previous theory-grounded research. All fitted models correspond to standard linear structural equation models using the maximum likelihood method to estimate parameters and the observed information matrix technique to obtain the variance-covariance matrix of the estimates. Parameters were constrained to specific values, when needed to achieve model identification and convergence. Overall model fit was assessed using the following indices: a Likelihood Ratio (LR) test comparing the model versus a saturated model (the model that fits the covariances perfectly), the Root Mean Squared Error of Approximation (RMSEA), the

Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), the Standardized Root Mean Squared Residual (SRMR), and the Coefficient of Determination (CD). Because each test provides a different piece of information and cutoffs to determine adequacy are arbitrary and vary by researchers, it is recommended to use them all when evaluating the model fit. A good model fit is considered when the lower bound of the 90% confidence interval for RMSEA is <0.05 (Bollen, 1989). The CFI and TLI coefficients should be above 0.9, or close to 1. A SRMR of 0 correspond to a perfect fit, and the value should be <0.08 . The interpretation of the CD is similar to the R^2 for the model (the proportion of variability of the outcome explained by the independent variables), therefore the closer to one, the better (Bollen, 1989).

Measurement model for clinical leadership. Because developers of the CLS had already validated a measurement model for the scale, we conducted Confirmatory Data Analysis (CFA) to test whether our data had an adequate fit to their proposed model. The model specified model included five first-order factors (Clinical Expertise, Communication, Collaboration, Coordination, and Interpersonal Understanding; each measured by 3 items) and one common underlying second-order factor (Clinical Leadership). Because it is well known that small sample sizes ($n < 185$) can result in model convergence issues, we started by using Stata default normalization constraints: 1) constrain all latent exogenous variables to have mean 0, 2) constrain all latent endogenous variables to have intercept 0, and 3) constrain the paths from latent variables to the first observed endogenous variable to have coefficient 1. We were not able to achieve convergence, therefore additional constraints were explored until convergence issues were resolved. In addition to the default constraints, the final measurement model

also constrained paths from the second-order underlying factor (Clinical Leadership) to three first-order factors (Clinical Expertise, Communication, and Collaboration) to 1 (see Figure 2).

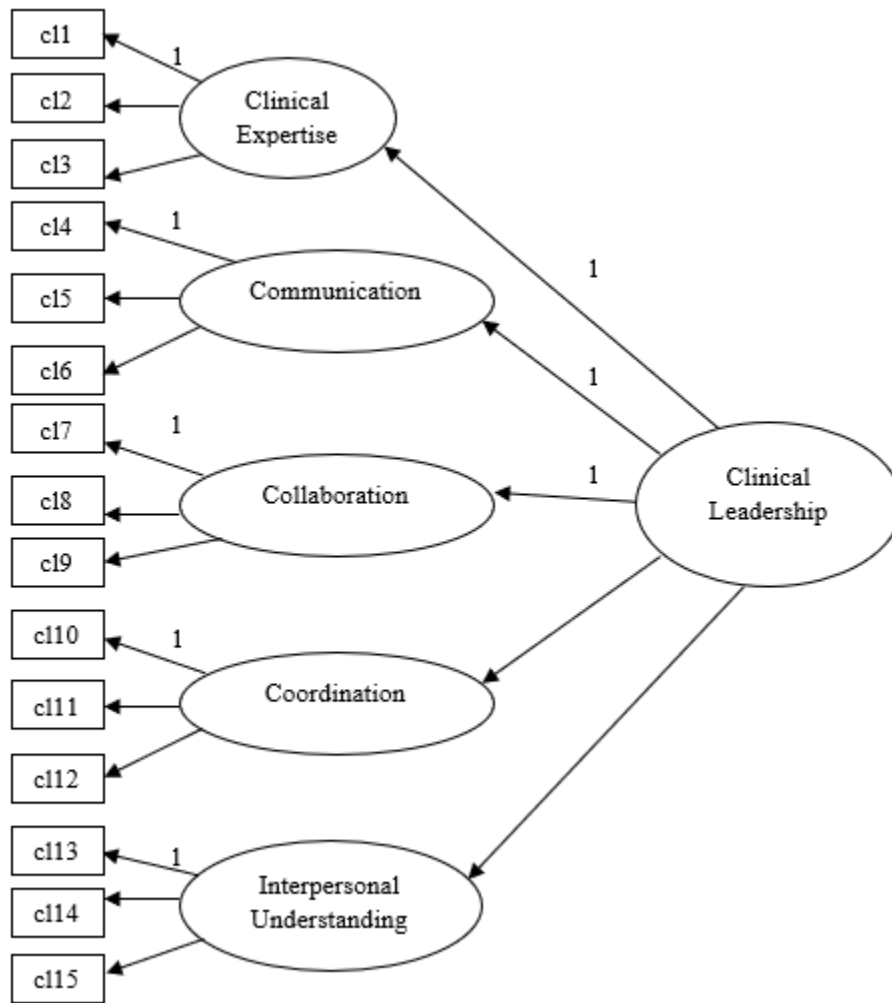


Figure 2. Clinical Leadership Measurement Model, depicting 15 observed variables, 5 first-order factors, and one second-order underlying factor.

Rectangles represent observed variables; ellipses represent latent variables.

Measurement model for professional satisfaction. Developers of the *Satisfaction with Work* and *Satisfaction with Career* scales recommend combining both scales and using as a single scale. We conducted CFA to test the fit of our data by specifying a

measurement model including two first-order factors (Satisfaction with Work – measured by 4 items – and Satisfaction with Career – measured by 3 items), and one common underlying second-order factor (Professional Satisfaction). In addition to the default constraints, the final measurement model also constrained paths from the second-order underlying factor (Professional Satisfaction) to the two first-order factors (Satisfaction with Work and Satisfaction with Career) to 1 (see Figure 3).

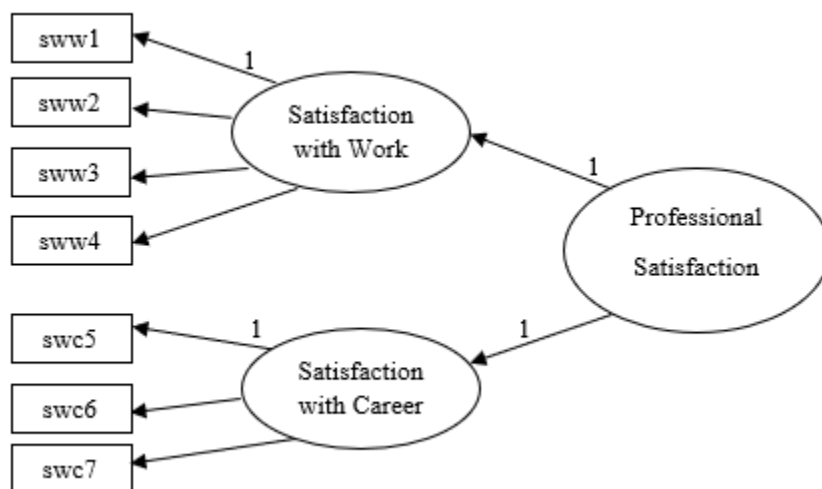


Figure 3. Professional Satisfaction Measurement Model, depicting 7 observed variables, 2 first-order factors, and one second-order underlying factor. Rectangles represent observed variables; ellipses represent latent variables.

Structural equation model. To assess the association between clinical leadership, professional satisfaction, and intention to stay in current employment, we fitted a SEM. As defined a priori, the specified model included a direct causal pathway between Clinical Leadership and Professional Satisfaction, and a direct causal pathway between Professional Satisfaction and Intention to Stay in current employment. In addition to the default constraints, the final SEM also constrained paths from the second-order underlying factors to their first-order factors to 1 (see Figure 4). Due to our small sample

size, we faced convergence issues when trying test whether Clinical Leadership had a direct effect towards intent to stay in current employment (independently from the indirect pathway through Professional Satisfaction). To address this issue, a second SEM was specified using a single first-order factor (measured by 15 items) to characterize Clinical Leadership and a single first-order factor (measured by 7 variables) to characterize Professional Satisfaction (see Figure 5).



Figure 4. Structural Equation Model to assess the association between Clinical Leadership, Professional Satisfaction, and Intent to Stay in Current Employment. Rectangles represent observed variables; ellipses represent latent variables.

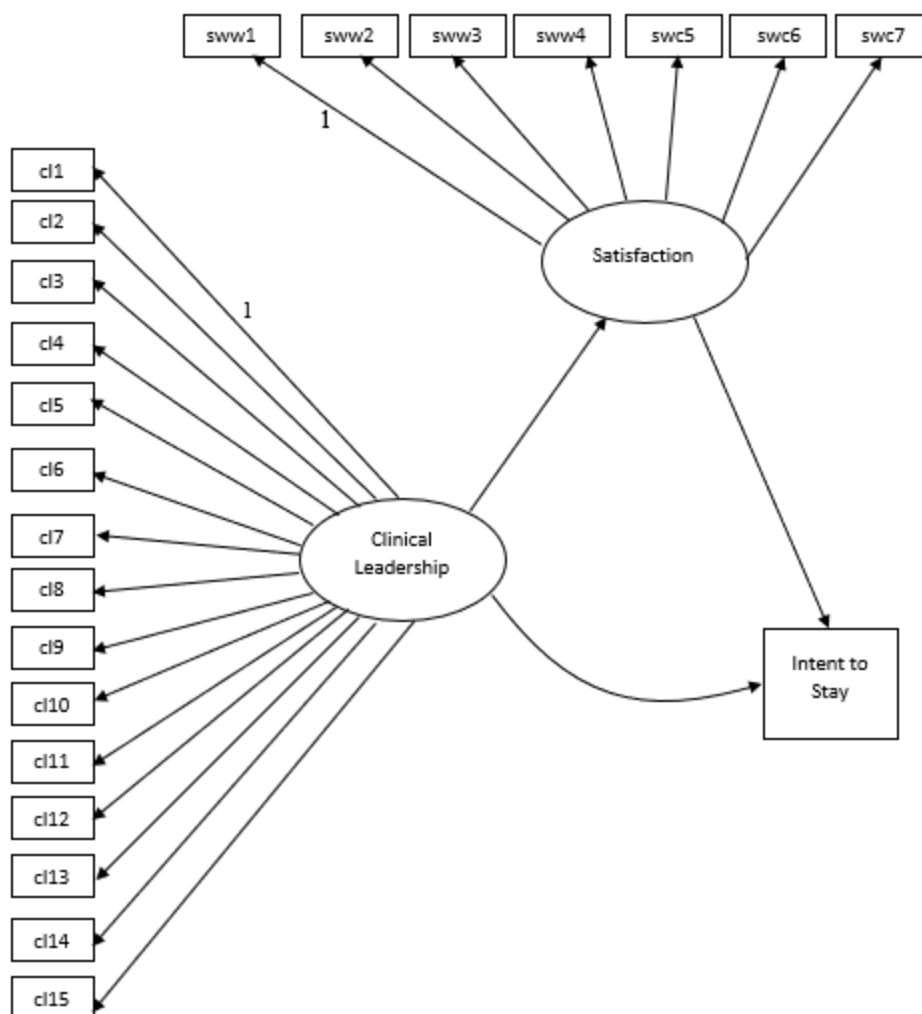


Figure 5. Structural Equation Model to test the direct and indirect (mediated by Professional Satisfaction) effects of Clinical Leadership on Intent to Stay in Current Employment.

Rectangles represent observed variables; ellipses represent latent variables.

Protection of Human Subjects

Protection of human subjects was ensured by obtaining IRB approval through the Idaho State University Office of Research. The application for this study was submitted according to the Idaho State University Office of Research policy. All participants were recruited through email, which included details of the study with an option to complete the survey through an included link. Participants were told that informed consent was

given by them completing the survey. No information was withheld from the study participants. The email detailed the participant rights and ensured that participants understood rights including a description of the purpose of the study, goals of the study, risks and benefits, information that the study is being conducted through Idaho State University, as well as an email and phone number for the researcher. The risks to participants were minimal, including feelings that may arise when recalling the experiences as a new graduate nurse, and the benefits include a potential to better understand the transition that nurses make into the role of staff nurse in a rural hospital. The freedom of the participants, including the right to refuse to participate in the study without penalties, and voluntary participation were included. The participants had the right to refuse to participate in the study at any time without penalties. There was a drawing for three \$25 gift cards at the completion of the study for all participants who entered their email. Participants remained anonymous throughout the data collection as they were not asked for any identifying information during the survey. The survey was returned directly to the primary investigator via the online survey management system.

Summary

The study was a nonexperimental cross-sectional survey design intended to assess the relationship between concurrent clinical leadership and professional satisfaction of staff nurses practicing in rural critical access hospitals, and retention in current employment. The purpose of this study was to quantify clinical leadership among staff nurses working in rural areas, examine its determinants, and impact on job satisfaction and retention. IRB approval was obtained through the Idaho State University Office of Research. The sample for this study were registered nurses who worked in 36 critical

access hospitals in North Dakota. All nurses were given the opportunity to participate in the study by completing the internet-based survey, and the analytical sample was 85 nurses. The small sample size did result in some difficulties with data analysis. The survey included questions about the participant demographics, their nursing education, and their professional practice, their intent to stay in their current employment, as well as scales to measure clinical leadership and professional satisfaction. Stata was utilized for data analysis. Clinical leadership and job satisfaction of nurses practicing in the rural critical access hospitals were quantified, and variables of interest were assessed. CFA was conducted to test a measurement model for clinical leadership and for satisfaction. To assess the association between clinical leadership, professional satisfaction, and intention to stay in current practice, SEM was used. One model included a direct causal pathway between clinical leadership and professional satisfaction, and between professional satisfaction and intent to stay in current employment, with second-order and first-order factors. A second model was specified using a single factor to characterize clinical leadership and professional satisfaction, to allow testing of the direct effect between clinical leadership and intent to stay in current employment.

Chapter IV: Results

The purpose of this study was to quantify clinical leadership among staff nurses working in rural areas, examine its determinants, and impact on job satisfaction and retention. This study addressed the clinical leadership practices, job satisfaction, and the intent to stay in their current job of nurses working in rural areas with a survey. This study was conducted over five weeks, starting in January 2019, in critical access hospitals in North Dakota. The results of the survey were used to answer the following research questions:

1. What are the clinical leadership behaviors of staff nurses practicing in rural areas?
2. What is the job satisfaction of staff nurses practicing in rural areas?
3. Does clinical leadership influence professional satisfaction and retention among staff nurses practicing in rural areas?

Characteristics of Study Participants

Table 2 shows the demographic characteristics of study participants, as well as their education and nursing career. The mean age of participants was 39.7 years (± 12.6), with a range from 21 to 65 years. The study participants were predominantly female at 97.7%, with 1 male and 1 participant choosing prefer not to say. The participants were mostly Caucasian at 98.8%, and one person responded Asian. The participants were mostly married, 78.6%, with 1.2% reporting to be widowed, 6% reporting to be divorced, 7.1% in a relationship, and 7.1% single or never married. The mean for marital status was 1.8 (± 1.62).

The participants reported their highest level of education completed including 28.2% with an associate degree, 65.9% with a baccalaureate degree, and 5.9% with a master's degree. 69.4% of participants reported that they received formal clinical training when they started their first job as a nurse with 27% (n=23) selecting no clinical training and 3.5% (n=3) selecting they were not sure. The majority of participants, 64.7% reported that they had received formal training or education in leadership. 34% (n=29) reported that they had not received formal training or education in leadership and 1 participant responded that they were not sure.

The nurses reported the years that they had actively practiced as a nurse as 14.6 years (± 11.8) and their years of practice as a nurse in a rural area as 12.9 years (± 11.4), both with ranges from 0.5 to 44 years. The majority of participants stated they had a previous job, either nursing or non-nursing, where they had to use leadership skills at 97.7%, with one participant responding not and 1 participant responding that they were not sure.

Table 2. Selected characteristics of study participants ($n = 85$)

Characteristics	Frequency, % (n)
<i>Demographic</i>	
Age (years)	
<30	26.2% (22)
30-39	33.3% (28)
40-49	21.4% (18)
50+	19.1% (16)
Gender	
Female	97.7% (83)
Race/ethnicity	
Caucasian	98.8% (84)
Marital status	
Married	78.6% (66)
Widowed	1.2% (1)
Divorced	6.0% (5)
In a relationship	7.1% (6)
Single/never married	7.1% (6)
<i>Nursing Education</i>	
Highest level	
Associate	28.2% (24)
Bachelor	65.9% (56)
Master	5.9% (5)
Received formal clinical training	69.4% (59)
Received formal leadership training	64.7% (55)
<i>Work history</i>	
Nursing practice, overall (years)	
<5	23.8% (20)
5-9	20.2% (17)
10-19	27.4% (23)
20+	28.6% (24)
Nursing practice, rural (years)	
<5	32.1% (27)
5-9	21.4% (18)
10-19	21.4% (18)
20+	25.0% (21)
Job with leadership role	97.7% (83)

Data were missing for age ($n = 1$), marital status ($n = 1$), nurse practice overall ($n = 1$), nurse practice rural ($n = 1$).

Current employment in rural critical access hospitals. Table 3 shows the characteristics of the nurses current jobs in critical access hospitals. The majority of participants stated their current employment status was full time with one job at 58.8% and full time with more than one job at 20%, part time with one job at 10.6% and part time with more than one job at 7.1 %, with the remaining participants at 3.5% reporting casual/PRN employment. The category of casual/PRN was created after data collection, as participants did have the option to select other. Eight participants originally responded other, with 5 responses fitting into categories already listed and 3 participants writing casual or PRN. Participants, n=78 (91.8%), consider their primary place of employment to be a critical access hospital, with 7 participants selecting no. Participants reported a tenure at their current CAH of 11 years (± 10.4), with a range of 0.5 to 44 years. Work schedules included 55.3% of nurses working days, 1.2% working evenings, 9.4% working nights, and 34.1% working rotating shifts. Participants stated the direct patient care units that they regularly worked with the most frequent on emergency department 58.8%, swing bed 62.4%, medical 67%, surgical 24.7%, and operating room 7%. Participant could select the option of other for patient care unit and 19 did select this option. Upon analyzing the responses to other, two responses fit into one category already listed, and two new categories were created, outpatient care and other inpatient care. Nurses reported working in outpatient care at 14.1% and 4.7% in other inpatient care. Three participants listed administrative roles, and these were not included in data analysis as the question asked for direct patient care units worked on. These responses could have been due to not emphasizing direct patient care in the survey. When asked about the time they spend in their workload dedicated to direct patient care, 28.2% of

participants reported that their workload was exclusively direct patient care. When asked about completing tasks other than direct patient care, 18.8% reported spending 1-10% of workload time, 9.4% reported 11-25% of workload time, 12.9% reported 26-50% of workload time, and 30.6% reported greater than 50% of workload time.

Intent to stay. Intent to stay was a reflection of the feelings of the nurses about their likelihood of retention in their organization. The majority of participants stated that they were not planning on leaving their current job at 69.4%. Participants selected the following answers: 18.8% stated that they definitely would not leave, 50.6% stated that they probably would not leave, 22.4% selected they were uncertain, 4.6% selected they probably would leave, and 3.5% selected that they definitely would leave. The mean response was 3.8 (± 0.93), with a median of 4 (3,4).

Table 3. Characteristics of current employment in rural staff nurses ($n = 85$)

Characteristics	Frequency, % (n)
<i>Employment Status</i>	
Full-time, single job	58.8% (50)
Full-time, more than one job	20.0% (17)
Part-time	21.2% (18)
<i>Current employment at CAH</i>	
Primary employment	91.8% (78)
Tenure	
<5	34.9% (29)
5-9	25.3% (21)
10-19	19.3% (16)
20+	20.5% (17)
Work shift	
Day	55.3% (47)
Evening/night	10.6% (9)
Rotating	34.1% (29)
Clinical unit	
Emergency Department	58.8% (50)
Swing Bed	62.4% (53)
Medical	67% (57)
Surgical	24.7% (21)
Obstetrics/Gynecology	9.4% (8)
Operating Room	7% (6)
Outpatient Care	14.1% (12)
Other-Inpatient	4.7% (4)
Non-direct patient care workload (%)	
Only direct patient care	28.2% (24)
1-10	18.8% (16)
11-25	9.4% (8)
26-50	13.0% (11)
>50	30.6% (26)
Intention to stay (%)	
Definitely will not leave	18.8% (16)
Probably will not leave	50.6% (43)
Uncertain	22.4% (19)
Probably will leave	4.7% (4)
Definitely will leave	3.5% (3)

Data were missing for tenure ($n = 2$).

Analysis of the Research Questions

Clinical leadership. The participants response to these questions are explained and data are reported in Table 4. Each item in the CLS was analyzed. The average of every item was over 4, meaning that participants reported most of the time or almost always to engaging in clinical leadership behaviors.

The five subscales of the CLS, clinical expertise, effective communication, collaboration, coordination, and interpersonal understanding, were analyzed by calculating score for the 3 items in each category. The average of each subscale was over 4, meaning that participants reported most of the time or almost always to engaging in clinical leadership behaviors.

Clinical expertise. Questions one through three were analyzed together. Each RN participant had a total score between 8 and 15. These scores range from almost always to some of the time engaging in clinical expertise. The mean was 4.5 (± 0.5) and median was 4.7 (4.3,5), with a range from 2.7 to 5.

Effective communication. Questions four through six were analyzed together. Each RN participant had a total score between 11 and 15. These scores range from almost always to most of the time engaging in effective communication. The mean was 4.6 (± 0.4) and median was 4.7 (4.3,5), with a range from 3.7 to 5.

Collaboration. Questions seven through nine were analyzed together. Each RN participant had a total score between 11 and 15. These scores range from almost always to most of the time engaging in collaboration. The mean was 4.7 (± 0.3) and median was 4.7 (4.3,5), with a range from 3.7 to 5.

Coordination. Questions ten through twelve were analyzed together. Each RN participant had a total score between 12 and 15. These scores range from almost always to most of the time engaging in coordination of care. The mean was 4.8 (± 0.3) and median was 5 (4.7,5), with a range from 4 to 5.

Interpersonal understanding. Questions thirteen through fifteen were analyzed together. Each RN participant had a total score between 8 and 15. These scores range from almost always to some of the time engaging in interpersonal understanding. The mean was 4.3 (± 0.6) and median was 4.3 (4,5), with a range from 2.7 to 5.

The overall score on the CLS was created by adding each of the 15 items together. The lowest total score was 56, meaning participants with this score answered most of the time to the majority of the 15 clinical leadership behaviors. The highest total score was 75 and participants with this score answered almost always to engaging in all 15 clinical leadership behaviors. The arithmetic mean of all 15 items was calculated at 4.6 (± 0.3) and median was 4.6 (4.3,4.8), with a range of 3.7 to 5.

Table 4. Clinical Leadership in rural staff nurses ($n = 81$)

Clinical Leadership Subscales and Items	Mean $\pm$ S.D.	Median (IQR)	Range
Challenging the process (<i>clinical expertise</i>)			
Take risks	4.5 $\pm$ 0.9	5 (4,5)	1-5
Use evidence-based rationale	4.3 $\pm$ 0.7	4 (4,5)	2-5
Engage in reflective practice	4.6 $\pm$ 0.7	5 (4,5)	2-5
<i>Subscale mean</i>	4.5 $\pm$ 0.5	4.7 (4.3, 5)	2.7-5
<i>Subscale total</i>	13.4 $\pm$ 1.6	14 (13, 15)	8-15
Inspiring a shared vision (<i>communication</i>)			
Negotiate and support	4.6 $\pm$ 0.6	5 (4,5)	3-5
Engaged communication	4.6 $\pm$ 0.5	5 (4,5)	3-5
Meaningful conversations	4.6 $\pm$ 0.5	5 (4,5)	3-5
<i>Subscale mean</i>	4.6 $\pm$ 0.4	4.7 (4.3, 5)	3.7-5
<i>Subscale total</i>	13.8 $\pm$ 1.2	14 (13, 15)	11-15
Enabling others to act (<i>collaboration</i>)			
Actively listen	4.6 $\pm$ 0.5	5 (4,5)	3-5
Establish therapeutic conversations	4.7 $\pm$ 0.4	5 (4,5)	4-5
Develop cooperative relationships	4.7 $\pm$ 0.5	5 (4,5)	4-5
<i>Subscale mean</i>	4.7 $\pm$ 0.3	4.7 (4.3, 5)	3.7-5
<i>Subscale total</i>	14.0 $\pm$ 1.0	14 (13, 15)	11-15
Modeling the way (<i>coordination</i>)			
Follow through on promises	4.9 $\pm$ 0.3	5 (5,5)	4-5
Work to achieve goals	4.6 $\pm$ 0.6	5 (4,5)	3-5
Commit to patient-centered care	4.8 $\pm$ 0.4	5 (5,5)	3-5
<i>Subscale mean</i>	4.8 $\pm$ 0.3	5 (4.7, 5)	4-5
<i>Subscale total</i>	14.3 $\pm$ 0.9	15 (14, 15)	12-15
Encouraging the heart (<i>interpersonal understanding</i>)			
Acknowledge colleagues' values	4.4 $\pm$ 0.8	5 (4,5)	2-5
Provide positive feedback	4.5 $\pm$ 0.7	5 (4,5)	2-5
Celebrate colleagues' accomplishments	4.1 $\pm$ 0.8	4 (3.5, 5)	2-5
<i>Subscale mean</i>	4.3 $\pm$ 0.6	4.3 (4, 5)	2.7-5
<i>Subscale total</i>	13.0 $\pm$ 1.8	13 (12, 15)	8-15
Scale mean	4.6 $\pm$ 0.3	4.6 (4.3, 4.8)	3.7-5
Scale total	68.5 $\pm$ 4.9	69 (65, 72)	56-75

S.D., standard deviation; IQR, interquartile range.

Clinical leadership items were measured in a Likert scale ($1 = \text{almost never}$, $2 = \text{occasionally}$, $3 = \text{some of the time}$, $4 = \text{most of the time}$, $5 = \text{almost always}$).

Professional satisfaction. The participants response to these questions are explained and data are reported in Table 5.

Satisfaction with work. Statements one through four were analyzed for satisfaction with work. The average of each individual item ranged from 3.7 to 4.3, meaning that participants agreed with the statements about their job. The statements were analyzed together to determine overall satisfaction with work. Each RN participant had a total score between 6 and 20. These scores range from the lowest participants ranking their job satisfaction between disagree and strongly disagree to the highest participants strongly agreeing to being satisfied with their job. The mean was 3.9 (± 0.8) and median was 4 (3.5,4.5), with a range from 1.5 to 5.

Satisfaction with career. Statements five through seven were analyzed for satisfaction with nursing as a career. The average of every item on career satisfaction was over 4, meaning that participants reported agree or mostly agree to statements about their career. The statements were analyzed together to determine overall satisfaction with their career. Each RN participant had a total score between 9 and 15. These scores range from rating neutral to strongly agree about career satisfaction. The mean was 4.6 (± 0.6) and median was 5 (4,5), with a range from 2.5 to 5.

The overall score on the Satisfaction with Work and Satisfaction with Career survey was created by adding each of the 7 items together. The arithmetic mean was 4.2 (± 0.6) and median was 4.3 (3.8,4.7), with a range from 2.3 to 5. A weighted score was calculated for professional satisfaction due to the 4 job satisfaction items and 3 career satisfaction items. The highest total weighted score was 40, meaning that participants with this score strongly agreed to all statements about their satisfaction. The lowest total

score was 18, meaning that some participants averaged a ranking between disagree and neutral to their satisfaction. Although this indicates that on average participants tended to be satisfied with their profession (a score of 3 indicates neutrality), their satisfaction was greater with their career in nursing than with their current job (difference = 0.7 points, $p < 0.001$).

Table 5. Satisfaction with Work and Career in rural staff nurses ($n = 85$)

Satisfaction Scale, Subscales and Items	Mean $\pm$ S.D.	Median (IQR)	Range
Job satisfaction			
Work environment	3.9 $\pm$ 0.9	4 (4,4)	1-5
Quality of care provided	4.3 $\pm$ 0.7	4 (4,5)	2-5
Encourage others to join	4.0 $\pm$ 1.0	4 (3,5)	1-5
Value placed on work	3.7 $\pm$ 1.1	4 (3,4.5)	1-5
<i>Subscale mean</i>	<i>3.9 $\pm$ 0.8</i>	<i>4 (3.5, 4.5)</i>	<i>1.5-5</i>
<i>Subscale total</i>	<i>15.9 $\pm$ 3.1</i>	<i>16 (14, 18)</i>	<i>6-20</i>
Career satisfaction			
Satisfied with nursing career	4.6 $\pm$ 0.7	5 (4,5)	2-5
Like being a nurse	4.6 $\pm$ 0.6	5 (4,5)	3-5
Encourage others to nursing	4.4 $\pm$ 0.7	5 (4,5)	3-5
<i>Subscale mean</i>	<i>4.6 $\pm$ 0.6</i>	<i>5 (4, 5)</i>	<i>2.5-5</i>
<i>Subscale total</i>	<i>13.6 $\pm$ 1.7</i>	<i>14 (12, 15)</i>	<i>9-15</i>
<i>Subscale total (weighted)</i>	<i>18.1 $\pm$ 2.3</i>	<i>18 (16, 20)</i>	<i>12-20</i>
Scale mean	4.2 $\pm$ 0.6	4.3 (3.8, 4.7)	2.3-5
Scale total (weighted)	34.0 $\pm$ 4.6	35 (31, 37)	18-40

S.D., standard deviation; IQR, interquartile range.

Satisfaction items were measured based on level of agreement with statements in a Likert scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, 5 = *strongly agree*).

Clinical leadership measurement model. Clinical leadership was tested with CFA as a model with five first-order factors, clinical expertise, communication, coordination, collaboration, and interpersonal understanding, and one common underlying second-order factor. The factor structure was specified by Patrick et al.

(2011), and was selected because it is theoretically driven, and its internal consistency and concurrent validity has been previously determined. See Table 6 for details on these path loadings.

Standardized loadings between each first-order factor and their three associated measurements ranged from 0.39 to 0.78 ($p < 0.001$). Clinical expertise ranged from 0.40 to 0.73 ($p < 0.001$). Communication ranged from 0.55 to 0.70 ($p < 0.001$). Collaboration ranged from 0.39 to 0.65 ($p < 0.001$). Coordination ranged from 0.44 to 0.63 ($p < 0.001$). Interpersonal understanding ranged from 0.57 to 0.78 ($p < 0.001$). Standardized loadings between each first-order factor and the common underlying second-order factor ranged from 0.73 to 0.99 ($p < 0.001$).

The final CFA solution converged adequately, and all standardized parameter estimates were within range (< 1) and significant ($p < 0.001$). The structural equation modeling analysis showed a reasonably good fit of the model to the data ($\chi^2 (87) = 121.1$, $p = 0.009$; RMSEA = 0.07 (0.04, 0.10); CFI = 0.88; TLI = 0.85; SRMR = 0.09; CD = 0.99). The measurement model was acceptable between the first-order factors and the common underlying second-order factor with the path loadings all greater than 0.73. The measurement model between the indicator variable path loadings and their respective latent variable was not as good as the path loadings were not all above 0.60.

Table 6. Path loadings of Clinical Leadership 15-item measurement model with 5 first-order factors and an underlying second-order factor ($n = 81$)

Scales, Subscales, and Items	Unstandardized	S.E.	Standardized	<i>P</i>
First order factors				
<i>Clinical Expertise</i>				
Take risks	1.0	--	0.40	<.001
Use evidence-based rationale	1.42	0.31	0.73	<.001
Engage in reflective practice	0.97	0.27	0.51	<.001
<i>Communication</i>				
Negotiate and support	1.0	--	0.55	<.001
Engaged communication	1.02	0.25	0.61	<.001
Meaningful conversations	1.20	0.23	0.70	<.001
<i>Collaboration</i>				
Actively listen	1.0	--	0.52	<.001
Establish therapeutic conversations	0.63	0.22	0.39	<.001
Develop cooperative relationships	1.07	0.23	0.65	<.001
<i>Coordination</i>				
Follow through on promises	1.0	--	0.63	<.001
Work to achieve goals	1.74	0.58	0.56	<.001
Commit to patient-centered care	0.94	0.30	0.44	<.001
<i>Interpersonal understanding</i>				
Acknowledge colleagues' values	1.0	--	0.76	<.001
Provide positive feedback	0.67	0.15	0.57	<.001
Celebrate colleagues' accomplishments	1.11	0.19	0.78	<.001
Second order factor				
<i>Clinical Expertise</i>	1.0	--	0.81	<.001
<i>Communication</i>	1.0	--	0.88	<.001
<i>Collaboration</i>	1.0	--	0.99	<.001
<i>Coordination</i>	0.53	0.14	0.77	<.001
<i>Interpersonal understanding</i>	1.50	0.35	0.73	<.001

S.E. = standard error

Model fit statistics: LR test of model vs. saturated, $\chi^2(87) = 121.1$, $p = 0.009$;
 RMSEA = 0.07 (0.04, 0.10); CFI = 0.88; TLI = 0.85; SRMR = 0.09; CD = 0.99.

Professional satisfaction measurement model. Satisfaction was tested with CFA as two first-order factors, satisfaction with job and satisfaction with career, and one common underlying second-order factor. See Table 7 for details on these path loadings.

Standardized loadings between each first-order factor and their associated measurements ranged from 0.54 to 0.96 ($p < 0.001$). Job satisfaction had 4 associated measures ranging from 0.54 to 0.96 ($p < 0.001$). Career satisfaction had 3 associated measures ranging from 0.75 to 0.90 ($p < 0.001$). Standardized loadings between the two first-order factor and the common underlying second-order factor were 0.67 and 0.78 ($p < 0.001$).

The final CFA solution converged adequately, and all standardized parameter estimates were within range (< 1) and significant ($p < 0.001$). The structural equation modeling analysis supported a reasonably good fit of the model to the data ($\chi^2 (13) = 20.1$, $p = 0.09$; RMSEA = 0.08 (0.00, 0.15); CFI = 0.98; TLI = 0.97; SRMR = 0.06; CD = 0.70). The measurement model was acceptable with all of the path loadings except one above 0.60.

Table 7. Path loadings of Professional Satisfaction 7-item measurement model with two first-order factors and an underlying second-order factor ($n = 85$)

Scale, Subscales and Items	Unstandardized	S.E.	Standardized	P
First order factors				
<i>Work Satisfaction</i>				
Work environment	1.0	--	0.78	<.001
Quality of care provided	0.52	0.10	0.54	<.001
Encourage others to join	1.31	0.15	0.96	<.001
Value placed on work	1.13	0.15	0.76	<.001
<i>Career Satisfaction</i>				
Satisfied with nursing career	1.0	--	0.90	<.001
Like being a nurse	0.82	0.08	0.87	<.001
Encourage others to nursing	0.85	0.11	0.75	<.001
Second order factor				
<i>Work satisfaction</i>	1.0	--	0.67	<.001
<i>Career Satisfaction</i>	1.0	--	0.78	<.001

S.E. = standard error

Model fit statistics: LR test of model vs. saturated, $\chi^2 (13) = 20.1$, $p = 0.09$;

RMSEA = 0.08 (0.00, 0.15); CFI = 0.98; TLI = 0.97; SRMR = 0.06; CD = 0.70.

Association between clinical leadership, professional satisfaction, and intent to stay in current employment. Standardized parameter estimates for the final SEM assessing the association between clinical leadership, professional satisfaction, and intent to stay are illustrated in Figure 6. Coefficients can be interpreted as the unit change in the dependent variable associated with one unit increase in the predictor variable. For easier comparability, we chose to report standardized coefficients, therefore interpretation of parameters is in units of standard deviation. As hypothesized, there was a direct positive association between clinical leadership and professional satisfaction ($\beta=0.50$, $p<0.001$), which in turn, had a direct effect on intent to stay ($\beta=0.72$, $p<0.001$).

The final structural equation modeling analysis showed a reasonably good fit of the model to the data ($\chi^2 (227) = 309.5$, $p = 0.0002$; RMSEA = 0.07 (0.05, 0.09); CFI =

0.88; TLI = 0.86; SRMR = 0.11; CD = 0.96). Correlations and indices demonstrate the fit, but the sample size was much smaller than what is recommended to have a good model fit. The measurement model was acceptable with most of the path loadings above 0.60.

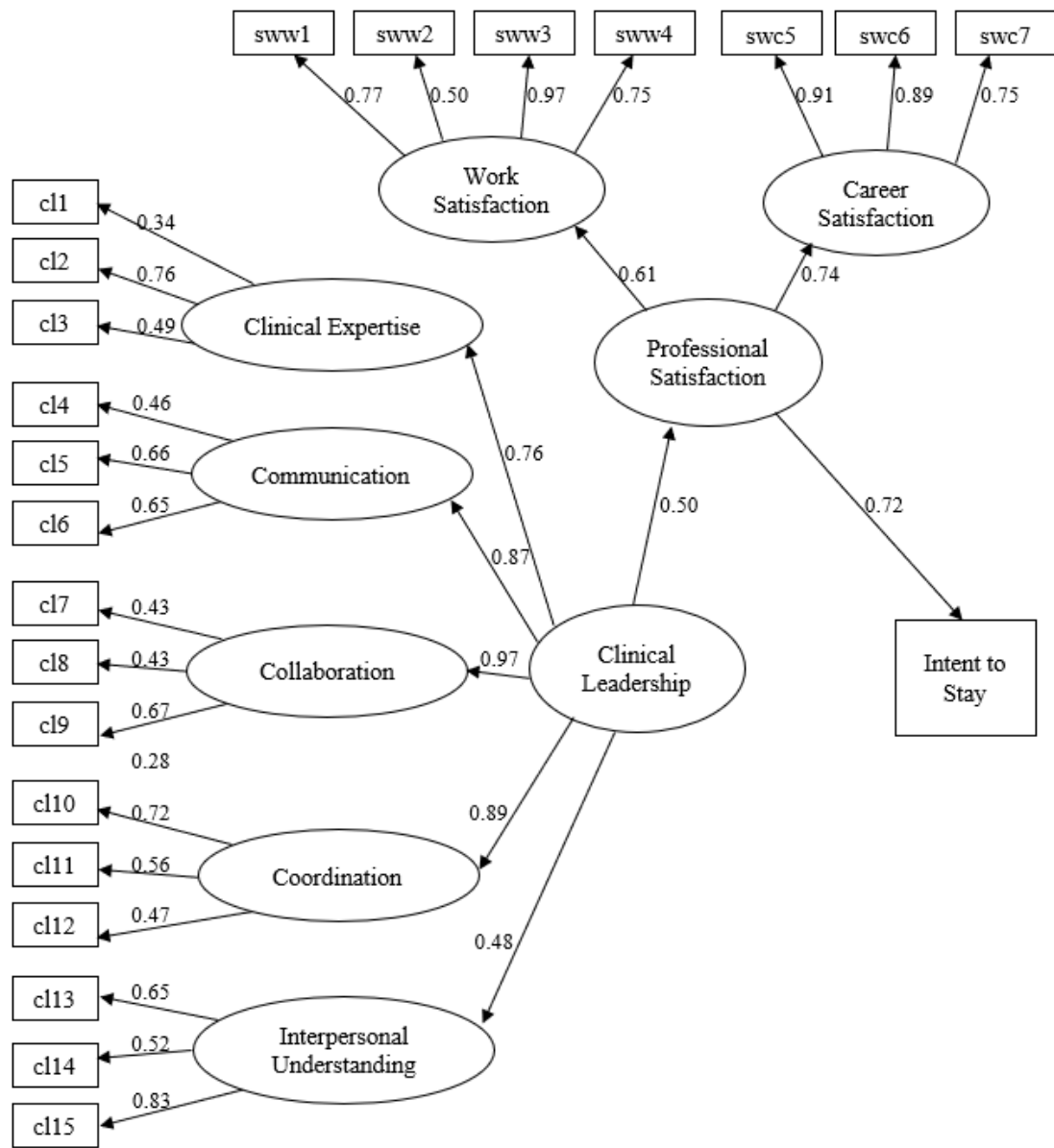


Figure 6. Structural equation model. Path coefficients are standardized, showing associations between clinical leadership, professional satisfaction, and intent to stay.

($n=81$)

$p < 0.001$

Model fit statistics: LR test of model vs. saturated, $\chi^2(227) = 309.5$, $p = 0.0002$; RMSEA = 0.07 (0.05, 0.09); CFI = 0.88; TLI = 0.86; SRMR = 0.11; CD = 0.96.

Direct association between clinical leadership and intent to stay in current employment. A SEM model was specified using a single first-order factor measured by the 15 items of clinical leadership, a single first-order factor measured by 7 items of professional satisfaction, and intent to stay measured as an observed variable, to test whether clinical leadership had a direct effect towards intent to stay in current employment. As described above, we faced convergence issues when including a direct pathway from clinical leadership on intent to stay in current employment (in addition to the indirect pathway through professional satisfaction), therefore simplified models using a single-factor structure to characterize clinical leadership and professional satisfaction were specified solely for this purpose. Models including higher-order factors tend to face challenges with convergence, particularly when sample sizes are small (Bollen, 1989). Although the overall fit of the single-factor solution for these measurement models were less adequate than their higher-order counterparts, parameter estimates were consistent enough that supported its use. The lack of a direct effect of clinical leadership on intent to stay in current employment in this alternative model, the decision was made not to include this pathway in the final model, and therefore provided additional support to consider the SEM with higher-order factors described above as our final model.

Clinical leadership was analyzed as a single factor. Standardized loadings between the single factor and the 15 measurements ranged from 0.28 to 0.62 ($p < 0.001$). See Table 8 for details on these path loadings. The structural equation modeling analysis showed that the fit of the model to the data was not strong ($\chi^2(90) = 148.4$, $p = 0.0001$; RMSEA = 0.09 (0.06, 0.12); CFI = 0.79; TLI = 0.75; SRMR = 0.10; CD = 0.85). Most of the path loadings were also less than 0.60.

Table 8. Path loadings of Clinical Leadership 15-item measurement model with an underlying single factor ($n = 81$)

Items	Unstandardized	S.E.	Standardized	<i>P</i>
Take risks	1.00	--	0.38	<.001
Use evidence-based rationale	1.23	0.41	0.61	<.001
Engage in reflective practice	0.87	0.33	0.44	<.001
Negotiate and support	0.81	0.30	0.47	<.001
Engaged communication	0.92	0.31	0.57	<.001
Meaningful conversations	1.02	0.34	0.61	<.001
Actively listen	0.86	0.31	0.52	<.001
Establish therapeutic conversations	0.53	0.22	0.39	<.001
Develop cooperative relationships	0.88	0.29	0.62	<.001
Follow through on promises	0.42	0.16	0.45	<.001
Work to achieve goals	0.88	0.32	0.48	<.001
Commit to patient-centered care	0.35	0.18	0.28	<.001
Acknowledge colleagues' values	1.39	0.48	0.60	<.001
Provide positive feedback	1.13	0.39	0.55	<.001
Celebrate colleagues' accomplishments	1.50	0.51	0.60	<.001

S.E. = standard error

Model fit statistics: LR test of model vs. saturated, $\chi^2 (90) = 148.4$, $p = 0.0001$; RMSEA = 0.09 (0.06, 0.12); CFI = 0.79; TLI = 0.75; SRMR = 0.10; CD = 0.85.

Satisfaction was measured as a single factor. Standardized loadings between the single factor and the 7 measurements ranged from 0.42 to 0.95 ($p < 0.001$). See Table 9 for details on these path loadings. The structural equation modeling analysis showed that the fit of the model to the data was not strong ($\chi^2 (14) = 122.0$, $p = 0.0000$; RMSEA = 0.30 (0.25, 0.35); CFI = 0.67; TLI = 0.50; SRMR = 0.16; CD = 0.93). Four of the seven path loadings were also less than 0.60.

Table 9. Path loadings of Professional Satisfaction 7-item measurement model with an underlying single factor ($n = 85$)

Items	Unstandardized	S.E.	Standardized	<i>P</i>
Work environment	1.00	--	0.79	<.001
Quality of care provided	0.51	0.10	0.54	<.001
Encourage others to join	1.28	0.14	0.95	<.001
Value placed on work	1.11	0.15	0.75	<.001
Satisfied with nursing career	0.53	0.10	0.56	<.001
Like being a nurse	0.34	0.09	0.42	<.001
Encourage others to nursing	0.49	0.10	0.52	<.001

S.E. = standard error

Model fit statistics: LR test of model vs. saturated, $\chi^2 (14) = 122.0$, $p = 0.0000$;
RMSEA = 0.30 (0.25, 0.35); CFI = 0.67; TLI = 0.50; SRMR = 0.16; CD = 0.93.

The results of the SEM model did not demonstrate as good of a fit as the first model. Contrary to expectations, the direct effect of clinical leadership on intent to stay was not significant ($\beta = -0.03$, $p = 0.810$). The effect of clinical leadership on intent to stay was indirect, through professional satisfaction.

Summary of Results

The purpose of this study was to quantify clinical leadership among staff nurses working in rural areas, examine its determinants, and impact on job satisfaction and retention. Clinical leadership, professional satisfaction, and intent to stay were measured in nurses working in Critical Access Hospitals through the use of an online survey. Statistical analysis included means with standard deviations, medians with interquartile ranges, minimum and maximum values, and frequency distributions percentages. A hypothesized model specifying the relationship between clinical leadership, job satisfaction, and intent to stay was tested using structural equation modeling.

Results indicated that staff nurses in critical access hospitals utilize clinical leadership when providing patient care (4.6 ± 0.3). The majority of staff nurses reported work and career satisfaction (4.2 ± 0.6), and intended to stay in their current job (69.4%). As hypothesized, there was a direct positive association between clinical leadership and professional satisfaction ($\beta=0.50, p<0.001$), which in turn, had a direct effect on intent to stay ($\beta=0.72, p<0.001$). The direct effect of clinical leadership on intent to stay was not significant ($\beta= -0.03, p=0.810$). The effect of clinical leadership on intent to stay was indirect, through professional satisfaction.

Chapter V: Conclusions

The purpose of this study was to quantify clinical leadership among staff nurses working in rural areas, examine its determinants, and impact on job satisfaction and retention. There were three research questions addressed in this study that focused on the clinical leadership practices, job satisfaction, and the intent to stay in their current job with a survey of nurses working in rural critical access hospitals.

Discussion of Research Findings

The first research question was descriptive with an objective to quantify clinical leadership in rural staff nurses. The clinical leadership behaviors were tested through the use of the Clinical Leadership Survey developed by Patrick (2010). Clinical leadership had not previously been measured in rural staff nurses. Staff nurses in this study reported that they use clinical leadership behaviors in their practice most of the time or almost always (4.6 ± 0.3).

The second research question was descriptive with an objective to quantify professional satisfaction with work and career in rural staff nurses. The satisfaction of these nurses was tested through the use of the Satisfaction with Work and Satisfaction with Career Survey by Shaver and Lacey (2003). The majority of staff nurses in this study reported that they strongly agreed or agreed to statements about their satisfaction, however some participants averaged a ranking of disagree to their satisfaction (4.2 ± 0.6). Nurses were more satisfied with nursing as a career (18.1 ± 2.3) than they were with their current jobs (15.9 ± 3.1).

The third research question was analytical with an objective to assess the relationship between the latent variables of clinical leadership and professional

satisfaction, and intent to stay in current employment. SEM was used to summarize and analyze the variables. The first hypothesis was that as clinical leadership of staff nurses increase, professional satisfaction and intention to stay increase. The results from this analysis accepted this hypothesis. As hypothesized, there was a direct positive association between clinical leadership and professional satisfaction ($\beta=0.50, p<0.001$), which in turn, had a direct effect on intent to stay ($\beta=0.72, p<0.001$). The second hypothesis was that professional satisfaction is a mediator in the association between clinical leadership and employment retention. The results from this analysis accepted this hypothesis. The direct effect of clinical leadership on intent to stay was not significant ($\beta= -0.03, p=0.810$). As hypothesize, the effect of clinical leadership on intent to stay was indirect, through professional satisfaction. Overall model fit was not strong, but the theoretical model did explain the observed relationship among the observed variables.

The results of this study provide understanding into the use of clinical leadership by staff nurses in critical access hospitals, demonstrating that the majority of staff nurses in rural areas use clinical leadership in their nursing practice. This finding demonstrates that the nurses in these critical access hospitals use behaviors that support high quality patient care practices. Rural nurses expressed their satisfaction with their job and with nursing as a career and the majority of the nurses indicated they intended to remain employed with their current employer. This study demonstrates that clinical leadership has a direct positive association with professional satisfaction, which has a direct positive association on intent to stay.

Characteristics of study participants. The sample for this study demonstrates the nursing population in North Dakota as primarily female and Caucasian with a mean age of 39.7 years. The percentage of the rural nurses in this study with an associate degree was 28.2%, which is lower than the national average of rural nurses at 51.6% (RHIhub, 2017). 65.9% of nurses in this study had a baccalaureate degree.

Nurses reported working in the emergency department with a frequency of 58.8%, which is expected as all critical access hospitals must provide emergency care services at all times (CMS, 2013). Nurses also reported working on medical and surgical units, and a swing bed unit, which is expected as critical access hospitals can have up to 25 inpatient beds and provide swing-bed services (CMS, 2013). 71.8% of nurses stated that part of their workload was non-direct patient care tasks, and only 28.2% of nurses in the critical access hospital had their workload exclusively dedicated to patient care. This is similar to previous research that found nurses move into leadership roles early in their careers as there are few nurses to fill these roles (Seright, 2011).

Clinical leadership. Staff nurses in this study reported that they use clinical leadership behaviors in their practice most of the time or almost always (4.6 ± 0.3). These results are similar to the results of the first group of nurses who completed the clinical leadership survey (4.4 ± 0.4) (Patrick, 2010). The subscales in this study ranged from 4.3-4.8. The subscales in the study by Patrick (2010) ranged from 4.2-4.6.

A thorough review of literature was done to determine aspects of clinical leadership in staff nurses, as leadership is usually used when describing formal leaders in nursing such as managers or administration (Yoder-Wise, 2015). Five common leadership behaviors were found in the literature that staff nurses should possess

including clinical expertise, effective communication, coordination of patient care, interprofessional collaboration, and empowerment/interpersonal understanding (AACN, 2008; ATI 2016; Patrick et al., 2011; Yoder-Wise, 2015). Research has recognized the importance of clinical leadership in all staff nurses who provide direct patient care and particularly for rural nurses in providing safe patient care (Molinari et al., 2008; Seright, 2011). These leadership behaviors were all utilized by participants in this study, as the results showed the average of every item and subscale was over 4, meaning that participants reported most of the time or almost always to engaging in clinical leadership behaviors.

This study found no statistically significant difference between clinical leadership and years as a nurse, highest nursing education level, formal education in leadership, years employed at current CAH, and proportion of time in their current job spent in direct patient care. These results were similar and different from previous research.

In this study as there was no difference in clinical expertise based on years worked as a nurse. The clinical leadership behavior of clinical expertise was found to not depend on years of experience in a study by Sedgwick et al. (2014). Nurses in this study stated that they used effective communication (4.6 ± 0.4). The clinical leadership behavior of effective communication was seen in a previous study where nurses at the bedside use communication skills (Fardellone et al., 2014). Nurses were found to collaborate regardless of their years in practice (Fardellone et al., 2014), which this study supported as there was no difference in collaboration based on years as a nurse. Fardellone et al. (2014) found that nurses with leadership skills feel empowered. This was found in this study as nurses ranked their empowerment/interpersonal understanding

high (4.3 ± 0.6). Education was found to improve critical thinking in nurses (Dyess & Sherman, 2011), and collaboration (Laut et al., 2018). This finding was unable to be verified as 64.5% of nurses stated they had received formal training in leadership and clinical expertise was reported (4.5 ± 0.5).

There were no differences found between years of nursing practice in this study, although due to the small sample size, nurses with less than 2 years of experience were unable to be analyzed separately. Previous research demonstrated differences in clinical leadership based on years of nursing practice. In a study with new graduate nurses, they increased in their communication skills after a residency program (Olson-Sitki et al., 2012). The clinical leadership behavior of coordination of care was seen in a previous study where there was no difference in new graduate nurses who participated in an orientation program (Olson-Sitki et al., 2012). Collaboration was found to be essential for new graduate nurses (Seright, 2011; Sedgwick et al., 2014). Previous research demonstrated that new graduate nurses were not adequately prepared to be leaders during their nursing program (Curtis et al., 2011; Dyess & Parker, 2012).

There were no differences found between clinical leadership of associate degree nurses and nurses with a baccalaureate or master's degree. Previous research demonstrated differences in some clinical leadership behaviors based on nursing degree. A study by Thompson (2011) assessed whether clinical leadership differed between associate and baccalaureate prepared nurses. There were no differences in communication skills, coordination of care or clinical expertise between the nurses based on degree. However, associate degree nurses had higher levels of support than baccalaureate degree nurses and felt more empowered than baccalaureate degree nurses

as they described receiving praise and support from coworkers (Thompson, 2011). The preparation of nurses at the associate and baccalaureate degree level includes an emphasis on the development of leadership (AACN, 2008; OADN, 2018). The degree level of nurses in this study did not significantly impact their use of clinical leadership behaviors. This supports the assumption that student nurses are learning clinical leadership behaviors in their nursing programs.

Professional satisfaction. The majority of staff nurses in this study reported that they strongly agreed or agreed to statements about their satisfaction, however some participants averaged a ranking of disagree to their satisfaction (4.2 ± 0.6). Nurses were more satisfied with nursing as a career (18.1 ± 2.3) than they were with their current jobs (15.9 ± 3.1).

Job dissatisfaction was not found in this study as nurses reported high levels of satisfaction with their career and job (4.2 ± 0.6). Most nurses also intended to stay with their current employer (69.4%). This is different than what has previously been seen in the literature. Reviewed literature confirms that the nursing shortage and subsequent insufficient nurse staffing is negatively impacting patient care (AACN, 2017). The problem of retention of new graduate nurses due to job dissatisfaction is contributing to the nursing shortage (Casey et al., 2011; Cleary et al., 2013; Duchscher, 2008; Kovner et al., 2007; Molanari et al., 2011; Wu et al., 2012). New graduate nurses feel that there are discrepancies between their educational preparation and their responsibilities as a nurse. This creates dissatisfaction with their job, including feelings of being overwhelmed and frustrated which can lead to them not only leaving their job, but leaving the profession of

nursing (Candela & Bowles, 2008; Clark & Holmes, 2007; Cleary et al., 2013; Duchscher, 2009; Kelly & Ahern, 2009; Newton & McKenna, 2007; Parker et al., 2014).

The multifocal nature of rural nursing practice has been found in the literature to contribute to job dissatisfaction, especially with new graduate nurses (Molinari et al., 2007, MacLeod et al., 2008, Mellor & Greenhill, 2014). This study found no statistically significant difference between job satisfaction and employment status, shift worked, unit worked on, or working in a multifocal role.

Association between clinical leadership, professional satisfaction, and intent to stay in current employment. Previous research has demonstrated that as staff nurses use clinical leadership to improve patient care, their job satisfaction increases (Grindel, 2016). The development of clinical leadership has been shown to improve patient safety, increase job satisfaction and retention rates (Curtis et al., 2011; Dyess & Sherman, 2011; Laut et al., 2018). To explain how these variables are related, SEM was used to impose a hypothetical structure on their relationships. As hypothesized, there was a direct positive association between clinical leadership and professional satisfaction ($\beta=0.50, p<0.001$), which in turn, had a direct effect on intent to stay satisfaction ($\beta=0.72, p<0.001$). Overall model fit was not strong, but our theoretical model did explain the observed relationship among the observed variables. These findings were not consistent to the ones from Patrick et al. (2011) as they found a good fit for their model of clinical leadership with second-order factor analysis and first-order factor analysis with five factors.

Transformational leadership. Transformational leadership is the theory that can be applied to nurses working in patient care areas, as they solve problems and assist in reaching goals (McEwen & Wills, 2014). Kouzes and Posner (1995) believe that

leadership skills are learned behaviors and that anyone can become an effective leader and make a difference, and the clinical leadership behaviors were conceptualized by Patrick et al. (2011). This study supports the belief that all nurses are transformational leaders, as the nurses reported high use of clinical leadership behaviors.

Study Strengths and Limitations

This study has strengths and also limitations. The cross-sectional design limits understanding of causality. The study variable of clinical leadership is a multidirectional concept, so this may not be a definitive picture of the relationship with job satisfaction or intent to stay in current job. There are other variables that could explain the association between clinical leadership and intent to stay, besides job satisfaction. The assessment of direction of causality could be incorrect. The researcher specified the direction of pathways and effects, and it is possible that the truth is in the opposite direction.

The sample was limited to nurses from one state, and although this setting was chosen for its rural nature, this could limit generatability of the results. The sample size was small, which did limit statistical analysis, however statistical power was adequate. With a sample of 81 participants, the study had 80% power at a 0.05 level of significance to detect a difference of 0.2 units in clinical leadership mean and 0.4 units in the professional satisfaction mean score.

The response rate to the surveys was approximately 15%, which is lower than previously reported response rates and may limit the generalizability of the findings. The surveys were sent to managers at the CAHs, and it is unknown how many invitations to participate in the study were sent on to the RNs. It is unknown where the participants were located, and therefore, how many different CAHs are represented in this study.

Participants did self-report their responses to the survey questions, so this could have some degree of measurement error. However, this study was conducted anonymously, which does lead to greater confidence that survey participants answered honestly and accurately. The participants self-selected to complete the survey and could have selected for a specific reason, which could affect the measurements and associations assessed.

The sample for this study demonstrates the nursing population in North Dakota as primarily female and Caucasian with a mean age of 39.7 years. The percentage of the rural nurses in this study with an associate degree was 28.2%, which is lower than the national average of rural nurses at 51.6% (RHihub, 2017). 65.9% of nurses in this study had a baccalaureate degree. Nurses reported working in the emergency department with a frequency of 58.8%, which is expected as all CAHs must provide emergency care services at all times (CMS, 2013). Nurses also reported working on medical and surgical units, and swing bed units, which is expected as CAHs can have up to 25 inpatient beds and provide swing bed services (CMS, 2013).

Implications

There are few studies that have assessed the clinical leadership of staff nurses, and none in rural areas. The findings from this study contribute to the nursing knowledge based related to clinical leadership of staff nurses in rural practice. The results from this study provide insight into the clinical leadership of staff nurses in rural areas, and demonstrates that staff nurses in rural critical access hospitals do have clinical leadership behaviors that they use consistently in their nursing practice. This is important because clinical leadership in staff nurses has been demonstrated to play a role in improving patient care, increasing job satisfaction, and supporting retention. This study provides

evidence supporting that clinical leadership is positively associated with satisfaction, which has a positive effect on intent to stay.

Nursing education. The findings from this study support education for associate and baccalaureate degree student nurses on clinical leadership behaviors. Associate degree and baccalaureate degree nursing programs need to continue to strive to prepare nursing students as clinical leaders. Producing nurses who are able to assume the role of a clinical leader at the bedside will improve the challenges that new graduate nurses face when entering the profession of nursing and will improve the quality of care for patients. Clinical leadership behaviors should not only be taught in knowledge format, but should also be modeled by faculty and clinical staff who may be mentoring students. Students should be taught how to apply these behaviors to nursing practice. This information may provide an improvement in the transition that student nurses make into the professional nursing role. This could assist in decreasing job dissatisfaction and turnover, leading to a reduction in the nursing shortage and improving patient care.

Critical access hospitals. Staff nurses should be encouraged to use clinical leadership behaviors and to assist new nurses in developing these behaviors. Nursing management at critical access hospitals need to support clinical leadership behaviors in staff nurses as this has been demonstrated to have a positive association with job satisfaction, and job satisfaction with intent to stay. Management should empower and support staff nurses in growing and utilizing clinical leadership behaviors. This could improve job satisfaction and then retention of these nurses, decreasing the nursing shortage and improving patient care in the rural setting.

Recommendations for Future Research

This research contributes to the current knowledge about clinical leadership in staff nurses. This study demonstrates that staff nurses in critical access hospital utilize clinical leadership when providing care. Clinical leadership had a direct positive association on satisfaction, which had a direct effect on intent to stay.

Future research should be done to contribute to a greater understanding between the variables of clinical leadership, job satisfaction, and intent to stay in current practice. Potential study participants could include staff nurses in other clinical settings and other geographical locations. The sample could include LPN staff nurses as leadership may not be emphasized in their educational programs. Research could be done on the barriers that staff nurses see to having and using clinical leadership in their work of providing direct patient care. This study included all nurses working in critical access hospitals. The number of years that a nurse has worked could be explored further to possibly gain different perspectives. Studies looking at clinical leadership and patient outcomes would be valuable as job satisfaction affects intent to stay which leads to short staffing, which negatively impacts patient care. Future research could include differences between satisfaction with their work and the intent to stay in current practice, and other reasons why nurses might leave their job outside of job satisfaction, as this has been proved to be multidimensional. Future analysis could include multiple hypothesized dimensions of intent to stay. Studies on intent to stay could include intent to stay in current geographical location, intent to change jobs, and intent to leave nursing.

Conclusion

The purpose of this study was to quantify clinical leadership among staff nurses working in rural areas, examine its determinants, and impact on job satisfaction and retention. This study addressed the clinical leadership practices, job satisfaction, and the intent to stay in their current job with a survey of nurses working in rural areas.

The major findings of this study indicated that staff nurses in critical access hospitals utilize clinical leadership when providing patient care (4.6 ± 0.3). The majority of staff nurses reported work and career satisfaction (4.2 ± 0.6), and intended to stay in their current job (69.4%). As expected, there was a direct positive association between clinical leadership and job satisfaction ($\beta=0.50, p<0.001$), which in turn, had a direct effect on intent to stay ($\beta=0.72, p<0.001$).

Leadership in staff nurses has not been studied in any depth prior to this study. It is important to know more about the leadership behaviors of nurses at the bedside as more emphasis has been placed on leadership in these nurses and the need for all nurses to incorporate leadership behaviors into their practice. Leadership is particularly important in nurses who work in rural critical access hospitals due to the generalist role of caring for the spectrum of patients, and the role overlap that occurs with nurses moving between the bedside and management tasks (Molanari et al., 2011; Seright, 2011). Given the findings of this study, it is important to support leadership development in nurses in programs of nursing, and as nurses transition from student nurse to practicing nurse. This research builds on current evidence which emphasizes leadership in staff nurse positions and clearly highlights the need for the continued development of clinical

leadership in new graduate nurses and staff nurses in direct patient care roles, especially in rural settings.

This study builds the knowledge base regarding leadership role preparation needs of the new graduate nurse transitioning into rural practice, and informs nurse managers for the creation of an empowered work environment supporting the transition of new graduate nurses into the rural practice setting. Further studies should be completed on this topic to continue to learn about the clinical leadership of staff nurses, and how job satisfaction can be improved. Future studies are necessary to address clinical leadership with different variables, and the multidimensional aspects of job satisfaction and intent to stay. This information can lead to an improvement in the clinical leadership that staff nurses utilize when providing patient care, which could improve their job satisfaction and then retention of these nurses. This could decrease the nursing shortage and ultimately improve patient care.

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Appendix A

Sample Size Calculation

Table. Sample size needed to estimate mean values of individual items scored in an ordinal scale 1-5 assessing clinical leadership, job satisfaction, and intent to stay in current practice, assuming different values of S.D. and precision.

	S.D.				
d	1.0	1.25	1.5	1.75	2.0
0.5	15	24	35	47	61
0.4	24	38	54	74	96
0.3	43	67	96	131	171
0.2	96	150	216	294	384
0.1	384	600	864	1176	1537

S.D. = standard deviation of item scored 1-5.

d = precision of estimated mean of item scored 1-5.

Using the sampling distribution and assuming a cross-sectional study design with the main analytical objective to estimate the population mean for each of the three main study variables of interest (clinical leadership, job satisfaction, and intent to stay in current position), 300 participants allowed us to calculate our estimates with high precision and confidence (95%). The sample size needed to accomplish our analytical goals assuming a conservative range of standard deviation (S.D.) (1.0-2.0) and precision (0.1-0.5) values in our computations was calculated. The population S.D. for the study variables are unknown, and the S.D.s obtained with same instruments previously used in similar nursing populations are lower than the ones assumed in our calculations (Clinical Leadership, S.D. = 0.91; Job Satisfaction, S.D. = 0.39) (Patrick, 2010; Read & Laschinger, 2015; Shaver & Lacey, 2003) or those expected from estimated quartiles based on the range of values of item responses (1-5, S.D. = 1.25) (Aday & Cornelius,

2006). However, it was our decision to take a conservative approach on the study sample size to provide additional flexibility if the response rate is lower than the 50% expected and to achieve adequate statistical power for data analyses of research aim 3, which was of exploratory nature.

Appendix B

Demographic Questions

Instructions: Thank you for your willingness to complete this survey. As part of the survey you will be asked to answer questions about your demographics, education, nursing practice, and current employment in a critical access hospital (CAH).

1. Before you start the survey, please confirm that you are currently employed as a RN in a CAH.
 - ☐ yes (survey will continue)
 - ☐ no (disqualification message: Thank you for your time, but we are only surveying RNs who are currently employed in a CAH.)
2. Select the statement that best describes your CURRENT employment.
 - ☐ Full-time, single job
 - ☐ Full-time, more than one job
 - ☐ Part-time, single job
 - ☐ Part-time, more than one job
 - ☐ Other (specify) _____
3. What is your age? (years) _____
4. What is your gender?
 - ☐ Male
 - ☐ Female
 - ☐ Other (specify) _____
 - ☐ Prefer not to say

5. What is your race/ethnicity? (*select all that apply*)

- ☐ American Indian/Alaska Native
- ☐ Asian
- ☐ Black/African American
- ☐ Hispanic or Latino
- ☐ Native Hawaiian/Pacific Islander
- ☐ White
- ☐ Other (specify) _____
- ☐ Prefer not to say

6. What is your marital status?

- ☐ Married
- ☐ Widowed
- ☐ Divorced
- ☐ Separated
- ☐ In a relationship
- ☐ Single/never married
- ☐ Prefer not to say

Education and Career:

7. Have you ever had a job (nursing or non-nursing) where you had to USE LEADERSHIP SKILLS? (*e.g. advocating, collaborating, critical decision making, communication, delegating, coordinating, and/or quality improvement*)
- ☐ no
 - ☐ yes
 - ☐ not sure
8. Have you ever received formal TRAINING/EDUCATION IN LEADERSHIP (nursing or non-nursing)?
- ☐ no
 - ☐ yes
 - ☐ not sure
9. What is the HIGHEST level of NURSING education you have completed?
- ☐ Associate Degree
 - ☐ Baccalaureate Degree
 - ☐ Master's Degree
 - ☐ Doctorate Degree
 - ☐ Other (specify) _____
10. How long have you been ACTIVELY PRACTICING as a registered nurse?
(years) (*exclude years as a registered nurse but NOT in active practice*) _____
11. Of those years of ACTIVE nursing practice, how many were in a RURAL area?
(years) (*population < 50,000*) _____

12. When you first started working as a registered nurse, did you receive any
FORMAL clinical training as part of your FIRST job? (*e.g. residency, orientation
program, one-on-one mentorship/preceptorship*)

- ☐ no
- ☐ yes
- ☐ not sure

Current Employment as a Critical Access Hospital Nurse:

Please answer the following questions thinking about your CURRENT job as a Critical
Access Hospital (CAH) nurse. If you work in more than one CAH, answer the questions
about the CAH where you work the most hours.

13. Do you consider a Critical Access Hospital (CAH) your PRIMARY place of
employment?

- ☐ no
- ☐ yes

14. How long have you been employed at this CAH? (years) _____

15. What is your typical work schedule?

- ☐ Days
- ☐ Evenings
- ☐ Nights
- ☐ Rotating shifts
- ☐ Other (specify) _____

16. What type of patient care unit do you REGULARLY work on? (*Select all that apply*)

- ☐ Emergency Department
- ☐ Swing Bed Unit
- ☐ Medical Unit
- ☐ Surgical Unit
- ☐ Obstetrics/Gynecology
- ☐ Operating Room
- ☐ Other (specify) _____

17. On average, how much of your TOTAL workload is dedicated to complete tasks

OTHER THAN direct patient care? (*e.g. program coordinator, education/training, committee service, administration*)

- ☐ My workload is exclusively dedicated to direct patient care
- ☐ 1-10%
- ☐ 11-25%
- ☐ 26-50%
- ☐ >50%

(Adapted from the demographic questionnaire by Polit & Beck, 2017 and Patrick, 2010)

Appendix C

Clinical Leadership Survey

In this part of the survey you will be asked to estimate the AVERAGE frequency in which you engage in certain behaviors as part of your role as a nurse when providing DIRECT PATIENT CARE in a CRITICAL ACCESS HOSPITAL.

1	2	3	4	5
Almost Never	Occasionally	Some of the time	Most of the time	Almost Always

- _____ 1. When I am concerned about the patient's well being, I take risks by questioning orders and/or treatments.
- _____ 2. I am able to provide evidence based rationale for my clinical decisions.
- _____ 3. I engage in reflective practice and try to understand what went well and what did not go well.
- _____ 4. I negotiate with and support members of the inter professional healthcare team to help patients achieve their goals.
- _____ 5. I am enthusiastic and engaged when communicating with patients to achieve patient-centered goals.
- _____ 6. I engage in meaningful conversations with colleagues to foster our ability to provide patient-centered care.
- _____ 7. I actively listen to colleagues' diverse points of view.

- _____ 8. I establish therapeutic relationships with patients and their families that are based on trust.
- _____ 9. I develop cooperative relationships with my peers and colleagues.
- _____ 10. I do my best to follow through on the promises and commitments that I make to patients.
- _____ 11. I try to ensure we work towards achievable goals, make concrete plans and establish measurable objectives in achieving clinical patient outcomes.
- _____ 12. I am committed to patient centered care.
- _____ 13. I publicly acknowledge my colleagues who exemplify commitment to professional values.
- _____ 14. I provide positive feedback to colleagues when their actions contribute to the well being of patients and families.
- _____ 15. I find ways to celebrate colleagues' accomplishments.

(Patrick, 2010)

Appendix D

Satisfaction with Work and Satisfaction with Career

Likert scale for responses: 1. strongly disagree, 2. disagree, 3. neutral, 4. agree, 5. strongly agree

How much do you agree with the following statements?

Satisfaction with work:

- _____ 1. I am happy with my current work environment.
- _____ 2. I am satisfied with the quality of care I am able to provide.
- _____ 3. I would encourage other nurses to apply for a job with my employer.
- _____ 4. My employer places a high value on the work I do.

Satisfaction with career:

- _____ 5. Overall, I am satisfied with my choice of nursing as a career.
- _____ 6. I like being a nurse.
- _____ 7. I would encourage others to become a nurse.

(Shaver & Lacey, 2003)

Appendix E

Intent to Stay

Which of the following statements most clearly reflects your feelings about your future in this hospital?

1. definitely will leave
2. probably will leave
3. uncertain
4. probably will not leave
5. definitely will not leave

(Price & Mueller, 1981)

Appendix F

Email to Nurse Manager, or Equivalent of Critical Access Hospitals

Dear Critical Access Hospital Staff,

I am Kathy Roth, a student in the Ph.D. program at Idaho State University, and the principal investigator for a study designed to investigate clinical leadership among staff nurses working in rural areas, and examine its determinants and impact on job satisfaction and retention.

I teach undergraduate nursing students at a college in North Dakota, and I aim to build the knowledge base regarding leadership role preparation needs of the nurse transitioning into rural practice, and inform nurse managers. The outcome of this study will support the development of leadership behaviors in nurses for practice in rural areas, and the creation of an empowered work environment supporting the transition of nurses into the rural practice setting.

I am asking that you please forward this link <> to all nurses in your hospital. I plan to collect data via survey between January and February. Participation of the nurse is voluntary and all survey data anonymous. The survey will take approximately 20 minutes to complete. The survey includes questions about demographics, education and training, nursing as a career, clinical leadership behaviors, and current employment in a critical access hospital. I would be happy to provide a summary of results once the study is completed if requested. I appreciate your support in advance of this study.

Please feel free to reach out to me by email or phone, 701-848-6244, if you have any questions or concerns.

Thank you,

Kathy Roth

Ph.D. in Nursing Student at Idaho State University

Appendix G

Cover Letter to Participants

Dear Professional nurse in rural practice:

My name is Kathy Roth and I am a PhD student in Nursing at Idaho State University. I am examining clinical leadership behaviors in nurses working in Critical Access Hospitals (CAHs), and its influence on job satisfaction and intent to stay in rural nursing practice. Because you are a RN at a CAH in North Dakota, I am inviting you to participate in this research study by completing an online survey.

The survey will require approximately 20 minutes to complete. At the completion of the survey you will be provided an option to share your email account to enter into a drawing to receive one of three \$25 gift cards to Amazon. If your name is drawn following completion of the study, a digital gift card will be sent to the email that you entered. Your participation is strictly voluntary and you may refuse to participate at any time. Your responses are anonymous, and results from this study will be presented in aggregate form only.

Thank you for taking the time to assist me in my educational endeavors. Findings from this study will provide useful information for further development of clinical leadership skills in nurses in rural practice, and inform leaders of opportunities to align these to enhance job satisfaction and retention.

Please click the following link: <> By clicking this link and completing this survey, you have read and understood this consent, acknowledge your voluntary participation in this research study, and agree to participate in this study. If you require additional information or have questions, please contact me at the number/email listed below.

Sincerely,

Kathy Roth, MSN, RN

Phone: 701-848-6244, email: rothkath@isu.edu