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Nursing Leadership and Employee Satisfaction Perception in a Virtual Work Environment

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Abstract

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MSN, Kaplan University, 2013

MBA, University of Phoenix, 2005

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Health Services

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Abstract

Virtual team leaders in health care must have the right resources available to help them effectively perform their jobs. Better performance from the leader may lead to greater employee satisfaction. The problem addressed by this study was the impact of leadership style on employee satisfaction of virtual nurses. The purpose of this quantitative correlational study was to investigate the relationship between the leadership styles of virtual nursing environment leaders as perceived by virtual employee nurses and the nurses' satisfaction as measured by the Multifactor Leadership Questionnaire–short form. Building on the theoretical foundation of Bass's 1990 work, this study examined the relationship between full range leadership and three measures linked to team success, work effort, perceived leader effectiveness, and employee satisfaction, for virtual teams. Populations came from national organizations that hire registered nurses to work remotely. The sampling strategy was a nonprobability convenience sample of 131 registered nurses. Data analysis included both descriptive and inferential statistics. Correlations were used to predict the relationship of the dependent and independent variables. There were strong positive correlations with transformational leadership and transactional leadership contingent reward with employee satisfaction, while passive/avoidant leadership correlations were negative with employee satisfaction. The potential significance of this study is a better understanding of how leadership in a virtual nursing environment can affect employee satisfaction, which can have a positive effect on job performance and employee retention, potentially leading to improved health care services and reduced health care costs.

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Dedication

This work is dedicated to my daughter, Gabrielle Duffy. You have inspired me to keep seeking more knowledge and to stay on this path that will guide me. Your love is undeniable and always available. Thank you for allowing mommy to miss some field trips and other activities so I could focus on this degree completion. Without you my life would be totally different, and I appreciate all the sacrifices you have made to allow me to finish this dissertation.

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Chapter 1: Introduction to the Study

Virtual work environments allow employees to work from anywhere with the use of computers, telephones, and the internet (Madlock, 2012). Health care has not been excluded from this virtual environment. Patients can be educated and/or treated in almost any environment (Harless et al., 2007; Vorderstrasse, Melkus, Pan, Lewinski, & Johnson, 2015). The ability to educate and treat patients outside of the hospital setting now spreads the work environment to several locations and allows nurses to work from anywhere (Kerfoot, 2010). With employees working in several locations with less frequent direct contact with their managers, leadership must evolve (Cascio & Shurygailo, 2003). This evolution can take place with the right leadership style in the workplace.

The problem I sought to investigate with this study was the impact of virtual nurse managers' leadership styles on the employee satisfaction of virtual nurses. The research regarding virtual leadership indicated that virtual work environments lessened the impact of leadership styles, but creating personal connections with team members improved team relationships (Schmidt, 2014). Although this research indicated important findings, a gap in the literature existed regarding the effective management of nurses working in remote environments who may not have regular, in-person contact with the nurse leader. The intent of this study was to examine the relationship between leadership styles and employee satisfaction among employees and managers in a virtual nursing environment.

Virtual team leaders in health care must have the right resources available that will help them perform better at their job. Better performance from the leader may have a chain reaction of positive outcomes. This positive chain reaction may lead to better

employee satisfaction. Positive outcomes may be the social change that is needed. The potential of significance of this study was the better understanding of how leadership in a virtual nursing environment can affect employee satisfaction. Since a direct link has been established between employee retention and satisfaction, this study may provide insight as to how to reduce employee turnover (American Association of Colleges of Nursing [AACN], 2014; Morgan, Doyle, & Albers, 2005).

Chapter 1 includes the background, problem statement, purpose of study, research questions and hypotheses, and theoretical framework. This chapter also presents the nature of study, definitions, assumptions, scope and delimitation, limitations, and significance of study.

Background of Study

Virtual teams are a group of people who work together on a project but happen to be separated by geography, time, and culture. The main source of communication is done via electronic media such as e-mail, video conferencing, and instant messaging (Bell & Kozlowski, 2002; Purvanova, 2014). Virtual team usage is expected to continue to grow with the increase of global business (Schmidt, 2014). Virtual teams and nursing are words that most would not expect to be in the same sentence. As nursing continues to change and grow with technology and become more virtual, nurse leaders will need the skills necessary to lead differently to accommodate the virtual world (Cowan, 2014).

Over the years, research regarding virtual teams has grown (Cheshin, Rafaeli & Bos, 2011; Krumm, Kanthak, Hartmann, & Hertel, 2016; Lockwood, 2015; Schouten, Van den Hooff, & Feldberg, 2016). There still is a limited amount of research available

regarding virtual team leadership (Hoch & Kozlowski, 2014; Ocker, Huang, Benbunan-Fich, & Hiltz, 2011; Schmidt, 2014). Virtual leadership in health care has even less research support (Cowan, 2014; Kerfoot, 2010; Levesque, 2012).

Leaders who work in health systems with multiple locations or organizations functioning nationally or internationally must manage employees effectively in the virtual environment (Cowan, 2014). Leadership in nursing can no longer take place under the traditional methods in a virtual environment because the old way of leading is no longer effective (Levesque, 2012). Nurse leaders need to become familiar with different types of leadership styles that will have positive effects on a virtual team (Cowan, 2014).

Incorporating leadership styles in the virtual environment has been a current topic of discussion in nonnursing environments (Barnwell, Nedrick, Rudolph, Sesay, & Wellen, 2014; Dahlstrom, 2013; Hoch & Kozlowski, 2012; Madlock, 2012; Schmidt, 2014). The most common leadership theories addressed in the literature include laissez-faire, situational, transactional, transformational, and full range of leadership models (Aarons, Ehrhart, Moullin, Torres, & Green, 2017; Avolio, Bass, & Jung, 1999; El Amouri & O'Neill, 2014; Green, Albanese, Cafri, & Aarons, 2014; Kanste, Kaariainen, & Kyngas, 2009; Powell et al., 2017; (Richter, Schwarz, Lornudd, Lundmark, & Mosson, 2016). Finding the right leadership style in a virtual environment takes effort on the leader's part to create successful teams (Schmidt, 2014).

Leadership Theories

Often criticized as nonleadership, laissez-faire leadership occurs when managers take no action in any type of situations whether good or bad (Dussault & Frenette, 2015).

The avoidance of decision making and the lack of availability from the leader when needed by employees make this type of leadership less desirable (Skogstad, Aasland et al., 2014). A laissez-faire leader will hide from the decision making and avoid conflict. Situational leadership assumes that different circumstances require different leadership styles. Based on the needs of the follower the leader will adjust the style to be supportive or directional (Northouse, 2016). A situational leader will look at the circumstances and determine what the appropriate leadership method will be to support or direct the follower.

The interchanges that occur between a leader and followers are the basic premise of transactional leadership. These exchanges are based on the employees providing productivity and task completion while the leader provides the resources and possible rewards (Hamstra, Van Yperen, Wisse, & Sassenberg, 2014; Judge & Piccolo, 2004). Transactional leadership works best with employees who are motivated by reward (Aarons et al., 2017; Kanste et al., 2009). A transactional leader would notify employees of a potential bonus if work is completed correctly and on time. Transformational leadership encourages a positive exchange between the leader and the follower (Munir, Nielsen, Garde, Albertseon, & Carneiro, 2012). The transformational leader provides coaching and mentorship while providing individualized treatment to employees (Choi, Goh, Adam, & Tan, 2016). A transformational leader would inspire each team member differently based on the individual's needs, but still give the overall same message of meeting the goals of the organization.

The full range leadership model (FRLM) includes the spectrum of leadership from laissez-faire to transformational leadership. FRLM authors intend to describe the full spectrum of leadership behaviors from undesirable leadership behavior to inspiring leadership behavior (Richter et al., 2016). Leaders can use FRLM to determine their type of leadership style within the spectrum.

Linking Leadership Style and Employee Satisfaction

When comparing an employee's intent to stay and their satisfaction, transformational leadership styles work better (Mohammad, AL-Zeaud, & Batayneh, 2011). Transformational leadership patterns have been advanced as reducing work stress and increasing employee morale, which results in promoting employee satisfaction (Berggren & Severinsson, 2003). Medley and Larochelle (1995) suggested that transformational leadership style has the biggest effect on employee satisfaction and that leadership style plays a big part. Transformational leadership style has a positive relationship with employee satisfaction and the opposite is true for transactional and laissez-faire leadership styles (Parkman, 2001). Wang, Chontawan, & Nantsupawat (2012) found a statistically significant positive correlation between transformational leadership of nurse leaders in a hospital setting and registered nurses (RN). There currently was no specific information regarding RN satisfaction in a virtual environment and how this satisfaction is affected by managerial leadership style. This study was necessary because employee satisfaction may affect employee turnover rates, employee morale, and the bottom line for organizations (Whitford & Moss, 2009).

Problem Statement

The problem is that employees who are not satisfied with their job tend to leave citing leader relationship as evidenced by lack of respect and noncommunication as the number one reason (Efron, 2013; Heathfield, 2017; Marr, 2017). The average turnover cost of one nurse can range from $38,000 to $61,100; this in turn can cost a hospital 4.4 to 7.0 million dollars a year (Nursing Solutions, 2018). Replacing employees after turnover costs varying amounts based on level of employment. Entry level employees cost about 30%-50% of annual salary, midlevel employees cost about 150%, and high-level or highly specialized employees cost as much as 400% of annual salary (Borysenko, 2015). This is a very expensive problem for organizations. The same cost analysis can be applied to nurses working in virtual environments. An employee's satisfaction can affect the work place in many ways. If the employee is not satisfied with their job, a company may experience high employee turnover rates, lack of employee engagement, and minimal organizational outcomes (Manning, 2016).

The problem that I addressed in this study was the impact of leadership style on employee satisfaction of virtual nurses. Although the research regarding virtual leadership styles illuminates important findings, I have found no research that has examined the relationship of transformational leadership and employee satisfaction in a virtual nursing environment. Given such, further research was warranted that could examine this area to address the rise of virtual environments in nursing.

Purpose of Study

Leadership styles of leaders in a virtual nursing environment was the problem that I sought to explore. The purpose of this quantitative correlational study was to investigate the relationship between the leadership styles of virtual nursing environment leaders as perceived by RNs and the RNs' satisfaction as measured by the MLQ-5X. My intent with this study was to identify specific leadership styles that represent effective leadership in a virtual nursing environment. Nurse leaders need to become familiar with different types of leadership styles that will have positive effects on a virtual team (Cowan, 2014). The independent variables studied were transformational leadership, transactional leadership, and laissez-faire leadership. This data was extracted from participant responses to the MLQ-5X. The dependent variables were the virtual nurse employees' perceptions of leader effectiveness, employee satisfaction with the leader, and the employee willingness to exert extra effort. The results of this study are important because they can possibly help reduce turnover rates in the virtual nursing environment. The results could provide virtual nurse leaders with information to improve the working environment and potentially improve employee satisfaction and productivity and reduce staff turnover. Knowing the results of this study allowed me to have a better understanding of what contributes to employee satisfaction. The results of this research can provide insight to organizations and managers on the key ingredients needed for a manager to possess, maintain, or create a successful team. Ultimately, happy employees will lead to successful teams; which provides greater organizational outcomes.

Research Questions and Hypothesis

Data was analyzed to produce results to answer the following research questions:

RQ1: Is there a relationship between virtual manager leadership style and employee satisfaction with their leader as measured by the MLQ-5X?

$H_0$1: There is no statistically significant relationship between virtual manager leadership style and employee satisfaction with their leader as measured by the MLQ-5X.

H_a1: There is a statistically significant relationship between virtual manager leadership style and employee satisfaction with their leader as measured by the MLQ-5X.

RQ2: Is there a relationship between virtual manager leadership style and employee perception of leader effectiveness as measured by the MLQ-5X?

$H_0$2: There is no statistically significant relationship between virtual manager leadership style and employee perception of leader effectiveness as measured by the MLQ-5X.

H_a2: There is a statistically significant relationship between virtual manager leadership style and employee perception of leader effectiveness as measured by the MLQ-5X.

RQ3: Is there a relationship between virtual manager leadership style and employee willingness to exert extra effort as measured by the MLQ-5X?

$H_0$3: There is no statistically significant relationship between virtual manager leadership style and employee willingness to exert extra effort as measured by the MLQ-5X.

H_a3: There is a statistically significant relationship between virtual manager leadership style and employee willingness to exert extra effort as measured by the MLQ-5X.

Theoretical Framework

Leadership styles of nurse managers have been linked to employee satisfaction among nurses (Abualrub & Alghamdi, 2012; Chen, Beck, & Amos, 2005; Negussie & Demissie, 2013; Roberts-Turner et al., 2014). One of the more common theories is full range leadership developed by Bass & Avolio (1990). This theory comprises three leadership constructs that denote leadership behaviors: laissez-faire, transactional, and transformational (Aarons et al., 2017; Avolio et al., 1999; Powell et al., 2017). Incorporating the most appropriate leadership styles in the nursing virtual environment can influence employee satisfaction.

FRLM can assess three different types of leadership styles at once. Currently one of the most researched and authenticated frameworks studying leadership, FRLM is used to assess leadership in individual and organizational development (Green et al., 2014; Kanste et al., 2009). The model addresses the full range of leadership behaviors from laissez-faire leadership to transformational leadership (Richter et al., 2016). Assessment with a model that incorporates the whole continuum of leadership styles allows for better understanding of the leadership style that is in use. FRLM serves as the theoretical

framework for this study. FRLM relates to this study's approach by providing a leadership model that may be effective in virtual environments and health care settings. This leadership model was chosen because it encompasses the complete continuum of leadership and the MLQ-5X successfully measures this continuum. The second reason for the selection of FRLM was the reliability of MLQ-5X has been strongly supported (Dimitrov & Darova, 2016).

When leaders choose not to take any action or are slow to respond to employees, the leadership style that is being used is laissez-faire leadership (Richter et al., 2016). The laisaez-faire manager tends to not take responsibility for anything, but instead is passive, which in turn is related to negative outcomes (Richter et al., 2016; Skogstad, Hetland, & Einarsen, 2014). Stated as the most ineffective leadership style, laissez-faire leadership represents the nontransaction style (Skogstad, Aasland et al., 2014; Skogstad, Hetland et al., 2014).

Transactional leadership distinguishes that rewards by leaders are contingent on successful completion of tasks by employees (Hamstra et al., 2014). It is the more task-driven type of leadership style. Transactional leadership can be broken down to two components, contingent reward and management by exception. Using positive and/or negative reinforcement, the transactional leader will use rewards or punishment to seek continued levels of change behaviors from the employee (Judge & Piccolo, 2004; Ruggieri, 2009). These exchanges are based on the leader providing the resources and possible rewards while the followers provide the motivation, productivity, and task accomplishment (Hamstra et al., 2014; Judge & Piccolo, 2004).

Transformational leadership, created by Burns (1978), inspires people to achieve unexpected results. Building relationships with leaders and followers promotes open communication and supports a certain level of trust (Choi et al., 2016; McCleskey, 2014). Transformational leadership will support open communication and building trust (Choi et al., 2016; McCleskey, 2014). Employees have the chance to be autonomous and assert authority when necessary once they have been adequately trained by a transformational leader (Richter et al., 2016). This style of leadership will mobilize teams to work together for the greater good of the company versus individual priorities (Botma, Botha, & Nel, 2012). Transformational leadership allows the manager to lead by example; the rapport and empathy used engages the employee and builds trustworthy relationships (Northouse, 2016). Relationships are important in a virtual environment and the autonomy of the job fits well with transformational leadership (Gilson, Maynard, Jones-Young, Vartiainen, & Hakonen, 2015).

Nature of Study

I investigated the relationship between leadership style and employee satisfaction using a descriptive and cross-sectional survey. The quantitative approach has been the most commonly used research method in leadership studies (Stentz, Clark, & Matkins, 2012). Quantitative design was appropriate for this study because the MLQ-5X survey instrument was used to collect numerical data to address the research questions (Bass & Avolio, 2000; Dimitrov & Darova, 2016; Frankfort-Nachmias & Nachmias, 2015).

The independent variables were transformational, transactional, and laissez-faire leadership styles while the leadership outcome as measured by the MLQ-5X was the

dependent variable for this study. The target population was gathered from health care virtual environments across the United States. Participants included nurses who worked in similar types of virtual environment. Participation in this study was voluntary and consent was implied by the submission of the completed survey.

The online survey created through SurveyMonkey was distributed to participants via e-mail and social media postings via LinkedIn and Facebook. All responses remained anonymous. The survey contained a demographic section, an informed consent section, and the 45-question MLQ-5X short form (Bass & Avolio, 2000). The demographic section included age, gender, highest level of education, ethnicity, type of professional licensure, contract or permanent employment, length of nursing, tenure with the organization, industry of work, work location versus manager's work location, type of role, and whether they considered themselves virtual/remote employees. SPSS was used to analyze data obtained from the survey. A detailed discussion of statistical data is presented in Chapter 3.

Definitions

Job satisfaction: Finding fulfillment, joy, and purpose in work (Chung-Yan, 2010).

Laissez-faire leadership: The inability of the leader to make decisions or to make decisions in a timely manner due to avoidance of responsibilities (El Amouri & O'Neill, 2014).

Leadership: A process by which one individual motivates and empowers others to achieve common goals of the group or organization (El Amouri & O'Neill, 2014; Rogers, 2012).

Multifactor Leadership Questionnaire (MLQ): The MLQ instrument was created and validated to measure leadership styles on the continuum from passive leaders to visionary leaders. The instrument consists of 45 questions (Bass & Avolio, 2004; Dimitrov & Darova, 2016).

Transactional leadership: Leadership style focused on the exchange between leaders and employees via a contingent reward system for task completion (Bass & Avolio, 2004; Burns, 1978; El Amouri & O'Neill, 2014).

Transformational leadership: Motivating employees to work together for the greater good of the company's outcomes and fostering an environment that results in innovation (Bass & Avolio, 2004; Burns, 1978; El Amouri & O'Neill, 2014).

Assumptions

The following assumptions were made when completing this research study:

1. All participants will respond truthfully and accurately.
2. Managers will have characteristics that are identifiable by the MLQ.
3. Enough people will participate to make the results meaningful.
4. Anonymity and confidentiality will be preserved during data collection.

Scope and Delimitation

The scope of this study was limited to investigating the leadership styles from the perspectives of nurses working in a virtual environment. The findings in this survey

might not be reflective of all nurses working in a virtual environment. The current study included some constraints to eliminate bias. The following delimiters were present for the study:

1. Participants in the study worked in a virtual environment.
2. Participants in the study were RNs.
3. All participants reported to someone in a leadership position in the organization.

Limitations

This study used the MLQ-5X to investigate the relationship between transformational leadership and employee satisfaction, just as many prior studies have done. However, this study focused on this relationship in the context of a virtual nursing environment, a phenomenon much less studied. Outside of the few studies pertaining specifically to virtual workers, much of the research used to support the hypotheses of this study was based on studies conducted in traditional nursing settings. The results of the data are only applicable to the industry in which that data was gathered and therefore cannot be generalized about all virtual nursing environments. This research will leave room for further studies in other industries that employ virtual nurses.

Significance

The significance of this study was that it provided evidence regarding the effect of nurse leader leadership style on employee satisfaction in a virtual nursing environment. Previous research studies have provided evidence regarding the positive correlation between employee retention and satisfaction, and this study may provide insights

regarding leadership styles in a virtual nursing environment (AACN, 2014; Hamstra et al., 2014; Morgan et al., 2005). Although the body of knowledge contains a wealth of research on leadership styles, there are only a few regarding the implications of leadership in a virtual environment and none that discuss virtual nursing environments. The goal of this research was to identify leadership characteristics that can positively impact employee satisfaction in a virtual nursing environment.

Virtual teams have seen continued growth since 2000 (Gilson et al., 2015; Krumm et al., 2016). Health care has been adapting to keep up with global trends by expanding to virtual work places. Evidence to illustrate a positive correlation between leadership style and increased employee satisfaction and productivity is abundant in the literature (Roberts-Turner et al., 2014). With health care making transitions to virtual environments, research is needed to see if the type of leadership style will affect employee satisfaction in the virtual nursing environment (Cowan, 2014).

Summary

Access to the internet has made globalization of business easier for companies (Bell & Kozlowski, 2002). The use of computers, telephones, and the internet have allowed employees the ability to virtually work from anywhere in the world (Greenhalgh, Bullock, Frécon, Lloyd, & Steed, 2001; Madlock, 2012). Some health care organizations can also be included in groups that provide services virtually. Nursing services are now being provided in several different types of locations (Kerfoot, 2010). Patient care may be provided in almost any environment (Harless et al., 2007; Vorderstrasse et al., 2015). Leaders who work in health systems with multiple locations or organizations functioning

nationally or internationally still must manage employees effectively in this virtual environment (Cowan, 2014).

Leadership styles of the past that require direct contact with employees may not be effective in this virtual space (Levesque, 2012). There are different types of leadership styles that can have positive effects on a virtual team and nurse leaders must become familiar with these styles for the team to be effective (Cowan, 2014). Known for its ability to inspire supporters and doers of the work and encourage change, transformational leadership has been studied in both nursing and virtual environments (Nahavandi, 2015; Northouse, 2016). Creating a virtual environment for nurses leading to high employee satisfaction is the goal. This goal can be better understood by research that addresses the relationship between leadership styles in a virtual environment and employee satisfaction among nurses. In the next chapter I explore the literature and theoretical framework that guides this research.

Chapter 2: Literature Review

The impact of leadership styles in a virtual nursing environment was the problem that I sought to explore. The purpose of this quantitative correlational study was to investigate the relationship between the leadership styles of virtual nursing environment managers as perceived by virtual employee RNs and the RNs' satisfaction as measured by the MLQ-5X. My intent with this study was to identify specific leadership styles that represent effective leadership in a virtual nursing environment. Nurse managers need to become familiar with different types of leadership styles that will have positive effects on a virtual team (Cowan, 2014).

The literature review was a collection of peer-reviewed journal articles, books, and dissertations. The major sections of this chapter include the literature search strategy, theoretical foundation, literature review, and summary and conclusion. In the major sections I describe virtual teams in organizations and the type of communication style that takes place in this environment. I also explain different types of leadership styles and their role in virtual teams. Finally, in this chapter I also address the linkage between employee satisfaction and leadership styles.

Literature Search Strategy

I conducted literature searches using the following databases in the Walden University Library: Academic Search Complete, Business Source Complete, CINAHL Plus with Full Text, Health and Psychosocial Instruments (HaPI), MEDLINE with Full Text, Primary Search, Mental Measurements Yearbook with Tests in Print, ProQuest Nursing & Allied Health Source, and ProQuest Health & Medical Collection. A Health

Services librarian was consulted to determine the most appropriate search strategy for this area of research. I used the following key words, independently and in combination, when searching the databases: *transformational leadership, laissez-faire leadership, situational leadership, virtual team, virtual environment, nurses, nursing, job satisfaction, health care, remote environment, remote team, remote work, remote work environment, telehealth, telemedicine, full range leadership model, Multifactor Leadership Questionnaire,* and *MLQ-5X*. When searching the academic databases, I limited results to full-text peer-reviewed articles published between 1985 (mostly seminal works) to 2017, with current research dating back to 2013. I also searched ProQuest Dissertations and Theses Global using the following key words: *virtual environment, nursing,* and *transformational leadership* combined. I limited my search to dissertations published since 2010. In addition, I used the Google Scholar search engine to identify articles that may not have been available in the databases. Finally, I examined reference lists from published articles and dissertations chosen for my literature review and, using Google Scholar, located each prospective article, read the abstract, and chose to read the full article or not based on the delimitations of my study.

Theoretical Foundation

Job satisfaction among nurses has been linked to the type of leadership style the nurse managers possess (Abualrub & Alghamdi, 2012; Chen et al., 2005; Negussie & Demissie, 2013; Roberts-Turner et al., 2014). Job satisfaction may be influenced by the leadership style that is incorporated in the nursing virtual environment. One of the more

common theories of leadership style is transformational leadership. Transformational leaders can motivate people to do more than what they intended to do (Bass, 1985).

In 1978, Burns created transformational leadership to connect leadership and followership. Transformational leadership was expounded by Bass (1998) who described leaders as role models who pay attention to the needs of their followers, while the leader mentors employees to succeed beyond their goals (Northouse, 2016). Bass and Avolio (1990) created transformational leadership using the four components that exist today.

The four components that make up transformational leadership are idealized influence, inspirational motivation, intellectual stimulation, and individual consideration (Northouse, 2016). Idealized influence allows the leader to be a role model with high standards of moral and ethical behavior that are deeply respected by the follower (Ghasabeh, Reaiche, & Soosay, 2015; Kanste et al., 2009). An example of idealized influence would include followers who are so enthralled by the leader that they become passionate about the leader, the team, and the organization. Inspirational motivation allows the follower to see the vision that the leader has created and builds trust between leader and follower. This trust helps to reduce the resistance to change (Whitford & Moss, 2009). The leader's ability to exhibit commitment to the goals of the organization provides followers with motivation to complete assignments even with challenges (Botma et al., 2012). Intellectual stimulation includes actions that challenge the standard ways of thinking, causing a person to think outside the norm for ideas and solutions (Botma et al., 2012; Gousy & Green, 2015; Kanste et al., 2009). The leader's ability to challenge followers on an intellectual level helps to empower the follower to be

innovative. Personal connections between leaders and followers are created when the leader applies individual consideration (Gousy & Green, 2015). Transformational leaders take the time to establish relationships with followers and provide coaching, encouragement, and support on an individualized basis (Botma et al., 2012). Each team member is treated equally but in a manner that addresses the individual needs of each member.

Transformational leadership inspires people to achieve unexpected results. Employees have the chance to be autonomous and assert authority when necessary once they have been trained by a transformational leader (Richter et al., 2016). Teams work together for the greater good of the company versus accomplishing individual priorities when this type of leadership is mobilized (Botma et al., 2012). In virtual environments where autonomy is paramount, relationships are important. This autonomy of the job fits well with transformational leadership (Gilson et al., 2015).

Overall transformational leadership style has had positive impacts on job satisfaction (Abualrub & Alghamdi, 2012; Bormann, 2014; Botma et al., 2011; Choi et al., 2016). Asiri, Rohrer, Al-Surimi, Da'ar, & Ahmed (2016) showed positive correlations between transactional leadership styles and organizational commitment and negative correlations between transformational leadership and organizational commitment, which goes against the norm when using the MLQ-5X. Belcher et al. (2015) used the MLQ-5X to evaluate the development of leadership characteristics among students enrolled in an emerging leaders program. Fischer (2016) established the concept of creating an operational definition for transformational leadership in the nursing context.

FRLM was developed from transformational theory. The intent for FRLM was to cover the continuum of leadership from nonleadership styles to full encompassed leadership (Kirkbride, 2006). The MLQ-5X addresses the continuum of leadership through survey questions that apply to each category of laissez-faire, transactional, and transformational leaderships (Bass & Avolio, 1990; Kirkbride, 2006).

The rationale behind using FRLM for this study was to discover what leadership style is perceived to work best in a virtual nursing environment. Studies have confirmed that transformational leadership evokes positive behaviors in virtual environments and in nursing environments (Abualrub & Alghamdi, 2012; Asamani, Naab, & Ofei, 2016; Belcher et al., 2015; Braun, Peus, Weisweiler, & Frey, 2013; Bowman, 2017; Botma et al., 2012; Fardellone, Musil, Smith, & Click, 2014; Gilson et al., 2015; Gousy & Green, 2015; Kanste et al., 2009) Tying both environments together provides better understanding for organizations in the same market. Virtual environments in nursing will continue to grow and leaders need to be properly prepared to inspire employees to greatness for organizations to be successful.

Transformational leadership relates to this present study because change is required of leadership from classic leadership models that will not be effective in a virtual nursing environment (Cowan, 2014). Transformational leaders embrace change and empower followers to be visionaries for the greater good of the organization (Meier, 2014). The research questions for this study build upon the existing theory by adding literature in other disciplines from those already studied. The literature discussed

provides background information regarding transformational leadership and how it can be linked to employee satisfaction in the virtual nursing environment.

Multifactor Leadership Questionnaire

The MLQ-5X was developed by Bass & Avolio (1990) to measure the full range of leadership from passive to transformational leaders (Mind Garden, 2014). There are a total of 45 questions on the MLQ-5X short with the following Likert scale results: not at all, once in a while, sometimes, fairly often, and frequently, if not always. The MLQ-5X can be administered in two forms, self and rater. MLQ-5X (self) documents the self-perception of leaders regarding their abilities while the rater form provides the employees perception of their leader. This study used the rater version of the MLQ-5X.

Researchers have tested transformational theory with the use of the MLQ-5X in nursing (Abualrub & Alghamdi, 2012; Asiri et al., 2016; Belcher et al., 2015; Bormann & Abrahamson, 2014; Botma et al., 2012; Choi et al., 2016). These studies focused on leadership style impact on employee satisfaction, nurses' intent to stay, nurses' organizational commitment, staff nurse perceptions of leaders, and employee empowerment and employee satisfaction (Abualrub & Alghamdi, 2012; Asiri et al., 2016; Belcher et al., 2015; Bormann & Abrahamson, 2014; Botma et al., 2012; Choi et al., 2016). Analysis of these studies revealed results were not consistent.

Virtual Teams

Virtual teams are a group of people who work together on a project but happen to be separated by geography, time, culture, and/or distance. Their main source of communication is done via electronic media such as e-mail, video conferencing, and

instant messaging (Bell & Kozlowski, 2002; Purvanova, 2014). The idea of people working from other locations outside of the office started becoming common practice around the beginning of 2000 (Blair, 2015; Hoch & Kozlowski, 2014). In 2000, companies with more than 10,000 employees were reporting that at least 80% of the workforce would be virtual at some point in time (Samdahl, 2008; Vickers, 2006). The Society of Human Resource Management revealed in 2012 that 46% of the organizations polled use virtual teams, and the number increased to 66% when the companies were doing international business (Minton-Eversole, 2012). In 2015, the Telework Research Network reported that 2.9 million people worked virtually full-time in the United States (Blair, 2015). Virtual team usage will continue to grow with the increase of global business (Gilson et al., 2015; Krumm et al., 2016).

There are benefits that have been linked to companies that have virtual teams. These benefits are having experts work on the same project without the disadvantage of time and location, significant savings made because of the reduction of travel expenses and the ability of organizations to be flexible and agile to flow with growing customer demand (Krumm et al., 2016; Purvanova, 2014). Challenges also exist in a virtual environment. Difficulty communicating, misunderstandings, feelings of isolation, and poor team leadership can all be overcome by building trust among team members (Alsharo, Gregg, & Ramirez, 2017; Dahlstrom, 2013; Purvanova, 2014).

Since 2004, the use of virtual teams has increased, and research regarding virtual teams has grown as well (Krumm et al., 2016; Lockwood, 2015; Schouten et al., 2016). Research for virtual teams has focused on disciplines such as accounting, applied

psychology, business management, communication, computer technology, engineering, information systems, and software design (Gilson et al., 2015). Research regarding virtual team leadership in health care and other organizations is limited, creating a gap in the literature (Cowan, 2014; Hoch & Kozlowski, 2014; Kerfoot, 2010; Levesque, 2012; Schmidt, 2014).

Virtual Teams in Health Care

The definition of virtual health care can include words such as *telemedicine*, *telehealth*, and *remote health*. This means that services are provided by health care workers using audiovisual equipment with clients that are geographically dispersed (Demiris, 2006; Kahn, 2015). Telemedicine has seen drastic growth in the United States with over 200 current telemedicine networks (American Telemedicine Association, 2017). With over half of all U.S. hospitals now using some form of telemedicine, it is becoming a typical form of health care worker/patient interactions.

Since the inception of the Patient Protection and Affordable Care Act, the Department of Health and Human Services has linked quality and value to fee for services paid by Medicare. In 2016, 85% of all Medicare fee-for-service payments have been associated to quality and value, and it is predicted that by 2018 90% will be affiliated (Burnwell, 2015). Since more people now have access to health care, the need and demand for health care providers has increased. One way to address the surge of service request is to provide telehealth/telemedicine. The increased usage of telemedicine can increase efficiency, reduce cost, and increase patient safety (Papanagnou, Sicks, & Hollander, 2015; Sharma, Fleischut, & Barchi, 2017).

Virtual options for health care include treating patients in emergency rooms for minor issues such as upper respiratory infections, wound checks, infections, suture removals, contusions, and simple rashes (Sharma et al., 2017). For these services to happen, a virtual team approach is required. The doctor is available via video conference with the patient and all other health professionals are within the facility to which the patient came for treatment. Telemedicine has also been used in school settings where health care providers are not located (Reynolds & Maughan, 2015). Rural communities also benefit from the use of telemedicine (Bowman, 2017; Henderson, Davis, Smith, & King, 2014; Lauckner & Whitten, 2016; Vockley, 2015).

Virtual Communication

Long distance communication has been made possible with the use of information devices like laptops and cellphones (Fujino & Kawamoto, 2013). These devices allow information to be spread rapidly and over great distances (Fujino & Kawamoto, 2013). The internet reduces the delay that existed with the use of standard mailing systems. A benefit of communicating with virtual teams via the internet is the ability to have instant communication. Communicating via the internet results in a reduction of paper use and is environmentally and economically friendlier (Applegate, 2015). Problems with communicating through e-mail and instant messaging can result in users responding without thoroughly thinking through their response with no way to retrieve the message once sent (Applegate, 2015). The lack of face-to-face communication requires recipients to now try and interpret what is being said, thus creating room for miscommunication (Applegate, 2015).

Virtual Communication in Health Care

Virtual communication in health care uses the same communication methods as other virtual environments, i.e. videoconferencing, e-mails, internet and instant messaging (Adler-Milstein, Kvedar, & Bates, 2014; Skiba, 2015). What makes virtual communication different in health care is the need to assess patients using these same devices (Henderson et al., 2014; Sharma et al., 2017; Skiba, 2015). Virtual communication is also used to store, process and exchange information in an effort to promote health, prevent illness, treat disease, and manage chronic health (Rouleau, Gagnon, & Cote, 2015, p. 76). Through the use of video-conferencing health care providers have a broader reach and can treatment patients outside of the office setting (Adler-Milstein et al., 2014; Henderson et al., 2014; Kahn, 2015; Kiah, Al-Bakri, Zaidan, Zaidan, & Hussain, 2014; Sharma et al., 2017). Underserved areas can now receive care with the use of telehealth methods. As of 2012, 42% of hospitals within the U.S. use some form of telehealth services (Adler-Milstein et al., 2014). Virtual communication has made a way for care to be provided in rural areas through programs like “telestoke, teledermatology, telepediatrics, telepsychiatry, teleneonatalogy, and telecardiology” (Henderson et al., 2014, p. 847).

Leadership & Virtual Teams

As with all teams, leadership must be established for the greater good of the team as they are the glue that keeps the teams together and on task; especially when the team is dispersed geographically. Managing a team virtually does come with challenges but can be overcome with the right tools and mindset of all involved (Tartell, 2015). Leadership

of the team is important for team motivation and team effectiveness (Bell & Kozlowski, 2002; Hoch & Kozlowski, 2012; Malhotra, Majchrzak, & Rosen, 2007). Relationship building is important for any leader. Creating connections with virtual team members is quintessential to a virtual team leader because most people rely on these relationships to resolve problems and handle atypical circumstances (Pauleen, 2003, p. 229).

Virtual leaders must learn to use several different communication channels that are appropriate for the content delivered in the communication due to the lack of or infrequent face-to-face interactions that take place among virtual teams (Jawadi, Daassi, Favier, & Kalika, 2013). Leaders also must implement active listening skills, which mean removing distractions while communicating with team members (Kerfoot, 2010). The top five distractions while on conference calls are performing other work, sending emails, eating or making food, going to the restroom, and texting (Gavett, 2014). Removing distractions can be as simple as turning off instant messaging, closing out of email systems and not eating during the call. Focus must be given to team members during conversation as this helps build relationships. Signs of distracted persons during conversations are slower rates of speech, pauses in communication and disrupted thoughts. This becomes a small obstacle in the virtual environment, but with active listening any leader can remove the obstacle.

Technology can also be used to help reduce distractions during communication with virtual teams. Applications like Skype, Google Talk, FaceTime, Tango, and Adobe Connect allow individuals to communicate face-to-face even though there is geographic distance between them (Gray & Rutledge, 2014). With the use of internet, a computer,

iPad, laptop or tablet, any of these applications will allow the individuals to see each other while they are communicating.

Current research regarding leadership styles in the virtual environment has been a current topic of discussion (Barnwell et al., 2014; Cowan, 2014; Schmidt, 2014). Several different leadership theories are being addressed in the literature. The more common are situational, transactional, transformational and full range of leadership model. Finding the right leadership style in a virtual environment takes effort on the leader's part to want to be effective.

Laissez-Faire Leadership

Often criticized as the non-leadership, laissez-faire occurs when managers take no action in any type of situations whether good or bad (Dussault & Frenette, 2015). The avoidance of decision making and the lack of availability from the leader when need by employees makes this type of leadership less desirable (Skogstad, Hetland et al., 2014). Laissez-faire leadership has been associated with low job satisfaction and workplace bullying (Dussault & Frenette, 2015; Jackson, Hutchinson, Peters, Luck, & Saltman, 2013; Skogstad, Aasland et al., 2014). Laissez-faire leadership can be viewed as situational deficiency of leadership from the leader when the employee has a lack of ability to perform required assignment or no knowledge regarding the assignment (Skogtad, Hetland et al, 2014). In this case the leader is physically present but avoids any conflict and provides no resolution to any problems that exist, leaving the employees to fend for self.

Situational Leadership

Originally developed by Hersey and Blanchard in the 1960s, situational leadership is now one of the more commonly used leadership theories (Bedford & Gehlert, 2013). This theory postulates that different circumstances require different leadership styles. Wide-spread use within organizational leadership training and development, situational leadership has evolved since conception (Blanchard, Zigarmi, & Nelson, 1993; Hersey & Blanchard, 1993).

The two behavior patterns of leadership are supportive and directive. Supportive patterns embrace two-way communication that incorporates listening and providing emotional and social support to others (Bedford & Gehlert, 2013; Northouse, 2016). Supportive patterns provide the relationship behaviors. A leader actively listening to an employee's complaint, and together creating resolutions to the problem, shows patterns of support. Directive patterns are the task driven behaviors needed to get the job done. Providing directions, timelines, and spelling out the duties and responsibilities to complete the task are directive behaviors (Bedford & Gehlert, 2013; Northouse, 2016). When the leader provides step-by-step instructions for task completion they are demonstrating directive patterns.

The four leadership styles created out of supportive and directive behaviors are directing, coaching, supporting, and delegating. Style 1 (S1), directing, is for employees that need high levels of direction and low levels of support. The leader must focus communication on task completion and provide very little support (Northouse, 2016).

This style is all about achieving the goal set forth with an employee that needs a lot of direction by the leader supervising all actions (Bedford & Gehlert, 2013).

Style 2 (S2), coaching, requires high levels of direction and high levels of support. This employee needs a great deal of direction, but also has high social and emotional needs that must be accommodated (Bedford & Gehlert, 2013). Coaching leaders provide encouragement and request employee input all while the leader makes the final decisions (Northouse, 2016).

Style 3 (S3), supporting, incorporates employees that require high levels of support, but low levels of directions. Supportive leaders allow the employees to make decisions needed to accomplish the goal but are available to provide any additional assistance with problem solving if needed (Northouse, 2016). This leader provides encouragement, recognition and support to the employee throughout the process.

Style 4 (S4), delegating, is low support and low directives. Employees requiring S4 leadership have shown confidence and competence in completing tasks needed to accomplish the goal. This leader is not involved with the day-to-day responsibilities required to get the task done and does not intervene or provide noncompulsory support (Northouse, 2016). Encouragement and positive reinforcement is bestowed upon the employee by the leader that focuses on the employee's success (Bedford & Gehlert, 2013).

Situational leadership allows the leader to flow through all four styles to meet the needs of the employee. The effectiveness of the leader is based on their ability to change leadership style to match the situation at hand. The vital component is the leader's ability

to discern where the employee's behaviors fall within the grid, so they can use the appropriate leadership style to meet the employee's needs.

Transactional Leadership

Transactional leadership is based on the exchange of goods and/or services between leader and employee. It is the more task driven type of leadership style. Transactional leadership can be broken down to two components; contingent reward and management by exception. Using positive and/or negative reinforcement the transactional leader will use rewards or punishment to seek continued levels of change behaviors from the employee (Judge & Piccolo, 2004; Ruggieri, 2009). These exchanges are based on the leader providing the resources and possible rewards while the followers provide the motivation, productivity and task accomplishment (Hamstra et al., 2014; Judge & Piccolo, 2004). Transactional leadership is effective and influential because the follower can gain what they are interested in by being productive for the leader. This type of leadership style is good for short term goals to accomplish a task. The long-term effect of transactional leadership without positive reinforcement is employees that lack inspiration (Hamstra et al., 2014). Lackluster employees do not think outside the box for improvements or change.

There are two components to transactional leader that must be brought to attention; contingent reward and management by exception. These two factors are key components of this leadership style. Contingent reward promises the follower the agreed upon payoff between leader and follower if the goals and task associated with the reward are completed by the follower. It is a bartering system between the follower and leader

where both individuals get what they want. Management by exception is where the leader provides little of no guidance to the follower regarding the task but swoops in and provides corrective/negative reinforcement when the task is not accomplished correctly.

Transformational Leadership

Transformational leadership often encapsulates charisma and vision. The goal is to motivate employees to work and produce beyond what is expected of them (Northouse, 2016). Leaders use emotions, values, ethics and standards to gain trust and confidence of their followers (Eagly, Johannesen-Schmidt, & Van Engen, 2003; Northouse, 2016). Transformational leadership can manifest qualities that incite civility and honor from association with the leader; in turn, the leader can convey an organizations belief, purpose and the value of the mission (Eagly et al., 2003).

A positive exchange between the leader and the follower can be bolstered with the use of transformational leadership. Transformational leadership can cause creativity, empowerment, and motivation from the positive exchange (Munir et al., 2012). Followers can do amazing things when they realize they have the support from leadership and the latitude to be creative when resolving problems. The support empowers the employee to be their best. Using the four components of transformational leader allows leaders to accomplish change on a large scale (Judge & Piccolo, 2004; Munir et al., 2012; Nahavandi, 2015).

Full Range of Leadership Model

FRLM can assess three different types of leadership styles at once. FRLM is the combination of transformational leadership, transactional leadership and laissez-faire

leadership styles (Aarons et al., 2017; Avolio et al., 1999; Powell et al., 2017). Currently one of the most researched and authenticated frameworks studying leadership, FRLM is used to assess leadership in individual and organizational development (Green et al., 2014; Kanste et al., 2009). The model addresses the full range of leadership behaviors from active leadership to passive leadership (Richter et al., 2016). Assessment with a model that incorporates the whole continuum of leadership styles allows for better understanding of the leadership style that is in use.

El Amouri & O'Neill (2014) studied FRLM among nurse leaders in the UAE. In the sample of 10 hospitals within UAE, government and private, transformational and transactional leadership styles were both present but with varying degrees of usage. The nurse leaders within government facilities practiced more management by exception and contingent rewards. The assumption of this style preference relates to the structure and rigid style within the government facilities (El Amouri & O'Neill, 2014). The private facilities seem to have more latitude and flexibility to be creative and visualize beyond the rules.

Green et al. (2014) found significance between leadership style and organizational climate within a children's mental health system. Organizational climate includes "levels of growth and advancement, role clarity and fairness" with higher scores indicating positive organization climate and lower scores indicating negative levels of organizational climate (Green et al., 2014, p. 773). The conclusions drawn from this study are leaders that use transformational leadership are more likely to create environments of fairness and clarity and provide room for advancement.

Job Satisfaction Among Nurses

With more than 2.7 million in the workforce, RNs are the largest group of health care workers in the United States (Rouleau et al., 2015), and this workforce is expected to grow by 16% by 2024 (U.S. Department of Labor, Bureau of Labor Statistics, 2015). There is a lot of time, money, and effort going into creating this large workforce. Organizations should focus on job satisfaction of nurses because they are the largest part of the health care workforce and replacement can be expensive and take up a lot of time (Wang et al., 2012).

This effort is in vain when resources must be spent again because of high turnover. Turnover rates have been associated with many variables, including but not limited to peer and leader relationships, organizational commitment, and citizenship (Ahmad, Adi, Noor, Rahman, & Yushuang, 2013; Al-Hussami, Darawad, Saleh, & Hayajneh, 2014; Cullen & Gorden, 2014). Consequences experienced by nursing turnover include the loss of experienced resources, increased hours spent orienting new staff, minimal forward growth during staff transitions, and increase in recruitment and training costs for replacement staff (Morgan et al., 2005). This turnover can be linked to job satisfaction and stress levels of nurses (AACN, 2014).

According to Aiken, Clarke, Sloane, Sochalski, and Silber (2002) the level of burnout and job dissatisfaction experienced by RNs working in a hospital setting can predict a nurse's intent to leave their current job within a year. Researchers who have studied job satisfaction among RNs have focused on the hospital environment, including some specialty areas. Researchers suggest that no matter what environment in which the

professional RN works, the experiences would be the same (Archibald, 2006; Heitkamp, 2009; Lacey, Teasley, & Cox, 2009; Roberts-Turner et al., 2014; U.S. Department of Labor, n.d.). There currently is no specific information regarding RN satisfaction in a virtual environment and how this satisfaction is affected by managerial leadership style.

Employee satisfaction of nurses and turnover rates has also been linked to peer to peer and manager-employee relationships (Brunetto, Shriberg et al., 2013; Brunetto, Xerri et al., 2013; Etienne, 2014; Granstra, 2015). The intent to stay with an organization and commitment to organizations has been linked to the quality of workplace relationships and personal wellbeing of nurses (Brunetto, Shriberg et al., 2013; Brunetto, Xerri et al., 2013). When workplace bullying is minimal, more nurses tend to commit to organizations and have minimal intentions for leaving (Etienne, 2014; Granstra, 2015). This organizational commitment can be seen through organizational citizenship, where the social behaviors of employees go well beyond the policies and procedures. These social behaviors set the tone of the culture within the organization (Cullen & Gorden, 2014). There are many other contributors to employee satisfaction such as cultural and personal influences that may affect the employee and leader relationship that will not be addressed here because they are not within the scope of this study.

Linking Leadership Style and Employee Satisfaction

Transformational leadership styles work better when comparing employees staying in their job and employee satisfaction (Mohammad et al., 2011). Reduced work stress and increased employee morale that results in promoting employee satisfaction have been advanced as the result of transformational leadership style usage (Berggren &

Severinsson, 2003). Medley and Larochelle (1995) suggested that the leadership style can play a valuable part in employee satisfaction and that the transformational style has the biggest effect on employee satisfaction. It has been discovered that transformational leadership style has a positive relationship with employee satisfaction (Ahmad et al., 2013; Wang et al., 2012) and the opposite is true for transactional and laissez-faire leadership styles (Parkman, 2001). Effective nurse managers play an integral role in employee retention (Brown, Fraser, Wong, Muise, & Cummings, 2013). Senior leaders who were perceived to have a transformational leadership style experienced lower turnover intention rates among employees (Brown et al., 2013).

Summary and Conclusion

Varying leadership styles have been studied in virtual environments and nursing environments. New methods of leadership are needed to accommodate virtual nursing environments (Cowan, 2014). Employee satisfaction can be affected by the leadership style of the manager (Roberts-Turner et al., 2014). If employees are not satisfied, organizations can experience increased turnover rates, decreased employee engagement, and decreased organizational outcomes (Manning, 2016). FRLM has been shown to have positive effects in nursing and virtual environments (Abualrub & Alghamdi, 2012; Asamani et al., 2016; Belcher et al., 2015; Braun et al., 2013; Bowman, 2017; Botma et al., 2012; Fardellone et al., 2014; Gilson et al., 2015; Gousy & Green, 2015; Kanste et al., 2009).

Research has shown that transformational leadership has positive effects in virtual and nursing environments. There is no knowledge about whether transformational

leadership will have positive effects in a virtual nursing environment. Studies have shown that laissez-faire leadership can have a negative effect on employee satisfaction, while transformational and transactional leaderships styles have provided inconsistent results (Abualrub & Alghamdi, 2012; Asiri et al., 2016; Belcher et al., 2015; Bormann & Abrahamson, 2014; Botma et al., 2012; Choi et al., 2016; Skogstad, Hetland et al., 2014). The unknown that remained was what effect FRLM had on employee satisfaction in the virtual nursing environment.

This study may fill a gap in knowledge by providing current research in a discipline of health care that has not been addressed. Providing research about leadership styles in a virtual nursing environment may be helpful to organizations that seek to reduce turnover rates and increase employee satisfaction among employees. With the use of the MLQ-5X questionnaire, quantitative data was provided that was analyzed to promote understanding.

Chapter 3: Research Method

Leadership styles in a virtual nursing environment was the problem that I sought to explore. The purpose of this quantitative correlational study was to investigate the relationship between the leadership styles of virtual nursing environment managers as perceived by virtual employee RNs and the RNs' satisfaction as measured by the MLQ-5X. My intent with this study was to identify specific leadership styles that represent effective leadership in a virtual nursing environment. Nurse managers need to become familiar with different types of leadership styles that will have positive effects on a virtual team (Cowan, 2014). The following independent variables were studied: laissez-faire leadership, transactional leadership, and transformational leadership. The dependent variables were the virtual nurse employees' perceptions of leader effectiveness, employee satisfaction with the leader, and the employee willingness to exert extra effort. The major sections of this chapter include research design and rationale, the methodology, threats to validity, and the summary and conclusion.

Research Design and Rationale

The type of quantitative research methodology that was most appropriate for this study was a correlational research design. I used a quantitative cross-sectional descriptive correlational survey designed to gather and describe the data. This survey was also used to identify correlations, if any, between the independent and dependent variables. Correlational research designs are meant to describe the type of relationship that exists between variables (Sousa, Driessnack, & Mendes, 2007). I used this research method to look for a relationship of two or more variables and described that relationship as

positive, negative, or independent. A qualitative approach to research was not appropriate because it only would have provided nonnumerical data. Research history shows that leadership is typically studied using a quantitative method, and this is the most common approach used to date (Stentz et al., 2012).

Methodology

FRLM was used as the theoretical framework to answer the following research questions and hypothesis statements for this research:

RQ1: Is there a relationship between virtual manager leadership style and employee satisfaction with their leader as measured by the MLQ-5X?

$H_0$1: There is no statistically significant relationship between virtual manager leadership style and employee satisfaction with their leader as measured by the MLQ-5X.

H_a1: There is a statistically significant relationship between virtual manager leadership style and employee satisfaction with their leader as measured by the MLQ-5X.

RQ2: Is there a relationship between virtual manager leadership style and employee perception of leader effectiveness as measured by the MLQ-5X?

$H_0$2: There is no statistically significant relationship between virtual manager leadership style and employee perception of leader effectiveness as measured by the MLQ-5X.

H_a2: There is a statistically significant relationship between virtual manager leadership style and employee perception of leader effectiveness as measured by the MLQ-5X.

RQ3: Is there a relationship between virtual manager leadership style and employee willingness to exert extra effort as measured by the MLQ-5X?

H_03: There is no statistically significant relationship between virtual manager leadership style and employee willingness to exert extra effort as measured by the MLQ-5X.

H_a3: There is a statistically significant relationship between virtual manager leadership style and employee willingness to exert extra effort as measured by the MLQ-5X.

Population

There are more than 2.8 million RNs working in the United States (U.S. Department of Labor, Bureau of Labor Statistics, 2016) of which 127,000 are members of the American Nurses Association (Center for Union Facts, 2017). The population of interest was RNs who work in virtual environments within the United States. This virtual environment included any RN that worked from home or anywhere other than the main office of the organization without a direct supervisor in their location.

Sampling and Sampling Procedures

The sampling strategy that was employed during this research study was a nonprobability convenience sample. Convenience sampling was appropriate in this research because of the time and cost involved for interviewing the entire nursing

population will be exhaustive (Frankfort-Nachmias & Nachmias, 2008). There was no data base that specifically defines nurses who worked virtually. Populations came from national organizations that hired RNs to work remotely and members of the American Nurses Association. The inclusion criteria for this study consisted of RNs working from a remote location of their team. This included any RN over the age of 18 that directly reports to a manager. The exclusion criteria included anyone that was not a RN, individuals that did not report to managers, and any RN that worked in the same location as their manager.

Based on G*power calculations for linear multiple regression with an alpha level of 0.05, power of 0.95, medium effect size (0.15), and two predictor variables the recommended sample size was 107. The a priori sample size is based on conducting a F-test through linear multiple regression with fixed model and R^2 deviation from zero. The non-centrality parameter λ equals 16.0500000, the critical F-value is 3.0837059 with a numerator of 2 and a denominator of 104.

Procedures for Recruitment, Participation, and Data Collection

Recruitment procedures for participates were based on the inclusion criteria for study and were gathered via a web-based questionnaire. Completion of survey was voluntary for all participants and all responses were confidential. Once permission was granted by the Institutional Review Board from the university (approval no. 04-06-18-0490980), the data collection process took place. The first step was gaining permission from participants via informed consent. This was done by sending out emails to nurses and inviting them to participant in the study. Included in the email was a welcome letter,

explanation of the study, implied informed consent information, and link to complete survey. No sign consents forms were gathered to preserve the privacy and confidentiality of participants. Submission of completed survey served as implied consent. A weblink was also placed within two closed groups for nurses on Facebook.

The second step was the data collection phase of the study. The MLQ-5X and demographic questionnaire were housed within the link for survey completion. The MLQ measured the employee perceived leadership characteristics of the nurse leaders (Bass & Avolio, 2004). Participants were able to access, agree and complete the survey by accessing a no-login link method on their computers.

Instrumentation and Operationalization of Constructs

The Multifactor Leadership Questionnaire (MLQ-5X) was developed by Bass & Avolio (1990) to measure the full range of leadership from passive to transformational leaders (Mind Garden, 2014). There is a total of 45 questions on the MLQ-5X short with the following Likert scale results: not at all, once in a while, sometimes, fairly often, and frequently, if not always. The MLQ-5X can be administered in two forms, self and rater. MLQ-5X (self) documents the self-perception of leaders regarding their abilities while the rater form provides the employees perception of their leader. This study used the rater version of the MLQ-5X.

The MLQ-5X had ten factors, divided into four groups, that represent transformational, transactional, lasses-faire leadership styles, and structure of leadership performance (Dimitrov & Darova, 2016). Factors one through four represented transformational leadership–idealized influence, inspirational motivation, intellectual

stimulation, and individualized consideration; respectively. Factors five and six were associated with transactional leadership; contingent reward and management by exception respectively. Laissez-faire leadership was represented by factor seven. Factors eight to ten represented efficiency, extra effort, and satisfaction, respectively. The demographics portion of this instrument included questions regarding gender, age, level of education, ethnicity, employment status, type of employment, longevity as RN, years in current position, type of industry, job type, virtual/remote employee status, and work location versus managers location. The average completion time for the survey was seven minutes. The copyright permission of the MLQ-5X did not allow me to include the entire questionnaire within this dissertation. The copyright permission is shown in Appendix A. Please see sample questions provided below:

Transformational leadership styles. Four aspects of transformational leadership are:

1. Idealized Influence: I go beyond self-interest for the good of the group.
2. Inspirational Motivation: I talk optimistically about the future.
3. Intellectual Stimulation: I reexamine critical assumptions to question whether they are appropriate.
4. Individualized Consideration: I help others to develop their strengths.

Transactional leadership styles. Two aspects of transactional leadership are:

1. Contingent reward: I make clear what one can expect to receive when performance goals are achieved
2. Management by Exception (Active): I keep track of all mistakes

Laissez-faire leadership styles. Two aspects of laissez-faire leadership are:

1. Management by Exception (Passive): I wait for things to go wrong before acting
2. Laissez-faire: I avoid making decisions

The MLQ was appropriate for this study because of its validity, reliability, and frequent use within leadership studies (Antonakis, Avolio, & Sivasubramaniam, 2003). Bass & Avolio (2004) report 0.76 to 0.92 reliability measures and validity by Cronbach's alpha of 0.74 to 0.94 for the MLQ. The easiest way to ensure reliability of this measurement tool was to compare previous studies using the same tool to see if it yielded similar results. Subject matter that has been re-tested using the same instrument and provides similar data is considered reliable (Engel & Schutt, 2013). Asiri et al. (2016) published research using the MLQ with 332 nurses and presented a Cronbach's alpha of 0.94. Botma et al. (2012) alpha coefficient fell between 0.81 and 0.91 within research of 41 nurse leader participants. Permission from Mind Garden was obtained to reprint the MLQ for use during this study.

Data analysis plan. Data analysis began after the sample size was met. SPSS was used for data analysis. Descriptive analysis (mean, standard deviation, and reliability score) were done for all predictor and criterion variables included within the study. The assumptions of multiple regression linearity, multicollinearity, homoscedasticity, and normality were assessed. Multiple regression analysis and correlations were used to predict relationships between independent and dependent variables.

Threats to Validity

Correlational research design does not allow for manipulation of the independent variable for this research study, therefore this was a threat to the validity of the work. Without the ability to manipulate the variable, there was no way to show complete causal inference because manipulation was eliminated as one of the four components of research. Procedures of control also could not be implemented in the study since there was no logical way to randomize the participants. This also created a threat to validity. To compensate for this obstacle, statistical analysis was used to assess the relationship between the two variables (Frankfort-Nachmias & Nachmias, 2008).

Ethical Procedures

Informed consent information was provided to each participant via a web-based delivery method. This consent information notified participants of the voluntary nature of the study. The consent form included background information for the study, procedures for participation, confidentiality requirements, the voluntary nature of the study, and ethical considerations. Once the individuals agreed to the terms of participation, they were then led to the survey. All responses were anonymous. To help protect participant confidentiality, no surveys were shared with the company for which the respondents worked. No personal data was requested or stored with the survey responses. If there were any additional questions and concerns participants could reach me via email or phone. All data was stored on an external hard drive with password protection on files in a locked file cabinet and all information will be destroyed after seven years. These steps helped curtail any ethical violations that could occur.

I have several years of experience as a RN and within a leadership position but limited experience in a virtual environment. My experiences had the potential to influence the interpretation of the data. However, my goal to interpret the data objectively and allow the correlations among the variables to provide conjecture to the material was accomplished.

Summary

The purpose of this quantitative correlational study was to explore the relationship between transformational leadership in a virtual nursing environment and employee satisfaction among employees and managers as measured by the Multifactor Leadership Questionnaire (MLQ-5X) rater. Chapter 3 has presented the research design and rationale for this study. The methodology, population, sample and sampling procedures along with procedures for recruitment, participation, and data collection were discussed. This chapter concluded with a discussion of threats to validity, ethical procedures, and summary. Chapter 4 will present results and data analysis for data gathered from survey.

Chapter 4: Results

The purpose of this quantitative correlational study was to investigate the relationship between the leadership styles of virtual nursing environment leaders as perceived by virtual employee RNs and the RNs' satisfaction as measured by the MLQ-5X. My intent with this study was to identify specific leadership styles that represent effective leadership in a virtual nursing environment. Nurse managers need to become familiar with different types of leadership styles that will have positive effects on a virtual team (Cowan, 2014). The following independent variables were studied: laissez-faire leadership, transactional leadership, and transformational leadership. The dependent variables were the virtual nurse employee's perception of leader effectiveness, employee's satisfaction with the leader, and the employee's willingness to exert extra effort.

Chapter 4 presents the data collection process, data analysis, results, and a summary. Included in this chapter is a baseline report of descriptive and demographic characteristics of the sample followed by the statistical analysis findings, which are organized by research questions and hypotheses. The final phase is a summary of answers to the following research questions and hypothesis statements:

RQ1: Is there a relationship between virtual manager leadership style and employee satisfaction with their leader as measured by the MLQ-5X?

$H_0$1: There is no statistically significant relationship between virtual manager leadership style and employee satisfaction with their leader as measured by the MLQ-5X.

H_a1: There is a statistically significant relationship between virtual manager leadership style and employee satisfaction with their leader as measured by the MLQ-5X.

RQ2: Is there a relationship between virtual manager leadership style and employee perception of leader effectiveness as measured by the MLQ-5X?

$H_0 2$: There is no statistically significant relationship between virtual manager leadership style and employee perception of leader effectiveness as measured by the MLQ-5X.

$H_a 2$: There is a statistically significant relationship between virtual manager leadership style and employee perception of leader effectiveness as measured by the MLQ-5X.

RQ3: Is there a relationship between virtual manager leadership style and employee willingness to exert extra effort as measured by the MLQ-5X?

$H_0 3$: There is no statistically significant relationship between virtual manager leadership style and employee willingness to exert extra effort as measured by the MLQ-5X.

$H_a 3$: There is a statistically significant relationship between virtual manager leadership style and employee willingness to exert extra effort as measured by the MLQ-5X.

Data Collection

Upon receiving approval from Walden's Institutional Review Board on April 6, 2018, I disseminated the MLQ-5X survey by directly e-mailing contacts for each U.S.

chapter of the American Nursing Association and posting a link on Facebook and LinkedIn. More than 475 randomly selected participants received survey completion requests from me. The survey remained open for 30 days between April and May 2018. Data was obtained from 131 completed surveys from participants yielding a 28% return rate. There were no discrepancies in data collection from the plan that was presented in Chapter 3. Because there was no database that specifically defined nurses who worked virtually, there was no way to describe how representative the sample was of the population of interest or how proportional it was to the larger population of members of the American Nurses Association.

The sample of participants consisted of a diverse group of nurses located throughout the United States. The descriptive analyses for respondents reported 123 women, 5 men, and 3 unknown, with majority aged between 40–49 years old (35.4%) and having worked 21 or more years in nursing (53.1%). Of this participant pool 55 (43%) obtained graduate degrees while 63 (49.2%) obtained only a bachelor's degree. Eighty-three (63.4%) of the nurses classified themselves as White or European American, with 28.2% identifying as Black or African American, 3.1% as multiple races, 1.6% as Asian, and 1.6% as other. Most of the participants, 107 (81.7%), were full-time employees, leaving 15 (11.5%) working part-time, 6 (4.6%) not employed, and 3 (2.3%) retired. There was about a half and half ratio between contract employees (50.4%) and direct hire employees (49.6%), with most working between 1 and 3 years in their current role (29.5%). The pharmaceutical industry (67.4%) represented majority of the participants with the insurance industry (10.1%) second most. The participants of the

study classified themselves at educators (53.8%) and managers (20%). Of the completed surveys, 90.8% considered themselves as virtual employees.

Table 1

Demographic Characteristics

Characteristic	Level	Frequency (%)
Gender		
	Female	123 (96.1%)
	Male	5 (3.9%)
Age		
	30-39	23 (18.1%)
	40-49	45 (35.4%)
	50-59	40 (31.5%)
	60 or older	19 (15.0%)
Education		
	Some college but no degree	2 (1.6%)
	Associate degree	8 (6.3%)
	Bachelor degree	63 (49.2%)
	Graduate degree	55 (43.0%)
Ethnicity		
	Caucasian	83 (63.4%)
	African American	37 (28.2%)
	Asian	2 (1.6%)
	Mexican	2 (1.6%)
	Puerto Rican	2 (1.6%)
	Cuban	1 (0.8%)
	Cuban-American	1 (0.8%)
	Multiple Hispanic Groups	2 (1.6%)
	Multiple Races	4 (3.1%)
Employment		
	Full time	107 (81.7%)
	Part time	15 (11.5%)
	Not employed	6 (4.6%)
	Retired	3 (2.3%)
Employment type		
	Contract	66 (50.4%)
	Direct hire	65 (49.6%)
RN work history		
	Less than 1 year	1 (0.8%)
	1-4 years	3 (2.3%)
	5-10 years	13 (10.0%)
	11-15 years	16 (12.3%)
	16-20 years	28 (21.5%)
	21 or more years	69 (53.1%)

table continues

Characteristic	Level	Frequency (%)
Years in current position		
	Less than 1 year	22 (17.1%)
	1-3 years	38 (29.5%)
	3-5 years	36 (27.9%)
	5-10 years	15 (11.6%)
	10-15 years	8 (6.2%)
	15-20 years	5 (3.9%)
	20 or more years	5 (3.9%)
Principal industry		
	Education	9 (7.0%)
	Government	2 (1.6%)
	Home health	3 (2.3%)
	Hospital	6 (4.7%)
	Insurance	13 (10.1%)
	Pharmaceuticals	87 (67.4%)
	Other	7 (5.4%)
	Not employed	2 (1.6%)
Professional role		
	Educator	70 (53.8%)
	Manager	26 (20.0%)
	Executive	8 (6.2%)
	Direct care provider	12 (9.2%)
	Other	14 (10.8%)
Work in same location as manager		
	Yes	14 (10.8%)
	No	116 (89.2%)
Virtual employee		
	Yes	118 (90.8%)
	No	12 (9.2%)

The subscale scores for the survey instrument were calculated according to the published scoring rubric. Each subscale score was checked for normality using skewness and kurtosis statistics. If either statistic was above an absolute value of 2.0, the distribution was assumed to be nonnormal. Cronbach's alpha was used as a measure of internal consistency reliability. Pearson's *r* correlation was used to test for significant associations between the predictor subscales and the outcome subscales. Statistical significance was assumed at a Bonferroni corrected alpha value of 0.0019 (0.05 / 27 hypotheses tested concurrently) to adjust for increased experimentwise error rates. All

analyses were conducted using SPSS Version 22. The independent variables were transformational leadership, which comprise idealized influence (attributed), idealized influence (behavior), inspirational motivation, intellectual stimulation, and individualized consideration; transactional leadership, which comprised contingent reward and management-by-exception (active); and passive/avoidant leadership, which comprised management-by-exception (passive) and laissez-faire. The dependent variables were the virtual nurse employee's perception of leader effectiveness, employee's satisfaction with the leader, and the employee's willingness to exert extra effort.

Results

The demographics of participants can be seen in Table 1, and the mean and standard deviation descriptive for each independent and dependent variable are displayed in Table 2.

Table 2

Group Descriptive

	N	Mean	Std. deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
OutcomeEE	120	3.5917	1.11811	-.624	.221	-.276	.438
OutcomeEFF	120	3.8875	.98936	-.928	.221	.460	.438
OutcomeSAT	120	3.8708	1.11990	-.984	.221	.324	.438
TransformAttributes	120	3.6500	.92378	-.633	.221	.132	.438
TransformBehaviors	120	3.2958	.66182	-.168	.221	.084	.438
TransformIM	120	3.9188	.83274	-.756	.221	.135	.438
TransformIS	120	3.3104	.91899	-.212	.221	-.516	.438
TransformIC	120	3.5354	.96651	-.438	.221	-.159	.438
TransactCR	120	3.7813	.90433	-.742	.221	.193	.438
TransactMBEA	120	2.3396	.95695	.579	.221	-.051	.438
PassAvoidMBEP	120	1.9333	.88447	1.257	.221	1.163	.438
PassAvoidLF	120	1.7229	.82934	1.316	.221	1.370	.438

Of the nine independent variables, four of the five subscales of transformational leadership had the highest means. The subscales for passive/avoidant leadership had the lowest means. Based on the mean averages, the perception of virtual nurses is that their direct managers more often demonstrated qualities of transformational leadership. Transactional leadership with contingent reward had the second highest mean average of all subscales. Virtual nurses also perceived that their direct managers less often demonstrated qualities of passive/avoidant leadership.

Calculation of Cronbach's alpha was done after data was reviewed and the descriptive characteristics were identified. Table 3 displays results of Cronbach's alpha for the nine independent variables and dependent variables measured on the MLQ-5X scale testing level.

Table 3

Reliability Statistics

Cronbach's alpha	*N* of items
.903	45

Bass & Avolio (2004) reported 0.76 to 0.92 reliability measures and validity by Cronbach's alpha of 0.74 to 0.94 for the MLQ. Based on results of this test with Cronbach's alpha equaling .903, validity and reliability have been established.

RQ1: Is there a relationship between virtual manager leadership style and employee satisfaction with their leader as measured by the MLQ-5X?

$H_0$1: There is no statistically significant relationship between virtual manager leadership style and employee satisfaction with their leader as measured by the MLQ-5X.

H_a1: There is a statistically significant relationship between virtual manager leadership style and employee satisfaction with their leader as measured by the MLQ-5X.

Calculations to address RQ1 and hypothesis were performed by seeking correlations between leadership style subscales and the dependent variable of employee satisfaction. The complete list of correlations between independent variables and dependent variables can be found in Appendix B. All leadership subscales correlated significantly with the dependent variable of employee satisfaction. There were positive correlations with transformational leadership (idealized influence respectively 0.788 and 0.425, inspirational motivation 0.796, intellectual stimulation 0.711, and individual

consideration 0.768) and transactional leadership contingent reward (0.734). All remaining correlations were negative (transactional leadership management-by-exception active -0.422, passive/avoidant management-by-exception passive -0.636, and passive/avoidant laissez-faire -0.592; see Table 4). Therefore, the null hypothesis for RQ1 is rejected.

Table 4

Correlations of Leadership Style and Employee Satisfaction

Correlations - Outcome satisfaction			
	Pearson's correlation	Sig. (2-tailed)	N
Transform A	.788*	.000	120
Transform B	.425*	.000	120
Transform IM	.796*	.000	120
Transform IS	.711*	.000	120
Transform IC	.768*	.000	120
Transact CR	.734*	.000	120
Transact MBEA	-.422*	.000	120
PassAvoid MBEP	-.636*	.000	120
PassAvoid LF	-.592*	.000	120

Note: $*p < 0.001$

RQ2: Is there a relationship between virtual manager leadership style and employee's perception of leader effectiveness as measured by the MLQ-5X?

$H_0$2: There is no statistically significant relationship between virtual manager leadership style and employee perception of leader effectiveness as measured by the MLQ-5X.

H_a2: There is a statistically significant relationship between virtual manager leadership style and employee perception of leader effectiveness as measured by the MLQ-5X.

Calculations to address the research question and hypothesis were performed by seeking correlations between leadership style subscales and the dependent variable of employee's perception of leader effectiveness (efficiency). All leadership subscales correlated significantly with the dependent variable of efficiency. There were positive correlations with transformational leadership (idealized influence respectively 0.806 and 0.429, inspirational motivation 0.763, intellectual stimulation 0.724, and individual consideration 0.818) and transactional leadership contingent reward (0.788). All remaining correlations were negative (transactional leadership management-by-exception active -0.371, passive/avoidant management-by-exception passive -0.653, and passive/avoidant laissez-faire -0.614) (see Table 5). Therefore, the null hypothesis is rejected.

Table 5

Correlations of Leadership Style and Leader Effectiveness

Correlations - Outcome efficiency			
	Pearson's correlation	Sig. (2-tailed)	N
Transform A	.806*	.000	120
Transform B	.429*	.000	120
Transform IM	.763*	.000	120
Transform IS	.724*	.000	120
Transform IC	.818*	.000	120
Transact CR	.788*	.000	120
Transact MBEA	-.371*	.000	120
PassAvoid MBEP	-.653*	.000	120
PassAvoid LF	-.614*	.000	120

Note: $*p < 0.001$

RQ3: Is there a relationship between virtual manager leadership style and employee's willingness to exert extra effort as measured by the MLQ-5X?

$H_0$3: There is no statistically significant relationship between virtual manager leadership style and employee willingness to exert extra effort as measured by the MLQ-5X.

H_a3: There is a statistically significant relationship between virtual manager leadership style and employee willingness to exert extra effort as measured by the MLQ-5X.

Calculations to address the research question and hypothesis were performed by seeking correlations between leadership style subscales and the dependent variable of employee's willingness to exert extra effort. All leadership subscales correlated significantly with the dependent variable of exert extra effort. There were positive correlations with transformational leadership (idealized influence respectively 0.809 and 0.457, inspirational motivation 0.748, intellectual stimulation 0.758, and individual consideration 0.801) and transactional leadership contingent reward (0.708). All remaining correlations were negative (transactional leadership management-by-exception active -0.352, passive/avoidant management-by-exception passive -0.542, and passive/avoidant laissez-faire -0.534) (see Table 6). Therefore, the null hypothesis is rejected.

Table 6

Correlations of Leadership Style and Extra Effort

Correlations - Outcome extra effort			
	Pearson's correlation	Sig. (2-tailed)	N
Transform A	.809*	.000	120
Transform B	.457*	.000	120
Transform IM	.748*	.000	120
Transform IS	.758*	.000	120
Transform IC	.801*	.000	120
Transact CR	.708*	.000	120
Transact MBEA	-.352*	.000	120
PassAvoid MBEP	-.542*	.000	120
PassAvoid LF	-.534*	.000	120

Note: $*p < 0.001$

Summary

Chapter 4 is a detailed description of the results of the research questions of this study. RQ1 explored the relationship between virtual manager leadership style and employee's satisfaction with their leader. The results of this study identified a statistically significant relationship between the virtual manager's leadership style and employee satisfaction with their leader as measured by the MLQ-5X. Transformational and transactional contingent reward leadership styles had a positive association with employee satisfaction with their leader while transactional management-by-exception (active) and passive/avoidant leadership styles had a negative association with employee satisfaction.

RQ2 explored the relationship between virtual manager leadership style and employee's perception of leader effectiveness. According to the results of this study, as measured by the MLQ-5X, there was a statistically significant positive correlation

between employee's perception of leader effectiveness with all transformational and transactional contingent reward leadership styles. There was statistically significant negative correlation between employee's perception of leader effectiveness with transactional management-by-exception (active) and both passive/avoidant leadership styles.

RQ3 explored the relationship between virtual manager leadership style and employee's willingness to exert extra effort as measured by the MLQ-5X. The results of this study identified a statistically significant relationship between the virtual manager's leadership style and employee's willingness to exert extra effort. Transformational and transactional contingent reward leadership styles had a positive relationship with employee's willingness to exert extra effort while transactional management-by-exception (active) and passive/avoidant leadership styles had a negative relationship with employee's willingness to exert extra effort. Chapter 5 will provide a discussion of these findings.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this quantitative correlational study was to investigate the relationship between the leadership styles of virtual nursing environment leaders as perceived by virtual employee RNs and the RNs' satisfaction as measured by the MLQ-5X. The intent of this study was to identify specific leadership styles that represent effective leadership in a virtual nursing environment. Nurse managers need to become familiar with different types of leadership styles that will have positive effects on a virtual team (Cowan, 2014). The following independent variables were studied: laissez-faire leadership, transactional leadership, and transformational leadership. The dependent variables were the virtual nurse employee's perception of leader effectiveness, employee satisfaction with the leader, and the employee willingness to exert extra effort.

Key findings from the research show that there were statistically significant correlations between independent and dependent variables as measured by the MLQ-5X. There were positive correlations between all components of transformational and transactional contingent reward leadership style with each dependent variable. Negative correlations were made with transactional management-by-exception and both passive/avoidant leadership style with all dependent variables.

Interpretation of the Findings

This research provides a positive correlation between employee satisfaction and transformational and transactional (contingent reward) leadership styles. The results of this study confirm Mohammad et al.'s (2011) thoughts that transformational leadership styles work better when comparing employees staying in their job and employee

satisfaction. As transformational and transactional (contingent reward) increased, so did employee satisfaction. Medley and Larochelle (1995) suggested that the leadership style can play a valuable part with employee satisfaction and that the transformational style has the biggest effect on employee satisfaction. The results of this research mirror previous research by Ahmad et al. (2013), Parkman (2001), and Wang et al. (2012). Ahmad et al. and Wang et al. discovered that transformational leadership style has a positive relationship with employee satisfaction, while Parkman (2001) discovered the opposite to be true for transactional and laissez-faire leadership styles. This research showed a negative relationship between employee satisfaction and transactional (management-by-exception) and passive/avoidant leadership styles. As the usage of passive/avoidant leadership styles increased, employee satisfaction decreased.

Brown et al. (2013) identified senior leaders who were perceived to have a transformational leadership style experienced lower turnover intention rates. Turnover can be linked to employee satisfaction and stress levels of nurses (AACN, 2014). This research disclosed that the employee's extra effort and employee satisfaction were linked to their perception of the manager's leadership style. If the employee perceived the manager to have a transformational or transactional (contingent reward) type of leadership style, they reported positive relations to extra effort and employee satisfaction. Employees reported the opposite with transactional (management-by-exception, active) and passive/avoidant leadership styles.

FRLM can assess three different types of leadership styles at once. FRLM is the combination of transformational leadership, transactional leadership and laissez-faire

leadership styles (Aarons et al., 2017; Avolio et al., 1999; Powell et al., 2017). FRLM authors intend to describe the full spectrum of leadership behaviors from undesirable leadership behavior to inspiring leadership behavior (Richter et al., 2016). Currently one of the most researched and authenticated frameworks for studying leadership, FRLM is used to assess leadership in individual and organizational development (Green et al., 2014; Kanste et al., 2009). The model addresses the full range of leadership behaviors from active leadership to passive leadership (Richter et al., 2016). Assessment with a model that incorporates the whole continuum of leadership styles allows for better understanding of the leadership style that is in use.

El Amouri & O'Neill (2014) studied FRLM among nurse leaders in the UAE. In the sample of 10 hospitals in UAE, government and private, transformational and transactional leadership styles were both present but with varying degrees of usage. The nurse leaders in government facilities practiced more management by exception and contingent rewards. The assumption of this style preference relates to the structure and rigid style in the government facilities (El Amouri & O'Neill, 2014). The private facilities seemed to have more latitude and flexibility to be creative and visualize beyond the rules. The study results with the virtual environment do not completely mirror the results of El Amouri & O'Neill (2014). A majority of the participants of this study worked in private organizations (89.9%). This yielded results more congruent with private facilities in the study performed by El Amouri & O'Neill (2014) with strong scores in transformational and transactional (contingent reward) leadership and less

favorable scores in transactional (management-by-exception, passive) and passive/avoidant leadership styles.

Limitations of the Study

A key limitation to this study is the lack of generalizability. The results only apply to the companies in which the participants worked and therefore cannot be assumed about all virtual nursing work environments. More specifically, the results can only be applied to the departments in the companies in which the employees worked. Since participants completed the questionnaire wherever they were, there was no way to block external or internal stressors that could affect a participant's responses. If all participants were honest with responses, the data provided could provide a foundation for future research.

Recommendations

The findings of this research study support that a positive relationship exists between transformational leadership and virtual nurse employee satisfaction. The research regarding virtual leadership indicated that virtual work environments lessened the impact of leadership styles but creating personal connections with team members improved team relationships (Schmidt, 2014). Transformational leadership allows leaders to use emotions, values, ethics, and standards to gain the trust and confidence of their followers (Eagly et al., 2003; Northouse, 2016). This creates the personal connections that are needed in the virtual nursing environment. Virtual nursing environment leaders will need to become more familiar with transformation leadership and how to apply its practice in their work environment.

It is recommended that organizations that employ virtual nurses administer the MLQ-5X to employees and managers so they can know where they stand and find out areas in which they can improve. Employee satisfaction of nurses and turnover rates have been linked to peer-to-peer and manager-employee relationships (Brunetto, Shriberg et al., 2013; Brunetto, Xerri et al., 2013; Etienne, 2014; Granstra, 2015). Transformational leadership fosters creativity, empowerment, and motivation from the positive exchange (Munir et al., 2012). The second recommendation would be to incorporate transformational leadership into the training curriculum for leaders. As nursing continues to change and grow with technology and become more virtual, nurse leaders will need the skills necessary to lead differently to accommodate the virtual world (Cowan, 2014).

Implications

The outcomes of this survey have significant implications for a virtual nursing environment, social change, and theory. As the world of nursing continues to grow and expand, leaders must be ready to grow and expand with it. According to this research, leaders who use styles that motivate and empower can increase employee satisfaction among virtual nurses. *Inspirational motivation* received the highest score of transformational leadership style affecting employee satisfaction. Inspirational motivation allows the follower to see the vision that the leader has created and builds trust between leader and follower. By applying this skill set in a virtual environment, leaders can reduce misunderstandings, feelings of isolation, and poor team leadership that were cited as problems that exist in virtual environments (Alsharo et al., 2017; Dahlstrom, 2013; Purvanova, 2014). The research supports that transformational and transactional

(contingent reward) leadership works best in virtual nursing environments. This research can be used as a contribution to the limited knowledge base that currently exists about virtual nursing environments (Cowan, 2014; Hoch & Kozlowski, 2014; Kerfoot, 2010; Levesque, 2012; Schmidt, 2014).

Positive social change can be affected at the individual and organizational level. Managers who continually assess their leadership style and how those behaviors affect employee satisfaction of their employees can make a positive change within themselves. This positive change within leadership could also have a direct impact on the social change of the organization. Positive social change can be attained if leaders and organizations rebrand their mission and vision to focus on employee satisfaction. If leaders also commit to positive change by determining which leadership style works best within their organization and implementing that leadership style, then there should be a positive outcome of improved work performance and growth amongst the employees.

This research adds to the body of knowledge that currently exists regarding FRLM. The study can be used as information gathering for anyone interested in improving leadership style characteristics for an individual or organization. The data presented can be an educational tool to further the knowledge of leadership in a virtual environment. The results provide insights into all leadership styles on the FRLM spectrum. This research described which leadership style worked well with employee satisfaction, employee willingness to exert extra effort, and employee perception of effective leadership. The results also point to which leadership styles did not work well.

Conclusion

The purpose of this quantitative correlational study was to investigate the relationship between the leadership styles of virtual nursing environment leaders as perceived by virtual employee RNs and the RNs' satisfaction. The intent was to identify specific leadership styles that represent effective leadership in a virtual nursing environment. This research provides valuable insights about employee satisfaction, employee perceptions of leader effectiveness, and employee willingness to exert extra effort in a virtual nursing environment. The results show a positive correlation between transformational and transactional (contingent reward) leadership styles and employee satisfaction, employee perceptions of leader effectiveness, and employee willingness to exert extra effort in the virtual nursing environment. There is also a statistically significant negative correlation between transactional (manage-by-exception, active) and passive/avoidant leadership styles and employee satisfaction, employee perceptions of leader effectiveness, and employee willingness to exert extra effort within the virtual nursing environment.

Employees are considered the most valuable asset of an organization. Their happiness and satisfaction has been linked to turnover rates. Because virtual work environments are rather new to nursing, leaders have not figured out the best way to motivate and inspire employees in that arrangement. Leadership styles can have a positive or negative effect on employees. Leaders should exert all efforts to help create a virtual nursing work environment that supports positive employee satisfaction. Leaders should want to have open communication, the ability to build trust, and the capacity to

mobilize the team to work for the greater good of the organization. Leaders who possess these skills represent the characteristics of effective leadership.

Technology and globalization of business is not going to go away, and nursing is moving into the digital age along with all other businesses. Leadership styles of the past that require direct contact with employees will not be effective in this virtual space. There are different types of leadership styles that are known to have positive effects in virtual work environments. Creating a virtual environment for nurses with high employee satisfaction is the goal.

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Appendix A: Permissions for MLQ

Multifactor Leadership Questionnaire™

Instrument (Leader and Rater Form)

and Scoring Guide (Form 5X-Short)

by Bruce Avolio and Bernard Bass

Published by Mind Garden, Inc.

info@mindgarden.com
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Appendix B: Correlations

Table B1

Pearson's r Correlation Coefficients

Characteristic	Subscale	Extra effort	Effectiveness	Satisfaction
Transformational				
	Idealized attributes	0.81*	0.81*	0.79*
	Idealized behaviors	0.46*	0.43*	0.43*
	Inspirational motivation	0.75*	0.76*	0.80*
	Intellectual stimulation	0.76*	0.72*	0.71*
	Individual consideration	0.80*	0.82*	0.77*
Transactional				
	Contingent reward	0.71*	0.79*	0.73*
	Management by exception (Active)	-0.35*	-0.37*	-0.42*
Passive avoidant				
	Management by exception (Passive)	-0.54*	-0.65*	-0.64*
	Laissez-Faire	-0.53*	-0.61*	-0.59*

Note: * $p < 0.001$