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Relationship Between Senior Leadership Style and Patient Satisfaction in the Inpatient Rehabilitation Facility

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Walden University
2019

Abstract

Relationship Between Senior Leadership Style and Patient Satisfaction in the Inpatient

Rehabilitation Facility

by

Amy Elder

MHA, Texas A&M University, 2012

BA, Texas A&M University, 2009

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Health Services

Walden University

August 2019

Abstract

Patient satisfaction has a significant role in the healthcare industry, as high patient satisfaction can improve quality outcomes. Hospital leadership is responsible for the culture, outcomes, and patient experience, which can involve different leadership styles. The purpose of this quantitative study was to examine the relationship between leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities (IRFs). Through the theoretical framework of transformational and transactional leadership theories, the research questions were designed to determine whether a statistically significant relationship existed between leadership style (transformational, transactional, and laissez-faire leadership) and patient satisfaction. The Multifactor Leadership Questionnaire was administered electronically to senior leaders in an IRF system and combined with secondary patient satisfaction data obtained from the IRF system. Senior leaders from 72 IRFs completed the online survey. Pearson's correlation and multiple linear regression revealed mixed results. The Pearson's correlation indicated small negative linear correlations between transformational leadership and laissez-faire leadership with patient satisfaction as well as a small positive linear correlation between transactional leadership and patient satisfaction. For multiple regression, none of the tests produced statistically significant results, which led to a failure to reject the null hypotheses and inconclusive findings. Through the further examination of the relationship between the leadership subscales and patient satisfaction, healthcare administrators can impact patient satisfaction through education and trainings for senior leaders.

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Dedication

This dissertation is dedicated to my family. It is amazing to think that this journey started over a basket of chips and hot sauce with a lot of "what ifs". Fast forward through four years of laughter and tears, you have always encouraged me to pursue my dreams. For that I am eternally grateful. And Cappy, this is it!

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To my family and friends, thank you for your understanding, support, and willingness to listen when I would ramble on about my "paper." To my parents, Rich and Cindi Elder, thank you for being incredible examples both professionally and personally.

This study would not have been possible without the support of Frank Brown, Craig Funk, Denise Lynch, and Mary Ellen DeBardeleben. Thank you for believing in this research and the impact that it could have in IRFs.

Thank you to my dissertation cohort for your support and encouragement to continue this journey. I will never forget going into an academic advising session and pitching my dissertation idea to a faculty member praying that they wouldn't laugh. Dr. Michael Furukawa, thank you for your interest in my topic, volunteering to help guide me through this process, and providing unparalleled knowledge and support. Also, thank you to Dr. Jeff Snodgrass for your expertise and work as my committee member. Dr. Zin Htway, thank you for your guidance with my dataset and the statistical analysis.

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Chapter 1: Introduction to the Study

Introduction

Patient satisfaction has a significant role in the healthcare industry (Ghosh, 2014; Kraska, Weigand, & Geraedts, 2017; Mazurenko, Collum, Ferdinand, & Menachemi, 2017; Shirley, Josephson, & Sanders, 2016). Patient satisfaction is related to the quality of care that patients receive (Batbaatar, Dorjdagva, Luvsannyam, & Amenta, 2015; Leggat, Karimi, & Bartram, 2017) and has been correlated to readmission rates, mortality rates, and safety processes (Mazurenko et al., 2017). Thus, low patient satisfaction has consequences for healthcare organizations. The hospital's leadership team is responsible for the culture, outcomes, and the patient's experience. One approach for improving patient satisfaction in hospitals is to survey the leadership style of the leadership team. For instance, transformational and transactional leadership styles have been found to have a relationship with patient satisfaction in acute care facilities (Bahadori et al., 2016; Leonard McRae, 2017; McNeese-Smith, 1999; Raup, 2008). However, there is a gap in the literature concerning other healthcare settings. There are a variety of settings within the healthcare industry that can be further explored, including inpatient rehabilitation facilities (IRFs).

IRFs deliver a unique, specialized care model that features an intensive rehabilitation therapeutic program for their patients that require 24-hour nursing care. In 2015, there were 1,182 IRFs in the United States with 381,000 patient encounters (MedPac, 2017). One significant difference between IRFs and the acute care setting is the length of stay of the patients. While in acute care, patients stay on average less than 4

days, but in the IRF, patients' stays can last from seven to more than 25 days. The IRF senior leadership team is similar to the acute care setting, which includes a CEO, chief nursing officer, director of therapy, director of case management, director of quality/risk management, human resource director, director of pharmacy, and controller. A key distinguishing factor is the scale of the IRF compared to the acute care setting. IRFs traditionally have less beds than acute care hospitals and therefore the senior leadership team plays a significant role in the daily operations and interactions with staff and patients.

The leadership style of the senior leaders can provide valuable information about the facility's service quality that includes patient satisfaction (Schaubroeck, Lam, & Peng, 2016). By taking a closer look at the leadership style of the senior leadership in IRFs, there is an opportunity to determine if there is a relationship between the leadership style of senior leaders and patient satisfaction in IRFs. Thus, this study has positive social implications that include increased referrals, higher payments, and improved quality of care outcomes. Further, this study provides a foundation for future studies to be conducted in IRFs regarding leadership style and patient satisfaction. This study may also encourage training on leadership style to influence patient satisfaction and higher quality of care in the IRFs. The study could also produce a hiring model for future senior leaders within the IRF.

Chapter 1 previews the background of the study including a brief review of the literature as well as the knowledge gap related to the study. This chapter also highlights the problem statement and current gap in the literature. The independent and dependent

variables along with the research questions are presented with the purpose of the study. The theoretical frameworks for the study are given followed by the rationale for the nature and methodology for the study. Key definitions are identified and defined for terms used. Assumptions for the study are provided along with the scope, delimitations and limitations. To conclude the chapter, the significance and potential social change implications for the study are given.

Background of the Study

The relationship between leadership style and patient satisfaction has primarily been studied in acute care settings. But there have been mixed results for studies concentrated on transformational and transactional leadership theories (Bahadori et al., 2016; Jordan, Werner, & Venter, 2015; Larrabee et al., 2004; Leonard McRae, 2017; McNeese-Smith, 1999; Raup, 2008). Several studies have shown positive correlations between transformational leadership and higher patient satisfaction scores, but due to small sample sizes the studies have not had statistically significant results (Bahadori et al., 2016; Larrabee et al., 2004; Leonard McRae, 2017; Raup, 2008).

Transformational leadership is often revered as a desired leadership style over others. Transformational leadership has been associated with higher employee engagement and low turnover, better quality outcomes, increased innovation, and ultimately higher patient satisfaction scores (Bahadori et al., 2016; Boamah, Spence Laschinger, Wong, & Clarke, 2017; Engelen, Schmidt, Strenger, & Brettel, 2014; McNeese-Smith, 1999; Jordan et al. 2015). For example, in Iranian teaching hospitals, nursing leaders who exhibited transformational leadership characteristics had higher

mean patient satisfaction scores than their colleagues that demonstrated transactional and laissez-faire leadership styles (Bahadori et al., 2016). Further, Raup (2008) conducted a longitudinal study across 15 academic medical centers across the United States and showed that transformational leaders had higher patient satisfaction scores. A positive correlation has also been found between emergency department nursing managers who exhibited transformational leadership and higher patient satisfaction scores (McNeese-Smith, 1999). Moreover, Leonard McRae (2017) and Jordan et al. (2015) found similar positive linear relationships between nursing leadership and higher patient satisfaction scores. Jordan et al. also found that transformational leadership was a positive predictor of cultures of safety and organizational success.

Despite positive results on leadership styles, previous studies have been focused on nursing leadership in acute care settings. Thus, there is a gap in the knowledge considering the entire senior leadership team as well as the IRF setting. This study was needed to continue the research across the continuum of care in the post-acute IRF setting. In this study, I investigated whether there was a relationship between the leadership style of senior leaders and patient satisfaction.

Problem Statement

Patient satisfaction is significant for healthcare organizations because patients score healthcare facilities and providers based on their perceptions and expectations of the care they receive (Shirley, Josephson, & Sanders, 2016). The emphasis on patient satisfaction stems from the Institute of Medicine's patient-centered care work in the early 1990s (Shirley et al., 2016). A slow progression began when the Centers for Medicare

and Medicaid Services (CMS) started collecting satisfaction data, which was followed by publicly reporting before a bundled payment system was created where patient satisfaction accounts for 30% of the total payment (Tefera, Lehrman, & Conway, 2016). Patient satisfaction data was included in the value-based purchasing system because it provides incentives for hospitals to improve quality and patient experience (Tefera et al., 2016). Further, patient satisfaction has been attributed to higher employee satisfaction, better quality outcomes, and success of an organization (Leggat, Karimi & Bartram, 2017; Leonard McRae, 2017; Wong, Cummings, & Ducharme, 2013).

Studies have been focused on nursing leadership style and its effect on patient satisfaction in acute care hospitals (Bahadori et al., 2016; Leonard McRae, 2017; Wong, 2015; Wong et al., 2013). This creates a gap in the literature on the relationship between patient satisfaction and senior leaders in other types of hospitals such as IRFs. IRFs are specialized hospitals recognized by CMS for providing intensive rehabilitation at an inpatient level (CMS, 2012). IRFs are a unique subset of hospitals that have not been studied in depth, especially in relation to the leadership style of senior leaders. In IRFs, hospital leadership is comprised of a multitude of disciplines including therapy, case management, human resources, quality, pharmacy as well as many others. Each of these leaders have direct relationships with patient care providers, if not the patients themselves. The leadership style of the senior leaders is important and can provide valuable information about the facility's service quality that includes patient satisfaction (Schaubroeck et al., 2016). Therefore, it is worthwhile to look at the leadership style of

senior leaders in IRFs to determine if there is a relationship between the leadership style and patient satisfaction.

Purpose of the Study

The purpose of this quantitative study was to further understand the relationship between the leadership style of senior leaders and patient satisfaction in IRFs. To address this gap, I examined whether there is a correlation between the dominant leadership style of senior leaders and patient satisfaction scores in IRFs. I studied the relationship between the three leadership styles of transformational, transactional, and laissez-faire and patient satisfaction individually.

Research Questions and Hypotheses

To examine whether a relationship exists between the leadership style of senior leaders and patient satisfaction in IRFs, I used the following research questions and hypotheses:

Research Question 1: Is there a statistically significant relationship between the leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?

$H_0 1$: A statistically significant relationship does not exist between the leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

$H_a 1$: A statistically significant relationship does exist between the leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

Research Question 2: Is there a statistically significant relationship between the transformational leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?

$H_0 2$: A statistically significant relationship does not exist between the transformational leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

$H_a 2$: A statistically significant relationship does exist between the transformational leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

Research Question 3: Is there a statistically significant relationship between the transactional leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?

$H_0 3$: A statistically significant relationship does not exist between the transactional leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

$H_a 3$: A statistically significant relationship does exist between the transactional leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

Research Question 4: Is there a statistically significant relationship between the laissez-faire leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?

$H_0$4: A statistically significant relationship does not exist between the laissez-faire leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

H_a4: A statistically significant relationship does exist between the laissez-faire leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

Theoretical Framework

This study is based on two theoretical frameworks: transformational and transactional leadership. Transformational and transactional leadership theories were first proposed by James MacGregor Burns (1978) and were later developed by Bernard Bass (1985). Transformational leadership and transactional leadership both have unique characteristics and qualities.

Transformational leadership is often noted as the "gold standard of leadership" (Cope & Murray, 2017, p. 63). Transformational leadership is characterized by four main traits: charisma, inspiration, intellectual stimulation, and individualized consideration (Bass, 1990). Transformational leaders exhibit charisma or idealized influence that allows them to lead by a shared purpose as well as conviction for their beliefs (Bass, 1990). Inspirational motivation provided by the leader illustrates a vision for the future along with providing encouragement. Leaders who challenge followers to think of new ideas and promote problem solving demonstrate intellectual stimulation. Individualized consideration is shown through coaching, developing, and training followers as individuals rather than as a collective group. According to Bass (1990), transformational

leaders have more fulfilling relationships with their followers in comparison to those who are transactional leaders. Organizations with transformational leaders also see higher financial returns as well as growth and satisfaction (Bass, 1990).

Transactional leadership is task-oriented, intermittent, and relative to short-term objectives (Cope & Murray, 2017). Transactional leadership is defined by employing contingent rewards, management by exception, and passive management (Bass, 1990). Contingent rewards are given by leaders to complete the tasks assigned and negotiate support from followers. Active management by exception is shown through leaders monitoring performance and taking corrective action on deviations from standard operating procedures. Leaders demonstrate passive management by not acting until mistakes are brought to their attention. Laissez-faire leadership defines another aspect of transactional leadership by leaders not assisting or accepting their responsibilities (Bass, 1997). Transactional leaders are often referred to as the "carrot and stick" leaders due to their contingent rewards and punishments with failure (Bass, 1997, p. 133).

The foundation to the study lies within the transformational and transactional leadership theories. Both transformational and transactional leadership theories have been found to have a relationship with organizational change, outcomes, and patient satisfaction. It is through these leadership theories that the research questions were addressed.

Nature of the Study

A cross-sectional, correlational study was appropriate to examine the relationship between the dominant leadership style of each IRF (independent variable) and the IRF's

patient satisfaction score (dependent variable). Correlational studies are used to determine if a relationship exists between variables (Warner, 2013). Through the correlational analysis, the study addresses the current gap in literature and advances the knowledge in the healthcare and IRF setting. The study is nonexperimental, had no time or resource constraints, and had no outside influence from me as the researcher.

The sample population for the study is an IRF system that has 127 IRFs across the United States, including Puerto Rico. There are six regions within the IRF system: Northeast, MidAtlantic, Central, Southwest, South, South Central, and West. An online survey using SurveyMonkey was sent by regional directors of quality within the IRF system to their respective directors of quality/risk management. The facility directors of quality/risk management sent the survey to the senior leaders defined in the study as CEO, controller, chief nursing officer, director of quality/risk management, director of human resources, director of case management, director of therapy operations, and the director of pharmacy. The population for the study included senior leaders employed at the facility in the calendar year of 2018. The survey instrument Senior Leadership Style in IRFs was comprised of two demographic questions and the 45-item Multifactor Leadership Questionnaire (MLQ) 5X-Short, which were used to determine leadership style. Patient satisfaction was denoted as the overall assessment score for patients discharged in 2018. The unit of analysis for the study was at the facility level, which aligned with the patient satisfaction data. Therefore, the individual leadership style of respondents were aggregated to produce a facility level leadership style for analysis. The data were analyzed using SPSS version 25. Transformational, transactional, and laissez-

faire leadership styles each have specific characteristics. Individually these characteristics were tested against patient satisfaction using multiple linear regression.

Previous studies employed correlational and multiple linear regression to determine the relationship between the variables (Larrabee, 2004; Leonard McRae, 2017; Sola, Badia, Hito, Osaba, & Garcia, 2016). The correlational test determined the strength of the relationship, whereas the regression predicted the outcome or relationship of the variables. A *p*-value of .05 was used to determine the statistical significance.

Operational Definitions

The following terms are used in this study and defined for clarity, as they might have multiple meanings. The independent and dependent variable definitions are also noted. Further details about the variables are noted in Chapter 3.

Inpatient rehabilitation facility (IRF): IRFs are a specialized type of hospital recognized by CMS for providing intensive inpatient rehabilitation. Patients must meet medical necessity requirements that include 24-hour nursing care and receive at least two therapies for 3 hours over 5 days or 15 hours over 7 days (CMS, 2012).

Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS): The HCAHPS or Consumer Assessment of Healthcare Providers and Systems (CAHPS) is the method of measuring patient satisfaction for acute care hospitals and potentially IRFs in the future (HCAHPS, 2017).

Patient satisfaction: Patient satisfaction is measured by the Press Ganey IRF survey, and for this study the overall assessment section was used. The following questions are scored and averaged to produce an overall assessment score: how well staff

worked together to care for you, how well staff prepared you to function at home, how well staff prepared you to function in the community, overall rating of care you received during your stay, and likelihood of recommending facility to others.

Multifactor Leadership Questionnaire (MLQ): The MLQ was developed by Bernard Bass and Bruce Avolio in 1990 as an instrument to determine a leader's leadership style based on transformational and transactional leadership theories (Mind Garden, 2004). The MLQ 5X-Short was used in this study.

Assumptions

There are several assumptions for this study. One assumption is that all participants are free from bias. Another assumption is that the survey tool is valid and that the participants answered the survey truthfully. Another assumption was that transformational leadership is positive, and transactional and laissez-faire leadership styles are less desirable. Previous studies have shown a positive relationship between transformational leadership and quality of care, including higher patient satisfaction (Bahadori et al., 2016; Boamah et al., 2017; Engelen et al., 2014; McNeese-Smith, 1999; Jordan et al. 2015). Another assumption was that leadership in IRFs would be similar to the leadership in other healthcare settings. Moreover, an assumption was that the senior leaders in the IRF system would respond to the survey. The final assumption was that the study promotes positive social change that is linked directly to the effects of higher patient satisfaction that includes more referrals, higher payments, and quality of care.

Scope and Delimitations

The sample population for the study included senior leaders defined as CEO, controller, chief nursing officer, director of quality/risk management, director of human resources, director of case management, director of therapy operations, and the director of pharmacy within in an IRF system located in the United States and Puerto Rico. The IRF system placed a boundary on the recruitment of senior leaders. Recruitment was through an e-mail sent by the regional directors of quality from the Northeast, MidAtlantic, South, Southwest, Central, South Central, and West Regions to their facility directors of quality/risk management, who then sent the survey to their facility's senior leaders. Further, to correlate the leadership style and patient satisfaction scores, only leaders who were employed by the IRF system during 2018 were included.

Transformational and transactional leadership theories were chosen as the theoretical foundation for the study (Bass, 1985). The theories were operationalized through the survey instrument that utilizes the MLQ 5X-Short. The MLQ was selected for the study due to its proven reliability and alignment to the leadership theories.

Within the specific population, there were external threats to the validity of the study. The length of stay for IRF patients is considerably longer than the acute care setting, and the structure of the senior leadership team also differs from other levels of care within the continuum. Additionally, the patient satisfaction survey is comprised of different questions that include preparedness to function at home as well as in the community and the likelihood to recommend. Use of an electronic survey limits the

ability of the participants to ask questions and receive clarification and could potentially affect the results of the study.

Limitations

The online survey method has many benefits; however, there are limitations associated with it as well. For instance, participants do not have the opportunity to ask questions or seek clarification. A potential source of bias includes my role in the IRF system because I am a senior leader at one of the IRFs; however, bias was controlled through limited demographic data collected through the survey. Another control for limiting the bias was the use of a quantitative survey.

Threats to the internal validity of the methodology of the study include the response rate of the senior leaders within the IRF System. Previous studies have cited low response rates as contributing factors as to why statistical significance was not achieved (Bahadori et al., 2016; Leonard McRae, 2017; Raup, 2008). With patient satisfaction data occurring at the facility level, the level of analysis must align with leadership scores; therefore, the senior leaders' responses were aggregated to produce a facility level leadership score. Limited responses could bias the facility's aggregate leadership style.

With the study focusing on one IRF system within the United States and Puerto Rico, there is potential for the study to produce a limitation with regard to generalizability. The leadership structure within the IRF system could be different than the structure or hierarchy in other IRFs. Further, the results of this study may not be representative of other IRFs. There is also the limitation of the study's general application to other settings or levels of care within the healthcare industry.

Significance of the Study

By examining the relationship between the leadership style of senior leaders and patient satisfaction in IRFs, the study has the potential to advance social change. For example, this research fills a gap in the current literature that has focused on acute care settings and nursing leadership (Bahadori et al., 2016; Boamah et al., 2017; Engelen et al., 2014; Larrabee et al., 2004; McNeese-Smith, 1999; Jordan et al., 2015; Raup, 2008). The study is original due to its concentration on IRFs and senior leadership. Expanding the range of leadership surveyed broadens the literature and the potential for further studies.

This study is also significant to the healthcare industry and health administration as a practice. Through examining the relationship between leadership style of senior leaders and patient satisfaction, there are implications for changes within health administration. If there are specific leadership styles tied to higher patient satisfaction scores, a model can be created for training programs and ultimately the recruiting and hiring of future leaders. Patient satisfaction has become a driver of payment for acute care settings, representing 30% of payment. Although IRFs are currently not part of this payment structure, Press Ganey, a survey vendor, has begun an "Early Adopter Program" for IRF HCAHPS (Business Wire, 2017). Thus, patient satisfaction may have a substantial role in the future payment structure for IRFs. With high patient satisfaction linked to more referrals, higher payments, and quality of care, the study is meaningful to the healthcare industry (Leonard McRae, 2017).

This study also has positive implications for social change for patient outcomes. Patient satisfaction has been tied to quality of care and outcomes in healthcare since the 1960s with the works of Avedis Donabedian and other researchers (Batbaatar et al., 2015; Locker & Dunt, 1978). Poor patient satisfaction can result in higher readmission rates, higher mortality rates, and unsafe processes (Mazurenko, et al., 2017). Examining the relationship between leadership style of senior leaders and patient satisfaction may lead to improvements to patient satisfaction, which can improve patient outcomes.

Summary

I conducted a quantitative, correlational study to determine whether a relationship exists between the leadership style of senior leaders (independent variable) and patient satisfaction in IRFs (dependent variable); therefore, I employed a correlational design. The correlational analysis involved Pearson's r and multiple regression to determine the strength and the predictability of the relationship.

This study was also focused on the transformational leadership and transactional leadership theoretical frameworks introduced by Burns (1978) and Bass (1985). Leadership style data were collected through an online survey using SurveyMonkey and the patient satisfaction data were accessed through the IRF system's electronic database. The survey instrument for leadership style data was the MLQ.

There is valuable social change associated with this study, as it can provide further insight to the relationship between leadership style and patient satisfaction in IRFs. Chapter 2 reviews the relevant literature for the study as well as the gap that currently exists.

Chapter 2: Literature Review

Introduction

Patient satisfaction is an important, multifaceted construct that exists in healthcare. The implications of high or low patient satisfaction are significant for the healthcare organizations (Ferrand et al., 2016). Patient satisfaction is directly related to quality of care (Locker & Dunt, 1978); poor patient satisfaction can result in high readmission rates, unsafe processes, and high mortality rates (Mazurenko et al., 2017). One method for improving patient satisfaction in hospitals is to explore the leadership style of the hospital leadership team. Specific leadership styles, such as transformational and transactional, have been found to have a relationship with patient satisfaction in hospitals. Leonard McRae (2017) discovered that transformational leadership had a moderately positive correlation with patient satisfaction, and McNeese-Smith (1999) indicated that higher patient satisfaction scores were attributed to transformational leadership. Jordan et al. (2015) also found strong positive correlation with changes in organizational outcomes including patient satisfaction.

Despite previous research on leaderships styles, many studies have been limited to only acute care nursing leadership, which creates a significant gap in the literature for settings such as IRFs and other hospitals leadership members. The purpose of this study was to further understand the relationship between the leadership style of senior leaders and patient satisfaction in IRFs. In this chapter, the theories of transformational, transactional, and laissez-faire leadership are reviewed. The topic of patient satisfaction is also presented in multiple ways including how it relates to the research and social

problem, the significance, and the implications moving forward. A brief background on

IRFs is illustrated alongside the senior leadership within IRFs. Literature regarding

leadership style and the relationship with patient satisfaction are also explored in the

chapter. In addition, the literature search strategies are described.

Literature Search Strategy

A literature review was systematically compiled through several library databases

and search engines. The search sourced articles that were peer-reviewed and published

between 2014 and 2018 from SAGE Journals, CINAHL Plus, Thoreau, ABI/INFORM,

ProQuest Health and Medical, and ScienceDirect. Seminal works from Locker and Dunt

(1978), Bass (1985), and Burns (1978) are also included in the literature review. Key

search terms for the electronic databases included *leadership style* and *patient*

satisfaction, *HCAHPS*, *leadership style* and *outcomes*, *Multifactor Leadership*

Questionnaire, *patient satisfaction* and *hospital*, *leadership style* and *hospital*, *senior*

leadership and *patient satisfaction*, *patient satisfaction in hospitals*, *leadership* and

patient satisfaction, *leadership style* and *healthcare*, *transformational leadership*,

transactional leadership, and *laissez faire leadership*.

Theoretical Foundation

There are two theoretical foundations for this study: transformational and

transactional leadership. James MacGregor Burns (1978) first introduced the two theories

of transformational and transactional leadership, but it was Bernard Bass (1985) who

further developed the theories. Leadership was defined by Burns as "leaders inducing

followers to act for certain goals that represent the values and the motivations of both

leaders and followers" (p. 19). The two distinct leadership theories emerged from the observation of exchanges between leaders and followers (Bass, 1985). Transformational and transactional leadership theories motivate and inspire followers in their own specific ways.

Transformational Leadership

Burns (1978) first coined transformational leadership theory in 1978. Burns depicted transformational leadership as a process where the leader inspires and elevates the followers' motives and values to achieve a goal. Although this broad definition remains, Bass (1985) has modified and made three important amendments of the theoretical foundation. First, Bass further developed the theory based on Maslow's hierarchy by noting and expanding the portfolio of needs and wants of the follower. Although the hierarchy is not necessary for success, understanding the range of needs and wants of the follower is vital to the leader. The second aspect that Bass altered was that transformational leaders do not always lead positive social change. Burns considered Adolf Hitler a dictator, not transformational leader; however, Bass recognized that the end results could be a "benefit" or "cost" to the followers (p. 21). Furthermore, Bass acknowledged that leaders hold both transactional and transformational leadership characteristics, whereas Burns believed that the two were on opposite ends of the spectrum.

Transformational leadership is comprised of four characteristics: charisma, inspirational leadership, individual consideration, and intellectual stimulation. Charismatic leadership is the "first and most important" factor of transformational

leadership (Bass, 1985). Charismatic leaders demonstrate both self-confidence and self-determination by leading followers through persuasive words and actions for a shared belief (Bass, 1985; Choi, Goh, Adam, & Tan, 2016). The second characteristic is inspirational leadership. Through emotions, leaders can inspire and provide encouragement for followers to further achievement (Bass, 1985; Malik, Javed, & Hassan, 2017). Individualized consideration is demonstrated through coaching, mentoring, and treating followers as individuals rather than as a collective group. Moreover, individualized consideration involves recognition as well as criticisms (Bass, 1985; Choi et al., 2015; Malik et al., 2017). Challenging followers by stimulating thoughts and beliefs is how transformational leaders demonstrate intellectual stimulation (Bass, 1985). Intellectual stimulation is promoting an environment where followers foster new ideas and ways of thinking (Choi et al., 2015).

Transformational leadership is considered the "gold standard of leadership" (Cope & Murray, 2017, p. 63). Transformational leadership has been correlated to staff empowerment, resulting in higher retention rates and job satisfaction scores (Asiri, Rohrer, Al-Surimi, Da'ar, & Ahmed, 2016; Boamah et al., 2017). Transformational leadership is also a type of relational leadership (Wong, 2015). All staff influences patient satisfaction, and good management is essential in the process (Leggat, Karimi, & Bartram, 2017). Through intellectual stimulation and inspirational motivation, leaders can influence and promote a culture of employee empowerment to satisfy the patients (Schaubroeck et al., 2016). When staff members are engaged and feel empowered in an organization, they are more likely to produce quality outcomes and satisfy their patients

on a deeper level (Boamah et al., 2017; Leggat et al., 2017). Transformational leadership

is also a method for uniting "workers' heads, heart, and hands towards supporting the

organization" (Bell, Powell, & Sykes, 2015, p. 32). Representing a key foundational

component of transformational leadership, intellectual stimulation and inspirational

motivation play an important role with employee engagement.

Transformational leadership is also associated with organizational change and

outcomes. The leadership style is a mechanism for implementing changes in hospitals

(Deschamps, Rinfret, Lagace, & Tejeda, 2016). Transformational leadership also directs

innovation and creation in organizations (Engelen et al., 2014). Through the basic

principles of transformational leadership, leaders can share their vision and inspire

followers to achieve goals. By garnering the characteristics of transformational leadership

and promoting a culture of communication and trust, the outcomes contribute to higher

patient satisfaction.

Transactional Leadership

Transactional leadership theory was introduced alongside transformational

leadership theory, as Burns conjectured that they were on opposite ends of the continuum

(Bass, 1985). Transactional leadership is task-oriented, intermittent, and relative to short

term objectives (Cope & Murray, 2017). The theory is founded on the premise that the

followers' confidence predicted and determined the level of effort produced.

Transactional leadership is based on employing contingent reward, management

by exception, and contingent aversive reinforcement (Bass, 1985). Later, Bass (1990)

modified the terms *contingent aversive reinforcement* and *management by exception* to

active and passive forms of management by exception. Although the names of the terms

were modified, the same principles were present in the theory. Contingent rewards are

given by leaders to negotiate support from followers and avoid punishment (Bass, 1990).

Transactional leaders are often referred to as the "carrot and stick" leaders due to their

contingent rewards and punishments with failure (Bass, 1997). Active management by

exception is exhibited when leaders only take corrective action if the follower has

deviated from the process or standards (Bass, 1997; Patel et al., 2016). In active

management by exception the leader also provides feedback (Bass, 1985). Contingent

aversive reinforcement, later known as passive management by exception, is where the

leader does not take action until significant issues arise (Cope & Murray, 2017). The

passive management by exception leader does not believe in interfering in the process

until it has gone astray (Patel et al., 2016).

Another type of transactional leadership that was developed by Burns after his

seminal work in 1985 was laissez-faire leadership. Laissez-faire leadership defines

another aspect of transactional leadership by leaders not assisting or accepting their

responsibilities (Bass, 1997). Further, the laissez-faire leader does not attend meetings

and refrains from answering questions that impact processes (Patel et al., 2016). Laissez-

faire leaders are nonchalant in their style and do not seek to make waves or disrupt the

environment.

Transactional leadership is often used in middle management to ensure that tasks

are completed. Focusing on the day-to-day operations, transactional leaders do not

question the goals and mission of the organization. Whereas transformational leadership

has a strong correlation to organizational commitment, transactional leaders only have a moderate relationship (Asiri et al., 2016). This type of leader also typically lets go of control. An assumption by transactional leaders is that their followers are continually invested and motivated to follow them as leaders (Bass, 1985). The process leadership of a transactional leader focuses on the check boxes and often has a short-termed mindset.

Patient Satisfaction

Social Problem

Patient satisfaction became a widely known topic after the Institute of Medicine's work in patient centered care in the early 1990s (Shirley et al., 2016). Efforts in patient satisfaction began in the 1960s with Avedis Donabedian as well as other researchers who sought to learn about healthcare quality and outcomes (Batbaatar et al., 2015; Locker & Dunt, 1978). In the 1970s, the focus was on the attitude of the patient toward physicians and received care (Locker & Dunt, 1978). Researchers conducted studies in different environments, such as general practitioner offices, hospitals, and pediatric offices in both the United States as well as Great Britain. While the settings varied, the goal remained the same—gain insight from the patient's viewpoint.

Following in the 1980s, the emphasis was on the patient's evaluation of care, reactions based on expectations, and that the overall needs were met (Batbaatar et al., 2015). This created a new focus that included patients, practitioners, and organizations, prompting the development of the HCAHPS or CAHPS Hospital Survey in 2002 (HCAHPS, 2017). HCAHPS was a joint venture between the CMS along with the Agency for Healthcare Research and Quality, which was later endorsed by the National

Quality Forum in 2005 (HCAHPS, 2017; Shirley et al., 2016). The purpose of HCAHPS

was to provide a standardized method of capturing patient satisfaction data so that

consumers as well as organizations could compare hospitals across the nation. HCAHPS

surveys were first used in October of 2006 and by March of 2008 the scores were

publicly reported (HCAPHS, 2017). The CAHPS Hospital Survey was developed for use

in acute care hospitals. The standardized 27 questions pertaining to cleanliness, quietness,

communication between staff, responsiveness, discharge information, as well as overall

rating of the hospital were all designed for the acute care setting. Moreover, the

specificity to the acute care setting continued in 2010 when the Patient Protection and

Affordable Care Act named that HCAHPS would be part of the new payment system

(HCAHPS, 2017; Shirley et al., 2016; Tefera et al., 2016).

With the seminal work by Donabedian, it is evident that patient satisfaction is

closely related to quality of care (Batbaatar et al., 2015). Donabedian (2005) found that

the "effectiveness of care" is ultimately determined by satisfaction and therefore is the

decisive "validator" of the quality of care received (p. 711). Consequently, researchers

have found that patient satisfaction is significant in predicting an organization's quality in

the acute care setting. Patient satisfaction is comprised of four dimensions: internal

environment, communication, administrative support, and clinical care (Ghosh, 2014).

Clinical care has had a positive relationship to patient satisfaction (Ghosh, 2014).

Moreover, patient satisfaction has been significantly impacted by both process and

outcome quality (Kraska et al., 2017). With regard to specific quality indicators, patient

satisfaction has been correlated with low readmission rates, organizational culture

centered on safety, and low mortality rates (Mazurenko et al., 2017). Through the relationship between patient satisfaction and these key quality indicators, patients receive better care.

Research Problem

The leadership style in the hospital can influence patient satisfaction. Patient satisfaction can have a direct relationship to perceived quality of care (Leggat et al., 2017). Good leaders and management are necessary for quality outcomes and patient satisfaction. For example, Rozenblum et al. (2013) indicated a significant lack in hospital management's communication about patient satisfaction. In their study, nine out of 10 staff members did not know if their organization had an improvement plan for increasing patient satisfaction, and only 38% of staff could speak to specific actions that would improve satisfaction (Rozenblum et al., 2013). Communication and motivation are key factors in leadership style that promotes successful quality of care. Additionally, through leadership creating a "service-oriented hospital environment," the organization is able to meet the needs and expectations of its patients (Chaabouni & Abednnadher, 2014, p. 334). This is systematically implemented through policies and procedures that support the staff to provide care and develop interpersonal relationships (Ghosh, 2014). However, there have not been any studies to date focused on the IRF setting regarding patient satisfaction and the influence of leadership.

The physical atmosphere and environment play an important role in the satisfaction of the patients, but the interpersonal relationships between the staff and patients account for the greatest impact (Ghosh, 2014; Malik et al., 2016). Interpersonal

relationships were noted to be a strong predictor of the patient's perception of their quality of care (Russell, Johnson, & White, 2015). Quality of care is not solely the responsibility of nursing and physicians, but all hospital staff (Leggat et al., 2017). From the environmental services worker that cleans the room, to the nurse that administers medications, to the nutrition aid who delivers the meal tray, to the physician who orchestrates the care, to the case manager creating a safe discharge plan, as well as the therapist that exercised the patient, each play a vital role in the quality of care that the patient receives. Through the work of all hospital staff members, pathways are created between patient satisfaction and quality (Leggat et al., 2017; Russell et al., 2015). In the IRF setting, patients have longer lengths of stay compared to acute care; the average length of stay in an IRF can be 10 to 14 days, whereas acute care optimally discharges patients within four days (Malik et al., 2016). Therefore, the relationship that staff has with patients in IRFs is far different than those in the acute care setting.

Previous studies relied on transformational and transactional leadership theories to determine if a relationship existed between the leadership style and service quality, namely patient satisfaction in acute care hospital settings (Jordan et al., 2015; McNeese-Smith, 1999). The findings were statistically significant and were found to have a positive linear correlation. The importance of utilizing the theoretical framework of transformational and transactional leadership theories is paramount. The research questions for the study are rooted in the leadership theories and build upon previous studies.

Significance

In regard to IRFs, patient satisfaction standardization remains in an infancy stage. Similar to acute care hospitals before HCAHPS, CMS was aware that satisfaction was being measured and aggregated, but no regulation currently exists. In October of 2017, Press Ganey, a widely known and reputable vendor of patient satisfaction surveys, announced that it was launching an "Early Adopter Program" for IRF CAHPS (Business Wire, 2017). This came after CMS had completed an "experience of care survey" in the rehabilitation setting, which according to Business Wire (2017) precedes a new legislative requirement.

Noted previously for acute care hospitals, patient satisfaction plays in integral part in the payment structure. In the Value-Based Purchasing Program instituted in the 2010 Patient Protection and Affordable Care Act, patient satisfaction represents 30% of total payments. Richter and Muhlestein (2017) validate the meaningfulness of patient satisfaction with regard to profitability; through net patient revenue, net income, and operating margin, profits were directly correlated to high patient satisfaction scores (Richter & Muhlestein, 2017). In summary, patient satisfaction has a significant role in the future payment structure for IRFs.

Implications

Through a technology driven society and publicly reported HCAHPS scores, organizations' referrals are also influenced. Hospital Compare, ran by CMS' Medicare program, highlights hospital's HCAHPS scores affording patients the ability to shop for healthcare (Russell et al., 2015). Other websites, such as Healthgrades.com, allow former

patients to write comments about their experiences and rate hospitals (Ferrand et al., 2016). This has a significant impact on the referral sources of facilities that were once held to geographic limits and the efforts of marketing teams.

Customer loyalty is aligned with the profitability of an organization (Lonial & Raju, 2015). A patient who is satisfied and has had their expectations met by a hospital or organization is more likely to be a repeat customer or patient. Lonial and Raju (2015) describe measures of customer loyalty to be retention and recommendation. The likelihood to recommend is universally found on every survey, specifically within HCAHPS and the proposed IRF CAHPS. Therefore, customer loyalty through patient satisfaction is a significant predictor of the organization's financial success.

Inpatient Rehabilitation Facilities

Inpatient rehabilitation is a specific, specialized delivery of care that patients receive. Centered on intensive therapy, each patient receives at least three hours of rehabilitation per day for five days, or if ordered by the physician, 15 hours over seven days (CMS, 2012). Therapy services can include physical therapy, occupational therapy, and speech therapy. Another key aspect is that the patients receive 24-hour nursing care along with support from case managers and other ancillary services.

Within the last three years in the United States, the number of freestanding IRFs has increased, whereas the number of hospital unit-based IRFs has decreased (MedPac, 2017). In 2015, the number of IRFs in the United States was 1,182 and the number of inpatient cases grew 1.5% from 2014 to 2015 to equal 381,000 visits (MedPac, 2017). Average occupancy rate was 65%, while 60% of all discharges are Medicare payer

sources (MedPac, 2017). The importance of IRFs is denoted by the occupancy rates and shift from long-term acute care facilities.

IRFs differ from their acute care hospital counterparts in many capacities. Acute care hospitals are held to the value-based purchasing model, whereas IRFs are paid under the prospective payment system (CMS, 2012). In the prospective payment system model, IRF patient assessment instruments must be submitted for payment (CMS, 2012). The IRF patient assessment instruments consist of focused quality indicators, such as functional status, medications, skin integrity, and health conditions (CMS, 2018). Another differentiation from acute care is IRFs are specialized intensive therapy driven hospitals where the patient's length of stay is longer. On average, the acute care hospital's length of stay is four days due to their payment system; however, patients in IRF settings can stay seven to more than 25 days. The post-acute rehabilitation setting is different from acute not only by the length of stay, but also the condition of the patients (Malik et al., 2016). Patients in IRFs require continued distinctive clinical care that is not offered in the outpatient setting.

The leadership in acute care hospitals and IRFs are not dramatically different with titles and positions, but their roles in the daily operations contrast. With the smaller size of IRFs, the senior leadership team is often involved in the daily operations including patient care. With the increase in freestanding IRFs, senior leadership has more responsibility than those previous IRFs that operated as a unit in an acute care hospital. The daily interactions and involvement from senior leaders including the CEO, chief

nursing officer, directors of therapy, quality, and case management, lend to the experience of the IRF patients.

Leadership Style and Patient Satisfaction

With the works of Donabedian and other researchers, patient satisfaction has been found as an indicator of quality outcomes. Empirical studies have been conducted in the acute care hospital setting concentrating on the effects of nursing leadership on patient satisfaction. Specific research was focused on transformational and transactional leadership theories to determine if a relationship existed with patient satisfaction.

A cross-sectional study by Bahadori et al. (2016) utilized a sample of nurse managers, staff nurses as well as patients to determine if a relationship existed between the ward level nursing leadership and patient satisfaction in Iranian teaching hospitals. The researchers employed the MLQ alongside the patient satisfaction instrument to measure a total of 34 acute care wards comprised of internal medicine, general surgery, intensive care, and emergency care. Through the study, researchers found that the majority of leaders exhibited transformational leadership characteristics at 50%, while 29.4% of leaders demonstrated transformational leadership and 20.6% represented passive avoidant leaders. Statistical significance was not found with patient satisfaction and leadership style, but the nurse managers that exhibited transformational leadership had higher mean scores of patient satisfaction in their units opposed to the transactional and laissez-faire leadership styles. The small sample size was cited as a possible reason for no statistical significance; however, the results from the study showed that leadership styles do account for variations in patient satisfaction.

There is mixed literature on the relationship between transformational leadership and higher patient satisfaction scores in the acute care setting. A systematic literature review found three studies that utilized transformational leadership (Wong, Cummings, and Ducharme (2013); however, only one of the three studies yielded a statistically significant relationship. Wong (2015) noted that the three studies by Larrabee et al. (2004), McNeese-Smith (1999), and Raup (2008), identified transformational leadership as the style of leadership measured with patient satisfaction. In the study by McNeese-Smith (1999), a significant relationship was found between transformational leadership and increased patient satisfaction; however, in the Larrabee et al. (2004) and Raup (2008) studies, the findings were not statistically significant between patient satisfaction and transformational leadership. Each of the studies identified in the article have different populations, variables, and methods that contribute to the literature.

Larrabee et al. (2004) sought to determine if there was a relationship between patient satisfaction and leadership style, among many other variables. Researchers used a large academic hospital setting in the United States, focusing on two medical, two surgical, and three intensive care step-down units alongside Registered Nurses on those specific units. A patient satisfaction tool called "Patients' Judgments of Nursing Care" and the MLQ were used to survey the patients and nursing staff. Leadership was not found to be a statistically significant predictor of patient satisfaction in the study along with other "context of care variables" (Larrabee et al., 2004, p. 265). Additional information about the nurse leadership's style was not given in the study. With the lack of

correlation and statistical significance, the authors were unable to show a relationship between leadership styles and patient satisfaction.

Focusing on emergency department nurse leaders and the impact that their leadership style had on patient satisfaction, Raup (2008) conducted a longitudinal study over a 20-month period with 15 academic health centers across the United States. Electronic versions of the MLQ were sent to nurse managers and staff nurses, along with a request to send their patient satisfaction score data. Dramatically contrasting to previous studies, 80% of the leaders demonstrated transformational leadership characteristics. The Fisher's exact test was not statistically significant, but the authors hypothesized that the small sample size of 15 participants plagued the study. Within the study, leaders that exhibited transformational leadership attributes had higher patient satisfaction scores than those who used a non-transformational style. While statistical significance was not achieved, a relationship between transformational leadership and patient satisfaction emerged in the final result.

Another study focused on nursing and nursing leadership's relationship with patient satisfaction (McNeese-Smith, 1999). Researchers used a convenience sample in a Los Angeles County acute care hospital affiliated with a university to determine a variety of factors with managerial motivation, leadership, quality outcomes, and patient satisfaction. The Leadership Practices Inventory, developed by Kouzes and Posner, was used to determine the managers' leadership behaviors. The instrument is based on the characteristics of transformational leadership and focuses on encouragement, inspiration, and motivation. For patient satisfaction, the Patient Judgements of Hospital Quality

instrument was utilized through correlational studies, the authors found that the motivation of the manager was positively related and significant to patient satisfaction.

Acute care hospital nursing leadership was also surveyed in the Leonard McRae (2017) study. The study was separated into two phases separated by the education intervention. Researchers used the MLQ alongside Press Ganey HCAHPS scores for data sources. Prior to transformational leadership education, there was no significance with patient satisfaction; however, there was a weak positive correlation between the transformational leadership of the nurse leaders with patient satisfaction. In contrast, after the education intervention, the correlation progressed to a moderately positive linear association. The statistical findings remained insignificant after the education. A potential threat to the study was the low sample size, which the author noted could have contributed to the non-significant results. While there was no statistical significance, the correlation between transformational leadership and patient satisfaction are meaningful.

The positive correlation between transformational leaders and organizational change, specifically patient satisfaction, was also found in Jordan et al. (2015). In six private intensive care units located in South Africa, the researchers found that transformational leadership was a significant predictor of organizational success. The MLQ was not used in its entirety but a condensed version that focused on a 12-item survey that had been developed by Bass was employed. By demonstrating inspirational motivation, intellectual stimulation, individualized consideration, as well as charisma, the transformational leaders promoted a positive culture of safety, increased patient satisfaction, as well as improve the quality of care delivered. Through the study,

transformational leadership was found to be a significant predictor of organizational success.

Summary and Conclusions

The current literature focused on the relationship between patient satisfaction and leadership style yielded mixed conclusions. While leadership style produced a high correlation in the majority of studies, it also failed to produce statistically significant results in several studies. However, the research points to one leadership style as a significant predictor of quality of care—transformational leadership.

The characteristics associated with transformational leadership are evident in the studies that saw higher performances in quality of care. While the current literature placed transformational and transactional leadership on a continuum and cited that both are necessary at different moments, organizations flourished with transformational leaders (Bass, 1985). Higher employee satisfaction and empowerment, lower readmission and mortality rates, increased innovation, and ultimately high patient satisfaction are all representative of transformational leadership (Bahadori et al., 2016; Boamah et al., 2017; Engelen et al., 2014; McNeese-Smith, 1999; Jordan et al. 2015).

Current studies performed in acute care hospitals are focused solely on nursing leadership. Another aspect that is not evident in the current literature is that other members of the hospital's leadership team are included in the leadership style assessment. This study seeks to fill the gap in current literature by examining the relationship between patient satisfaction and leadership style in the IRF setting.

In Chapter 3, the methodology is described for the study. The design through the supporting rationale is explored as well as justifications for population, sampling, and variables. The survey instrument and detailed plan of analysis is presented along with the threats to the validity of the study.

Chapter 3: Research Method

Introduction

The purpose of this quantitative study was to examine the relationship between the leadership style of senior leaders and patient satisfaction in IRFs. Previous studies have examined the relationship between leadership style and patient satisfaction, indicating a positive correlation between transformational leadership and patient satisfaction (Bahadori et al., 2016; Jordan et al., 2015; Larrabee et al., 2004; Leonard McRae, 2017; McNeese-Smith, 1999; Raup, 2008). However, the literature has been focused on nursing leadership in acute care facilities, which does not address the senior leadership team and other settings of care. This study addresses this gap in the literature with a focus on the leadership style of senior leadership team in the IRF setting. In this chapter, the research design and rationale are detailed. The methodology of the study is also highlighted. Further, descriptions of the survey instrument and data analysis are provided along with threats to validity and ethical considerations.

Research Design and Rationale

A quasi-experimental, cross-sectional, correlational study was appropriate to examine the relationship between the dominant leadership style of each IRF (independent variable) and the IRF's patient satisfaction score (dependent variable). Correlational studies are used to determine if a relationship exists between variables (Warner, 2013). Through correlational analysis, the study closes a gap in literature and advances the knowledge in the healthcare and IRF settings. I used both primary and secondary data

within a large IRF system in the United States. No time or resource constraints were noted for the study.

Methodology

Study Population and Sample

The IRF system used for the study has 127 IRFs across the United States, including Puerto Rico. The IRFs are divided into six regions across the company: the Northeast, MidAtlantic, South, Southwest, Central, and West. Each IRF has its own senior leadership team comprised of a CEO, controller, chief nursing officer, director of quality/risk management, director of human resources, director of case management, director of therapy operations, and the director of pharmacy. Inclusion for the study was based on senior leaders who were employed by IRF during the calendar year of 2018.

Roughly 1,016 senior leaders in 127 IRFs across the IRF system received the survey link. To determine the sample size for the study, a G* Power version 3.1 was performed. For this study, an f test with linear multiple regression deviation from zero, medium effect size of .3, an alpha level of .05, power of .90, and 12 predictors was entered into the calculator. Based on the calculations, the project sample size was 84 IRFs.

Procedures for Recruitment, Participation, and Data Collection

The Southwest regional president endorsed the study and communicated the significance of the research with the other regional presidents. The regional quality directors sent an e-mail to each of their directors of quality/risk management, who then sent the survey link to the senior leadership team members at their respective IRFs. The

e-mail stated that a colleague within the IRF system is conducting a study for their doctoral dissertation on the relationship between leadership style and patient satisfaction in IRFs. The regional directors of quality denoted their support for the study and encouraged their senior leaders to complete the survey via the SurveyMonkey link within the e-mail. The email also included a statement that participation in the study is voluntary and the respondent can exit the survey at any time.

Consent for the study was provided via the survey link in the e-mail sent by the regional directors of quality and directors of quality/risk management. Before the respondent could access the survey questions, they were required to read the consent form. By clicking on the link to access the survey, the respondent gave their consent to participate in the study. Demographic information collected for the study are facility name and verification of employment in 2018. No follow-up with the respondent was needed after completion of the survey.

The survey was focused on the leadership style of the senior leader as well as basic demographic information. I used the survey tool Senior Leadership Style in IRFs containing the 45-item MLQ 5X-Short (see Appendix A) to determine leadership style. Demographic information included facility name and whether the leader was employed at the facility in 2018. To meet the statistical significance threshold, at least 84 IRFs were needed. Four weeks were given between the initial e-mail from regional quality directors and the closure of the survey. A reminder e-mail was sent at Week 2.

Archived Data

The dependent variable in the study was investigated through secondary data maintained by the IRF system. The IRF system's electronic database stores historical patient satisfaction data. Patient satisfaction scores are available by received date or discharge date of the patient. Patients have 1 year to return satisfaction surveys post-discharge; therefore, the study was focused on the discharge date of the surveys. Patients who were discharged in 2018 was the inclusion criterion for the study.

The Press Ganey IRF survey has multiple sections to assess the patient's experience with the IRF: rehabilitation doctor, nursing, physical therapy, occupational therapy, personal issues, discharge, and overall assessment. For this study, the overall assessment section was utilized. There are five questions in this section that include how well staff worked together to care for the patient, how well staff prepared the patient to function at home, how well staff prepared the patient to function in the community, overall rating of care received during stay, and likelihood of recommending facility to others. The average score, already calculated by Press Ganey, for the overall assessment for patients who were discharged in the 2018 calendar year were retrieved for each IRF.

A data use agreement was completed with the IRF system for use of the patient satisfaction data. Within the electronic database, each IRF's patient satisfaction data were obtained. Also in the electronic database are patient identifiers; however, for the study no patient identifiers were used. I only used the IRF's overall assessment score.

Instrument

Multifactor Leadership Questionnaire

Bernard Bass and Bruce Avolio originally developed the MLQ in 1990 and later modified the instrument to produce the MLQ 5X-Short version (Mind Garden, 2004). The MLQ 5X-Short is comprised of 45 questions that are broken into transformational, transactional, and laissez-faire or passive avoidant leadership categories. Each question is measured on a 5-point Likert Scale: 0 for *not at all*, 1 for *once in a while*, 2 for *sometimes*, 3 for *fairly often*, and 4 for *frequently if not always often*. The cumulative score for each type of leadership is calculated, and the highest score reflects the dominant leadership style. Mind Garden Incorporated is the distributor for the MLQ. Electronic licenses to the instrument were bought for each respondent.

The reliability of the MLQ has been tested over multiple decades (Mind Garden, 2004). The MLQ 5X was created after criticism of the MLQ 5R; researchers took assessment of each question and how it affected the category. After a sample size of 2,154 within nine sets, the reliability was found to be between the range of .74 and .94. These reliability scores exceed the normal range for internal validity and consistency in literature.

A confirmatory factor analysis was also used with the items from the MLQ. Further, to create indices and determine the appropriate number of factors to include in the instrument, the researchers used goodness fit index, adjusted goodness fit index, and root mean squared residual, normed fit index, and Tucker-Lewis index. The result was the six-factor model that represents the MLQ 5X.

Since the inception of the MLQ, it has been used in numerous studies to determine leadership styles of leaders across industries. Industries that have used the MLQ include but are not limited to military, business, healthcare, and education. The MLQ has been employed by researchers in a variety of ways including responses by followers, self-perception of the leader, and a combination of follower and self-perception. For example, Bahadori et al. (2016) and Larrabee et al. (2004) gave the MLQ to staff nurses to determine the leadership style of their nurse managers. Leonard McRae (2017), El Amouri and O'Neill (2014), and Sola et al. (2016) also gave the MLQ to nurse leaders to complete based on their self-perception. Further, Raup (2008) gave the MLQ to both nurse followers and leaders, creating a 360-degree evaluation. Each study cited strengths and weaknesses with the deployment; however, Sola et al. noted that by using the self-perception of the leader, the researchers were able to capture the person's values, experiences, and own job satisfaction as part of the survey response.

Operationalization

The operationalization of the survey instrument with the independent variables and dependent variable is summarized in Table 1.

Table 1

Operationalization of Variables and Coding

Variable Category	Variable	Level of Measurement	Description	Code
Independent	Transformational Leadership	Interval	Likert Scale	Transform
	Transactional Leadership	Interval	Likert Scale	Transact
	Laissez-faire Leadership	Interval	Likert Scale	LF
Dependent	Patient Satisfaction	Interval	Average score for section: 0 to 100	Pt Sat

Note. Likert scales followed this format: 0 = not at all, 1 = once in a while, 2 = sometimes, 3 = fairly often, and 4 = frequently, if not always

Independent variable. Specific leadership styles have been found to have an impact on quality outcomes, including patient satisfaction (Bahadori et al., 2016; Larrabee et al., 2004; Leonard McRae, 2017; Raup, 2008). Bass (1985) built on the concepts of transformational and transactional leadership, which were originally coined by James MacGregor Burns. Bass and Avolio created the MLQ to operationalize the theories (Mind Garden, 2004). Transformational leadership is comprised of idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individual consideration. Contingent reward and management by exception-active are attributes of transactional leadership. Laissez-faire and management by exception-passive characterize laissez-faire or passive avoidant leadership.

Table 2

Leadership Characteristics in the Survey Tool: Senior Leadership Style in IRFs

Leadership characteristic	Description of characteristic	Related question
Transformational Leadership		
Idealized Attributes	Instill a sense of pride that others want to emulate	12, 20, 23, 27
Idealized Behaviors	High emotional intelligence and understands the importance of actions	8, 16, 25, 36
Inspirational Motivation	Instills a unified mission and strong supporter	11, 15, 28, 38
Intellectual Stimulation	Creative problem-solving tactics while soliciting ideas	4, 10, 34, 41
Individual Consideration	Coach and mentor to followers	17, 21, 31, 33
Transactional Leadership Contingent Reward	Recognition only when goals are met	3, 13, 18, 37
Management by Exception-Active	Keeps track of mistakes, punishes when goals are not met	6, 24, 26, 29
Laissez-faire Leadership		
Management by Exception-Passive	Do not interfere, only take action when things go very bad	5, 14, 19, 22
Laissez-faire	Often tardy or absent when issues arise	7, 9, 30, 35
Extra Effort	Followers do more than is asked	41, 44, 46
Effectiveness	Effective in leadership abilities	39, 42, 45, 47
Satisfaction	Followers are satisfied	40, 43

Within each style of transformational, transactional, and laissez-faire leadership, there are leadership characteristics as noted in Table 2. Also noted in Table 2 are the corresponding questions for each leadership characteristic. These questions are scored on a scale of 0 to 4. The survey was designed as 0 = *not at all*, 1 = *once in a while*, 2 = *sometimes*, 3 = *fairly often*, and 4 = *frequently, if not always*. The numerical values assigned to the respondent's answers were averaged to produce a score for each leadership characteristic as instructed by the MLQ scoring key (Mind Garden, 2004). Further, each leadership characteristic score was aggregated to produce an average score for each leadership style. The average score for each leadership style was used to operationalize the variable for Research Questions 2, 3, and 4. The highest score among the three leadership styles determined the dominant leadership style for the facility.

Dependent variable. The patient satisfaction score for each IRF was obtained through the IRF's electronic database system. The five questions in the overall assessment section are averaged by Press Ganey to produce an overall assessment score in a percentile format, which I used for the study. I did not manipulate the overall assessment score in any way. The five questions of the overall assessment score are detailed in Table 3.

Table 3

Overall Assessment Patient Satisfaction Questions

Survey Question	Description
How well staff worked together to care for you	Scored on a scale of 1 to 5: 1 is 0, 2 is 25, 3 is 50, 4 is 75, and 5 is 100
How well staff prepared you to function at home	Scored on a scale of 1 to 5: 1 is 0, 2 is 25, 3 is 50, 4 is 75, and 5 is 100
How well staff prepared you to function in the community	Scored on a scale of 1 to 5: 1 is 0, 2 is 25, 3 is 50, 4 is 75, and 5 is 100
Overall rating of care you received during your stay	Scored on a scale of 1 to 5: 1 is 0, 2 is 25, 3 is 50, 4 is 75, and 5 is 100
Likelihood of recommending facility to others	Scored on a scale of 1 to 5: 1 is 0, 2 is 25, 3 is 50, 4 is 75, and 5 is 100

Data Analysis Plan

Data were collected through primary and secondary methods. Regional directors of quality within the IRF system e-mailed their directors of quality/risk management, who then e-mailed their CEOs, controllers, chief nursing officers, directors of case management, directors of therapy, directors of pharmacy, and human resource directors. In the e-mail, a brief overview of the study was given along with a link to SurveyMonkey for the survey. I used the MLQ 5X-Short along with two demographic questions: hospital name and whether the person was employed by the facility in 2018. All data remained confidential and blinded for reporting purposes. Patient satisfaction data were obtained from the IRF system utilizing their electronic database. Overall assessment scores for patients that discharged in 2018 were extracted for each IRF.

Data compilation was achieved through Microsoft Excel and the statistical analyses were performed using SPSS version 25. The data were analyzed to determine if

a relationship exists between the variables. The following research questions and hypotheses were addressed in the study:

Research Question 1: Is there a statistically significant relationship between the leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?

$H_0 1$: A statistically significant relationship does not exist between the leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

$H_a 1$: A statistically significant relationship does exist between the leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

Research Question 2: Is there a statistically significant relationship between the transformational leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?

$H_0 2$: A statistically significant relationship does not exist between the transformational leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

$H_a 2$: A statistically significant relationship does exist between the transformational leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

Research Question 3: Is there a statistically significant relationship between the transactional leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?

$H_0$3: A statistically significant relationship does not exist between the transactional leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

H_a3: A statistically significant relationship does exist between the transactional leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

Research Question 4: Is there a statistically significant relationship between the laissez-faire leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?

$H_0$4: A statistically significant relationship does not exist between the laissez-faire leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

H_a4: A statistically significant relationship does exist between the laissez-faire leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

Correlational Analysis

Correlational studies seek to determine if a relationship exists between two variables. Pearson's r provides the strength of the linear association measured between the range of -1.00 and +1.00 (Warner, 2013). The rationale behind this study design was that previous studies had utilized these methods in order to determine a relationship between the variables (Larrabee et al., 2004; Leonard McRae, 2017; Sola et al., 2016).

Table 4 summarizes the statistical analyses for each research question and null

hypothesis.

Table 4

Statistical Analyses Conducted per Research Question and Corresponding Null Hypothesis

Research Question	Null Hypothesis	Statistical Procedure
Is there a statistically significant relationship between leadership styles of senior leaders and patient satisfaction in inpatient rehabilitation facilities?	A statistically significant relationship does not exist between the leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.	Correlational analysis, multiple linear regression, and step-wise regression
Is there a statistically significant relationship between the transformational leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?	A statistically significant relationship does not exist between the transformational leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.	Multiple linear regression
Is there a statistically significant relationship between the transactional leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?	A statistically significant relationship does not exist between the transactional leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.	Multiple linear regression
Is there a statistically significant relationship between the laissez-faire leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?	A statistically significant relationship does not exist between the laissez-faire leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.	Multiple linear regression

To answer the first research question, a correlational analysis was conducted to determine if a relationship exists between the dominant leadership style of senior leaders, the independent variable, and patient satisfaction, the dependent variable, in IRFs. Pearson's *r* was calculated using the following formula (Warner, 2003):

$$r = \sum \left(z_x \times z_y \right) / (N)$$

Where

$$z_x = (X - M_x)/s_X$$

$$z_y = (Y - M_Y)/s_Y$$

In the equation, *N* is equal to the number of cases or the number of *X, Y* pairs in the sample. A value of +1.00 indicated a positive relationship, whereas a value of 0 indicated no relationship, and a value of -1.00 indicated a negative relationship. A *p*-value of .05 in order to determine statistical significance of the test. Multiple linear regression analysis and step-wise regression was employed to look at the different attributes within each leadership style. Multiple linear regression was used to predict how two or more variables can predict an outcome or relationship. In order to test the statistical significance of the relationship between senior leadership style and patient satisfaction a *t* ratio was tested. The significance was calculated as (Warner, 2013):

$$t = \frac{r - \rho_0}{SE_r}$$

Where

$$SE_r = \frac{\sqrt{1 - r^2}}{\sqrt{N - 2}}$$

The second research question was addressed through multiple linear regression. By using multiple linear regression, the researcher tested the relationship between patient satisfaction and the five characteristics of transformational leadership, idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individual consideration. By testing each characteristic of transformational leadership, the researcher was able to determine which has more influence with patient satisfaction. The hypothesis was tested using a *t* test in the multiple linear regression. A *p*-value of .05 was used to determine the statistical significance with the hypothesis for the research questions.

The third research question was also tested using multiple linear regression. Testing the relationship between patient satisfaction and transactional leadership with the individual attributes of contingent reward and management by exception- active answered the research question. Each of these attributes was tested with the patient satisfaction score in a *t* test with a *p*-value of .05 to determine statistical significance.

The fourth research question was tested using multiple linear regression as well. In order to examine the relationship between laissez-faire leadership, the individual characteristics of laissez-faire and management by exception-passive was tested with patient satisfaction in a *t* test. A *p*-value of .05 was used to determine statistical significance.

By using a multiple linear regression test with research questions two, three, and four, I was able to look at each leadership style and the attributes independently. This is an important feature of the study because by testing each attribute against patient

satisfaction, I was able to determine which attributes influenced the overall leadership style's relationship with patient satisfaction.

Threats to Validity

Internal Validity

The study concentrated on the relationship between leadership style and patient satisfaction. Due to how patient satisfaction is calculated at a facility level, the unit of analysis had to align. Therefore, the individual leadership style of the IRF senior leaders was aggregated to produce a facility level leadership style.

Moreover, another internal threat was the response rate by senior leaders. Previous studies by Bahadori et al. (2016), Leonard McRae (2017), and Raup (2008) cited low response rate as a potential reason why the findings were not statistically significant. Limited responses by the senior leaders also ultimately affected the aggregate leadership scores. Through the survey design, there was specific inclusion criterion that could limit participation. Only senior leaders that were employed in 2018 at the IRF were asked to complete the survey.

Leadership scores were potentially biased towards the leadership styles of those who responded versus the senior leaders that did not respond. Another potential threat to the study was the Hawthorne effect. Participants' self-reporting of their leadership characteristics may be altered due to their perception of the survey (Paradis & Sutkin, 2017).

External Validity

Threats to the external validity are within the specific population of the study. The length of stay for patients in IRFs is three times the length of the acute care counterparts. Further, the structure of the senior leadership team within the IRF system is not the same as other settings in the continuum of care. Patient satisfaction surveys for IRFs contain specialized question about functioning in the community, preparedness for function at home as well as overall likelihood to recommend. These key questions are likely to threaten the ability to generalize the results across all populations and throughout the continuum of care. I had limited involvement with the participants through the electronic survey. If participants had questions about the survey questions, there was not be an opportunity for clarification. This potentially affected the answers and results of the study.

<div align="center">

Ethical Procedures

</div>

The IRF system defined a specific process for me to follow with the recruitment of participants. To follow the steps specified by the IRF system, recruitment was initiated by an email from the Regional directors of quality as well as the facility's director of quality/risk management to limit the perceived coercion. The brief synopsis of the study stated that the survey is voluntary, no personal information would be collected, as well as a statement that indicated the researcher is a director of quality/risk management in the Southwest Region seeking their doctorate and data would be used for research purposes only. The Regional director of quality provided a supportive statement and direct link to the survey. Only two fields of demographic data was collected from the participants:

verification of employment at the hospital in 2018 and hospital name. Consent was provided to participate in the survey by clicking the survey link, and participants were able to exit the survey at any time. No compensation was provided to the participants.

The researcher completed a data use agreement in order to access the patient satisfaction data stored in the IRF system's electronic database. No patient information was collected as part of the survey. The study was submitted to the Walden University Institutional Review Board. Data was kept in password protected electronic spreadsheets. Once the appropriate time has lapsed, all data is to be safely destroyed.

Summary

This chapter provided an in-depth view of the research design and methodology to determine if a relationship exists between the leadership style of senior leaders and patient satisfaction in IRFs. The methodology was described including the sample population of senior leaders in an IRF system within the United States and how the Regional directors of quality and directors of quality/risk management assisted in the recruitment of the population. The survey instrument, which is comprised of the MLQ as well as two demographic questions, was reviewed alongside the data analysis plan. Also discussed in the chapter was how the independent and dependent variables of leadership style and patient satisfaction were operationalized to test the study's hypotheses. Ethical considerations were also presented for how the researcher proposed to limit coercion or bias. In Chapter 4, the results of the survey are described and well as the study's findings.

Chapter 4: Results

Introduction

This chapter includes the detailed results of the study. The purpose of the study was to examine the relationship between the leadership style of the senior leaders and patient satisfaction in IRFs. The purpose was also to determine whether there was a statistically significant relationship between the three types of leadership styles (transformational, transactional, and laissez-faire) of senior leaders and patient satisfaction in IRFs. In this study, there were four research questions and hypotheses that responses from participants were analyzed. The research questions in the study were:

Research Question 1: Is there a statistically significant relationship between the leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?

$H_0 1$: A statistically significant relationship does not exist between the leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

$H_a 1$: A statistically significant relationship does exist between the leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

Research Question 2: Is there a statistically significant relationship between the transformational leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?

$H_0 2$: A statistically significant relationship does not exist between the transformational leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

H_a2: A statistically significant relationship does exist between the transformational leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

Research Question 3: Is there a statistically significant relationship between the transactional leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?

H_03: A statistically significant relationship does not exist between the transactional leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

H_a3: A statistically significant relationship does exist between the transactional leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

Research Question 4: Is there a statistically significant relationship between the laissez-faire leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?

H_04: A statistically significant relationship does not exist between the laissez-faire leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

H_a4: A statistically significant relationship does exist between the laissez-faire leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities.

For this study, the MLQ was used along with two demographic questions as well as patient satisfaction scores from the IRF system. Mind Garden granted permission for the use of the MLQ survey (see Appendix B). Permission was also granted from the IRF System as part of the data use agreement and approved by the IRB.

Chapter 4 reviews the data collection process, which includes the recruitment process, time frame for the survey, response rates, as well as how missing data were handled. Descriptive statistics are also discussed for the sample. Finally, detailed results for each research question are presented along with tables and graphs.

Data Collection

The study was approved by Walden University IRB (#02-21-29-0568348) with an expiration date of February 20, 2020. The sample used for the study was from an IRF system that is located across the United States. This included both senior leaders who were employed during 2018 and patient satisfaction surveys received during 2018.

The national quality director at the IRF system sent the seven regional directors of quality the first e-mail on February 22, 2019 and a reminder e-mail on March 14, 2019. At the discretion of the regional directors of quality, they forwarded an e-mail to their respective directors of quality/risk management at each facility. The e-mail sent to both the regional quality directors and facility-level directors of quality/risk management included a brief description of the survey along with the Survey Monkey link. Also within the e-mail was a request for the facility-level directors of quality/risk management to forward the invitation to other senior leaders in their IRF including the CEO, controller, chief nursing officer, director of human resources, director of case

management, director of therapy operations, and the director of pharmacy. There was a total of 153 respondents that accounted for 72 facilities within the IRF system.

The data collection period was 4 weeks. This was from when the survey was first sent to the regional directors of quality on February 22, 2019 until midnight on March 22, 2019. For this study, there were 72 facilities. According to the G* Power that was calculated, the desired sample size was 84 facilities. The G* Power was tested using an f test with linear multiple regression deviation from zero, medium effect size of .3, an alpha level of .05, power of .90, and 12 predictors.

Preliminary Data Management

The data were entered into SPSS version 25. Prior to performing analyses on the data, they were examined to determine the completeness of the responses. There was a large number of missing data within the responses. To complete the data, multiple imputation, specifically expectation-maximization, was chosen as the method after the data were found to be in a random pattern. Expectation-maximization utilizes an

> iterative procedure in which it uses other variables to impute a value
> (Expectation), then checks whether that is the value that most likely
> (Maximization). If not, it re-imputes a more likely value. This goes on until it
> reaches the most likely value. (Grace-Martin, n.d., para. 11)

Five imputations were chosen through SPSS along with the automatic test option and each variable was constrained as an imputation only (see Rubin, 1987).

Further data management included recoding each of the answer choices from the MLQ survey into ordinal numerical values: (0) not at all, (1) once in a while, (2)

sometimes, (3) fairly often, and (4) frequently, if not always. Subscales were created for each of the leadership characteristics. Idealized attributes included the sum of items 12, 20, 23, and 27; idealized behaviors included the sum of items 8, 16, 25, and 36; inspirational motivation included the sum of items 11, 15, 28, and 38; intellectual stimulation included the sum of items 4, 10, 32, and 34; individual consideration included the sum of items 17, 21, 31, and 32; contingent reward included the sum of items 3, 13, 18, and 37; management by exception-active included the sum of items 6, 24, 26, and 28; and laissez-faire included the sum of items 7, 9, 30, and 35. For each characteristic, the sum was divided by four to get a representation of the mean (Mind Garden, 2004). Extra effort included the sum of items 41, 44, and 46, which was then divided by three to represent the mean of extra effort (Mind Garden, 2004). Effectiveness included the sum of items 39, 42, 45, and 47, which was then divided by four to represent the mean of effectiveness (Mind Garden, 2004). Satisfaction included the sum of items 40 and 43, which was then divided by two to represent the mean of satisfaction (Mind Garden, 2004).

The leadership styles of transformational, transactional, and laissez-faire were created from the leadership subscales. Transformational leadership included the sum of idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individual consideration, which was then divided by five to represent the mean of transformational leadership. Transactional leadership included the sum of contingent reward and management by exception-active, which was then divided by two to represent the mean of transactional leadership. Laissez-faire leadership included the sum of laissez-

faire and management by exception, which was then divided by two to represent the mean of laissez-faire leadership.

The demographic question for IRF name was free text on the survey; therefore, multiple iterations of the same IRF were generated. The facility names were scanned to ensure that all were appropriately grouped together as appropriate. IRFs were recoded into nominal variables and then assigned a number value from 1 to 72. Patient satisfaction scores were obtained from the IRF system's database. The overall assessment patient satisfaction was calculated by adding the scores from each of the five questions (how well staff worked together to care for you, how well staff prepared you to function at home, how well staff prepared you to function in the community, overall rating of care you received during your stay, and likelihood of recommending facility to others), which was then divided by five. The overall assessment average for each IRF represented in the sample was recoded with the newly assigned IRF number. The overall assessment section of the patient satisfaction survey is a key indicator for the IRF system. It focuses on the four dimensions of patient satisfaction, internal environment, communication, administrative support, and clinical care, which are significant drivers (Ghosh, 2014).

Descriptive Statistics

In the dataset, there were 153 responses across 72 identified facilities and six nonidentified facilities. There were two demographic questions included in the survey—whether the senior leader was employed at the IRF in 2018 and the IRF name. Most respondents, nearly 97% (148 of 153) were employed at the IRF during 2018. Senior leaders from 72 facilities responded to the survey. Responses from each facility varied

from 1 to 6 (.7% to 3.9% of total responses). The IRF system has 127 facilities and 72 facilities responded to the survey, nearly a 57% response rate.

Descriptive statistics for each of the leadership subscales are in Table 5. The data are representative of the pooled data from the five multiple imputations. For idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individual consideration the mean scores and standard error of the mean are as follows: idealized attributes is 3.10 (SE= .066), idealized behavior is 3.43 (SE= .060), inspirational motivation is 3.54 (SE= .053), intellectual stimulation is 3.36 (SE= .075), individual consideration is 3.52 (SE= .059). For contingent reward and management by exception-active, the mean scores of 3.41 (SE=.056) and 2.5 (SE= .065) respectively. The responses for the laissez-faire subscale showed a mean score of .29 (SE= .028). Management by exception-passive had a mean score of .59 (SE= .043). Extra effort responses demonstrated a mean score of 2.96 (SE= .085). The effectiveness mean score was 3.33 (SE= .064), and the satisfaction mean score was 3.43 (SE= .090).

In regard to how the respondents are representative of the larger population, Mind Garden (2004) has created percentiles for each leadership subscale. For the individual attributes subscale, the mean score (3.10) of the participants was between the 50th and 60th percentiles (Mind Garden, 2004). For the idealized behaviors subscale, the mean score (3.43) of participants was between the 80th and 90th percentiles (Mind Garden, 2004). For the inspirational motivation subscale, the mean score (3.54) of the participants was between the 80th and 90th percentiles (Mind Garden, 2004). For intellectual stimulation subscale, the mean score (3.36) of the participants was between the 80th and

90th percentiles (Mind Garden, 2004). For the individual consideration subscale, the mean score (3.52) of the participants was between the 80the and 90th percentiles (Mind Garden, 2004). For contingent reward subscale, the mean score (3.41) of the participants was between the 70th and 80th percentiles (Mind Garden, 2004). For management by exception-active subscale, the mean score (2.5) of the participants was at the 30th percentile (Mind Garden, 2004). For the laissez-faire subscale, the mean score (.29) of the participants was between the 30th and 40th percentiles (Mind Garden, 2004). For management by exception-passive subscale, the mean score (.59) of the participants was between the 30th and 40th percentiles (Mind Garden, 2004). For the extra effort subscale, the mean score (2.96) of the participants was between the 50th and 60th percentiles (Mind Garden, 2004). For the effectiveness subscale, the mean score (3.33) of the participants was between the 60th and 70th percentiles (Mind Garden, 2004). For the satisfaction subscale, the mean score (3.43) of the participants was between the 60th and 70th percentiles (Mind Garden, 2004).

Table 5

Leadership Subscale Descriptive Statistics

Leadership Subscale	*N*	Mean	Standard Error of the Mean
Transformational Leadership			
IA	128	3.10	.066
IB	128	3.43	.060
IM	128	3.54	.053
IS	128	3.36	.075
IC	128	3.52	.059
Transactional Leadership			
CR	128	3.41	.056
MBEA	128	2.5	.065
Laissez-Faire Leadership			
LF	128	.29	.028
MBEP	128	.59	.043
Additional Indicators			
EE	128	2.96	.085
Eff	128	3.33	.064
Sat	128	3.43	.090

Note. IA = idealized attributes; IB = idealized behaviors; IM = inspirational motivation;

IS = intellectual stimulation; IC = individual consideration; CR = contingent reward;

MBEA = management by exception-active; LF = laissez-faire; MBEP = management by

exception-passive

Patient satisfaction for the 72 facilities in the IRF system varied. The minimum

patient satisfaction score was 83 and the maximum score was 95. The mean patient

satisfaction score was 88.84 (*SD* = 2.23). The standard error for the mean was .188.

Detailed Results

Research Question 1

Research Question 1: Is there a statistically significant relationship between the leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?

To examine if a relationship existed between leadership styles of senior leaders and patient satisfaction in IRFs, the MLQ leadership styles of transformational, transactional, and laissez-faire along with patient satisfaction were used. Pearson's r was used to assess the correlation between the leadership styles and patient satisfaction. The correlation coefficient of the pooled transformational leadership was determined to be $r = -.041$, along with the pooled transactional leadership ($r = .065$) and pooled laissez-faire leadership ($r = -.091$). Warner (2013) stated that a r value of -1 denoted a negative linear relationship whereas +1 signifies a positive linear relationship, therefore the transformational leadership and laissez-faire values of $r = -.041$ and $r = -.091$, respectively, illustrate small negative linear relationships. The transactional value of $r = .065$ depicts a small positive linear relationship.

To further determine if a relationship existed between the leadership style of senior leaders and patient satisfaction in IRFs multiple linear regression with the enter method was used. By using multiple imputation, the step wise method was not available to analyze the data. The leadership styles of transformational, transactional, and laissez-faire were the independent variables and patient satisfaction was the dependent variable. The confidence interval was set at 95%.

The leadership style coefficients of transformational, transactional, and laissez-faire are listed below in Table 6. The t-test significance was set at $p < 0.05$. None of the individual leadership styles showed statistical significance: transformational leadership (t-statistic = -.846, p = .400), transactional leadership (t-statistic = .826, p = .410), and laissez-faire leadership (t-statistic = -1.042, p = .298). The equation for the leadership styles and patient satisfaction can be noted as, *Patient Satisfaction =-.641 x transformational .422 x transactional -.680 x laissez-faire + 89.941* (transformational = transformational leadership; transactional = transactional leadership; laissez-faire = laissez-faire leadership). Based on the analyses, I did not reject the null hypothesis that a statistically significant relationship does not exist between the leadership style of senior leaders and patient satisfaction in IRFs.

Table 6

Linear Regression for Leadership Style of Senior Leaders and Patient Satisfaction (N = 121)

Model	Unstandardized Coefficients			
	B	Std. Error	*t*	Sig.
Constant	89.941	2.317	38.822	.000
Transformational	-.641	.758	-.846	.400
Transactional	.422	.511	.826	.410
Laissez-Faire	-.680	.653	-1.042	.298

Research Question 2

Research Question 2: Is there a statistically significant relationship between the transformational leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?

To determine if a statistically significant relationship between the transformational leadership style of senior leaders and patient satisfaction in IRFs, I used the transformational leadership characteristics of individual consideration, idealized attributes, idealized behaviors, inspirational motivation, and intellectual stimulation along with patient satisfaction. Pearson's r was used to assess the correlation between transformational leadership characteristics and patient satisfaction. The correlation coefficients of the pooled transformational leadership characteristics were determined as: idealized attributes ($r = -.107$), idealized behaviors ($r = .011$), inspirational motivation ($r = -.053$), intellectual stimulation ($r = .052$), and individual consideration ($r = -.021$). The transformational leadership characteristics of idealized attributes, inspirational motivation, and individual consideration had small negative linear relationships with patient satisfaction, while idealized behaviors and intellectual stimulation had small positive linear relationships with patient satisfaction.

To further determine if a relationship existed between transformational leadership characteristics of senior leaders and patient satisfaction in IRFs multiple linear regression with the enter method was used. The transformational leadership subscales of idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individual consideration were the independent variables and patient satisfaction was the dependent variable. The confidence interval was set at 95%. The t-test significance was set at $p < 0.05$.

The transformational leadership coefficients of idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individual consideration

are listed in Table 7. None of the transformational leadership subscales were statistically significant: idealized attributes (t-statistic = -.972, p = .338), idealized behaviors (t-statistic =.309, p =.762), inspirational motivation (t-statistic =-.364, p = .723), intellectual stimulation (t-statistic = .806, p = .422), and individual consideration (t-statistic = -.064, p = .950). Based on the analyses, I did not reject the null hypothesis that a statistically significant relationship does not exist between the transformational leadership style of senior leaders and patient satisfaction in IRFs.

Table 7

Linear Regression for Transformational Leadership Characteristics and Patient Satisfaction (N = 121)

Model	Unstandardized Coefficients			
	B	Std Error	*t*	Sig.
Constant	89.170	2.219	40.192	.000
IA	-.450	.463	-.972	.338
IB	.207	.671	.309	.762
IM	-.294	.808	-.364	.723
IS	.415	.516	.806	.422
IC	-.038	.600	-.064	.950

Note. IA = idealized attributes; IB = idealized behaviors; IM = inspirational motivation; IS = intellectual stimulation; IC = individual consideration

Research Question 3

Research Question 3: Is there a statistically significant relationship between the transactional leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?

To determine if a statistically significant relationship between the transactional leadership style of senior leaders and patient satisfaction in IRFs, I used the transactional

leadership characteristics of management by exception-active and contingent reward along with patient satisfaction. Pearson's *r* was used to assess the correlation between transactional leadership characteristics and patient satisfaction. As shown in Table 8, the correlation coefficients of the pooled transactional leadership characteristics were determined as contingent reward (*r* = .008) and management by exception-active (*r* = .089). Both of the transactional leadership characteristics of contingent reward and management by exception-active had small positive linear relationships with patient satisfaction.

To further determine if a relationship existed between transactional leadership characteristics of senior leaders and patient satisfaction in IRFs multiple linear regression with the enter method was used. The transactional leadership subscales of management by exception-active and contingent reward were the independent variables and patient satisfaction was the dependent variable. The confidence interval was set at 95%. The t-test significance was set at $p < 0.05$.

The transactional leadership coefficients of management by exception-active and contingent reward were as follows. Neither transactional leadership subscales of management by exception-active (t-statistic = .944, p = .346) nor contingent reward (t-statistic = -.241, p = .810) produced statistically significant relationships. Based on the analyses, I did not reject the null hypothesis that a statistically significant relationship does not exist between the transactional leadership style of senior leaders and patient satisfaction in IRFs.

Table 8

Linear Regression for Transactional Leadership Characteristics and Patient Satisfaction
(N = 121)

Model	Unstandardized Coefficients			
	B	Std. Error	*t*	Sig.
Constant	88.273	1.508	58.520	.000
Contingent reward	-.114	.474	-.241	.810
Management by exception-active	.335	.354	.944	.346

Research Question 4

Research Question 4: Is there a statistically significant relationship between the laissez-faire leadership style of senior leaders and patient satisfaction in inpatient rehabilitation facilities?

To determine if a statistically significant relationship between the laissez-faire leadership style of senior leaders and patient satisfaction in IRFs, I used the laissez-faire leadership characteristics of laissez-faire and management by exception-passive along with patient satisfaction. Pearson's *r* was used to assess the correlation between laissez-faire leadership characteristics and patient satisfaction. The correlation coefficients of the pooled laissez-faire leadership characteristics were determined as laissez-faire (*r* = -.097) and management by exception-passive (*r* = -.041). Both of the laissez-faire leadership characteristics of laissez-faire and management by exception-passive had small negative linear relationships with patient satisfaction.

To further determine if a relationship existed between laissez-faire leadership characteristics of senior leaders and patient satisfaction in IRFs multiple linear regression

with the enter method was used. The laissez-faire leadership subscales of laissez-faire

and management by exception-passive were the independent variables and patient

satisfaction was the dependent variable. The confidence interval was set at 95%. The t-

test significance was set at $p < 0.05$.

The laissez-faire leadership coefficients of laissez-faire and management by

exception-passive are listed in Table 9. The subscales of management by exception-

passive (t-statistic = -.967, p = .333) and laissez-faire (t-statistic = -.124, p = .901) did not

produce a statistically significant relationship. Based on the analyses, I did not reject the

null hypothesis that a statistically significant relationship does not exist between the

laissez-faire leadership style of senior leaders and patient satisfaction in IRFs.

Table 9

*Linear Regression for Laissez-Faire Leadership Characteristics and Patient Satisfaction
(N = 121)*

Model	Unstandardized Coefficients		*t*	Sig.
	B	Std. Error		
Constant	88.998	.343	259.750	.000
Laissez-faire	-.083	.461	-.124	.901
Management by exception-passive	-.446	.670	-.967	.333

Summary

Previously, the relationship between leadership style of senior leaders and patient

satisfaction in IRFs had not been studied. For Research Question 1, I failed to reject the

null hypothesis that a statistically significant relationship does not exist between the

leadership style of senior leaders and patient satisfaction in IRFs. I failed to reject the null

hypothesis for Research Question 2, and could not accept the alternative hypothesis that a statistically significant relationship exists between the transformational style of senior leaders and patient satisfaction in IRFs. None of the transformational leadership subscales were statistically significant with patient satisfaction. For Research Question 3, I failed to reject the null hypothesis that a statistically significant relationship does not exist between the transactional leadership style of senior leaders and patient satisfaction in IRFs. None of the transactional leadership subscales produced a statistically significant relationship with patient satisfaction. For Research Question 4, I failed to reject the null hypothesis that a statistically significant relationship does not exist between the laissez-faire leadership style of senior leaders and patient satisfaction in IRFs. None of the laissez-faire leadership subscales were statistically significant with patient satisfaction.

In this chapter, I presented data collection details as well as the data management procedures. Demographic and descriptive statistics were also discussed. Finally, the research questions from the study were detailed with statistical analyses and illustrative tables. Chapter 5 was a presentation of the interpretations from the study, limitations experienced during the study, along with recommendations and implications for future research.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

In this quantitative study, I examined the relationship between the leadership style of senior leaders and patient satisfaction in IRFs. The purpose was to determine whether there was a statistically significant relationship between the three types of leadership styles (transformational, transactional, and laissez-faire) of senior leaders and patient satisfaction in IRFs. For instance, transformational leadership has been found to have a positive correlation with higher patient satisfaction in other care settings (Bahadori et al., 2016; Larrabee et al., 2004; Leonard McRae, 2017; Raup, 2008). However, there has been no previous research on the IRF setting and previous samples have been limited to nursing leadership; therefore, this study addressed a gap in literature.

Transformational leadership and transactional leadership were used as a framework to guide the study (see Bass, 1985; MacGregor, 1978). Each of the leadership styles has leadership characteristics that were used as subscales for the study. Transformational leadership is comprised of idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individual consideration. Contingent reward and management by exception-active are representative of transactional leadership. Laissez-faire leadership is composed of laissez-faire and management by exception-passive. Each of these subscales was used to determine if individually they affected patient satisfaction. This chapter includes an interpretation of the key findings, limitations of the study, recommendations for future research, and implications for the leadership subscales as well as the field of healthcare administration.

The sample for the study included 153 responses across 72 facilities in the IRF system; the G*Power analysis revealed that 84 facilities was the desired sample size, however, the 72 facilities was a 57% response rate for the IRF system. The survey method was an online survey through Survey Monkey. Regional quality directors sent the invitation to participate in the survey to their directors of quality/risk management, who then sent the invitation and survey link to the senior leaders at their respective IRFs. The survey was open for 4 weeks, and one reminder e-mail about the survey was sent prior to the third week of the survey period.

The first research question addressed the relationship between leadership style of senior leaders and patient satisfaction in IRFs. There was a small negative linear correlation between the leadership styles of transformational and laissez-faire, with correlation coefficients of $r = -.041$ and $r = -.091$. Transactional leadership demonstrated a small positive linear correlation with a coefficient of $r = .065$. Within the multiple regression model, none of the three leadership styles demonstrated statistical significance, leading to the failure to reject the null hypothesis.

The second research question addressed the relationship between the transformational leadership style of senior leaders and patient satisfaction in IRFs. There was a small positive linear correlation with idealized behaviors ($r = .011$) and intellectual stimulation ($r = .052$), whereas there was a small negative linear correlation with idealized attributes ($r = -.107$), inspirational motivation ($r = -.053$), and individual consideration ($r = -.021$). Within the multiple regression model, none of the

transformational leadership subscales demonstrated statistical significance, leading to the failure to reject the null hypothesis.

The third research question addressed the relationship between the transactional leadership style of senior leaders and patient satisfaction in IRFs. There were small positive linear correlations with contingent reward ($r = .008$) and management by exception-active ($r = .089$). Within the multiple regression model, none of the transactional leadership subscales demonstrated statistical significance, leading to the failure to reject the null hypothesis.

The fourth research question addressed the relationship between the laissez-faire leadership style of senior leaders and patient satisfaction in IRFs. There were small negative linear correlations with laissez-faire ($r = -.097$) and management by exception-passive ($r = -.041$). Within the multiple regression model, none of the laissez-faire leadership subscales demonstrated statistical significance, leading to the failure to reject the null hypothesis.

Interpretation of the Findings

The findings from this study extended and supported knowledge from previous studies. For example, Bahadori et al. (2016) suggested variations within each of the relationships between the leadership styles and patient satisfaction, though like this study they did not find a statistically significant relationship between the leadership styles and patient satisfaction. Moreover, Larrabee et al. (2004), Leonard McRae (2017), and Raup (2008) also showed no statistical significance between the relationship between the leadership styles and patient satisfaction.

The findings of this study also contradict previous findings. Transformational leadership style and patient satisfaction demonstrated a positive linear relationship in studies by Jordan et al. (2015), Leonard McRae (2017), McNeese-Smith (1999), and Raup (2008). But the results of this study showed that overall leadership style of transformational leadership had a negative linear relationship with patient satisfaction. There were also varying positive and negative linear relationships between each of the transformational subscales. Further, idealized attributes ($r = -.107$), inspirational motivation ($r = -.053$), and individual consideration ($r = -.021$) had small negative linear relationships with patient satisfaction, which contradicts previous indications that as patient satisfaction increases, the transformational leadership characteristic would also increase (Jordan et al., 2015; Leonard McRae, 2017; McNeese-Smith, 1999; Raup, 2008). Research has indicated that as leaders motivate and inspire their followers on a personal basis, followers are likely to be encouraged and engaged in creating a culture focused on quality outcomes such as patient satisfaction; however, senior leaders in this study who had high scores of idealized attributes, inspirational motivation, and individual consideration had lower patient satisfaction scores. Further interpretation also depicts how the correlations or relationships varied in strength. Idealized attributes, or the characteristic that instills pride that followers want to emulate, had a stronger relationship with patient satisfaction than inspirational motivation, the characteristic where leaders share a vision for the future, and individual consideration, the characteristic of mentoring and guiding followers.

Though some of the results on leadership characteristics contradicted previous research, findings related to idealized behaviors and intellectual stimulation align with previous studies that as these characteristics increased the patient satisfaction scores increased (Jordan et al., 2015; Leonard McRae, 2017; McNeese-Smith, 1999; Raup, 2008). The transformational leadership subscales of idealized behaviors ($r = .011$) and intellectual stimulation ($r = .052$) demonstrated small positive linear relationships with patient satisfaction. As the senior leaders in the IRFs demonstrated higher levels of idealized behaviors and intellectual stimulation, the patient satisfaction was higher. As leaders exhibit idealized behaviors—the characteristic of discussing the importance of values—and intellectual stimulation—the characteristic of including others for different viewpoints of solving issues—the culture promotes higher patient satisfaction. Both subscales of idealized behaviors and intellectual stimulation had low strength, but the relationship between intellectual stimulation was stronger than idealized behaviors.

Regarding subscale data, there was only one study that reported leadership subscale data (see Jordan et al., 2015). For this study, the MLQ was used in its entirety, which delineated subscales of idealized attributes, idealized behaviors, inspirational motivation, individual consideration, and intellectual stimulation. Jordan et al. (2015) conducted a similar study but combined idealized attributes and behaviors into charisma. In this study idealized attributes ($r = -.107$) showed a small negative linear relationship with patient satisfaction, whereas idealized behaviors ($r = .011$) showed a small positive linear relationship with patient satisfaction. But Jordan et al. indicated that charisma ($r = .488$), which combined idealized attributes and idealized behaviors, demonstrated a

moderately positive relationship with patient satisfaction. Further, inspirational

motivation ($r = -.053$) showed a small negative linear relationship in this study, but

Jordan et al. (2015) found that inspirational motivation ($r = .501$) had a moderate positive

relationship with patient satisfaction. Additionally, intellectual stimulation ($r = .052$)

demonstrated a small positive relationship with patient satisfaction, whereas Jordan et al.

indicated that the relationship between intellectual stimulation and patient satisfaction

was stronger ($r = .467$). Finally, individual consideration ($r = -.021$) showed a small

negative linear relationship with patient satisfaction, but Jordan et al. suggested that

individual consideration ($r = .466$) had a stronger moderate positive relationship with

patient satisfaction. In summary, all the transformational leadership subscales had

positive linear relationships with patient satisfaction compared to this study; further, the

positive relationships in this study were not as strong as the positive relationships found

in Jordan et al.'s study.

Examining the relationship between transactional leadership and patient

satisfaction also yielded mixed results. The overall transactional leadership style

demonstrated a positive linear relationship with patient satisfaction in this study, which

was confirmed by Bahadori et al.'s (2016) results; however, Raup (2008) also suggested

that transactional leadership was similar to transformational leadership styles with the

relationship to patient satisfaction. Further, none of the prior studies reported detailed

results on the transactional leadership subscales of contingent reward and management by

exception-active. For transactional leadership, contingent reward is where leaders reward

positive behavior, and management by exception-active is where leaders concentrate on

mistakes and irregularities in process. These characteristics depict the positive

relationship with patient satisfaction. For this study, contingent reward ($r = .008$) and

management by exception-active ($r = .089$) both showed small positive linear

relationships with patient satisfaction, meaning that an increase in transactional

leadership behavior by senior leaders in IRFs would increase patient satisfaction. Though

the results were not as detailed, Raup's findings are supported in this study but contradict

with Bahadori et al.'s findings on overall transactional leadership style. Within this study,

management by exception-active showed a stronger relationship with patient satisfaction

than contingent reward.

Finally, the results for the fourth research question extended the limited

knowledge between the relationship between laissez-faire leadership style and patient

satisfaction. In contrast to transactional leadership, laissez-faire leadership had a negative

linear relationship with patient satisfaction in the study, which Bahadori et al. (2016) also

suggested by the passive-avoidant leadership style having the lowest patient satisfaction

scores in their study. Raup (2008) further confirmed that nontransformational leadership

styles accounted for lower patient satisfaction scores. None of the prior studies reported

detailed results on the laissez-faire leadership subscales of laissez-faire and management

by exception-passive; however, the findings of this study that laissez-faire characteristics

decrease patient satisfaction were supported by previous studies (see Bahadori et al.,

2016; Raup, 2008). For this study, laissez-faire ($r = -.097$) and management by

exception-passive ($r = -.041$) both showed small negative linear relationships with patient

satisfaction. Laissez-faire is defined by being absent when needed, and management by

exception-passive is where a leader fails to get involved until a serious issue arises. The negative relationship between laissez-faire and management by exception-passive and patient satisfaction is expected due to decreasing patient satisfaction with these behaviors. Both laissez-faire and management by exception-passive had a similar strength of negative relationship; however, the strength between laissez-faire was stronger than management by exception-passive.

Theoretical Context

There were two theoretical foundations for this study: transformational leadership and transactional leadership. The theoretical framework for transformational leadership is comprised of four characteristics: charisma, inspirational leadership, individual consideration, and intellectual stimulation. For the MLQ, Bass and Avolio expanded the four characteristics to five subscales to include idealized behaviors, idealized attributes, inspirational motivation, intellectual stimulation, and individual consideration (Mind Garden, 2004). Idealized attributes can be described as leaders who instill a sense of pride that others want to emulate, whereas leaders who possess the characteristic of idealized behaviors show high emotional intelligence and understand the importance of actions. Leaders who instill a unified mission and are strong supporters have inspirational motivation characteristics. Intellectual stimulation is defined by creative problem-solving tactics while soliciting ideas from supporters, and those who coach and mentor followers portray the individual consideration characteristic. Leaders who exhibit transformational leadership characteristics often have higher employee satisfaction rates, higher quality outcomes, and higher patient satisfaction scores (Bahadori et al., 2016; Boamah, Spence

Laschinger, Wong, & Clarke, 2017; Engelen et al., 2014; McNeese-Smith, 1999; Jordan et al. 2015). Transformational leadership is often considered the "gold standard of leadership" (Cope & Murray, 2017, p. 63). In this study, there was no statistical significance with the transformational leadership style and patient satisfaction, and the linear correlation was negative with patient satisfaction; further, the transformational leadership subscales did not have statistical significance and varied from negative to positive linear correlation.

The theoretical framework for transactional leadership includes attributes of contingent reward and management by exception, both active and passive, and laissez-faire. To operationalize transactional leadership, Bass and Avolio simplified transactional leadership to include the subscales of contingent reward and management by exception-active (Mind Garden, 2004). Leaders that exhibit contingent reward only provide recognition when goals are met. Management by exception-active is displayed in leaders that keep track of mistakes and punishes followers when goals are not met. Transactional leaders are considered the "carrot and stick" leaders due to their belief that the follower's confidence predicts and determine the level of effort produced (Bass, 1997). In this study, there was no statistical significance with the transactional leadership style and patient satisfaction, and the linear correlation was positive with patient satisfaction; further, the transactional leadership subscales did not have statistical significance and showed positive linear correlation.

Laissez-faire leadership was an extension of the transactional leadership style and distinguishes management by exception-passive from management by exception-active

but also includes the subscale of laissez-faire characteristic (Bass, 1997; Mind Garden, 2004). Leaders that exhibit laissez-faire characteristics are often tardy and absent when needed. Management by exception-passive leaders do not interfere and only act when things go wrong. Laissez-faire leaders are nonchalant in their style and do not seek to make waves or disrupt the environment. In this study, there was no statistical significance with the laissez-faire leadership style and patient satisfaction, and the linear correlation was negative; further, the laissez-faire leadership subscales did not have statistical significance and were negative in linear correlation.

Limitations of the Study

The online survey method has many benefits, however there were limitations associated with it as well. Participants did not have the opportunity to ask questions or seek clarification on the MLQ questions. The bias was controlled through the survey design and agreement with the IRF system. One of the limitations of the study was that the invitation to participate went through multiple channels before the senior leaders had the opportunity to voluntarily participate. The invitation for the survey was initiated by the National director of quality then forwarded by each Regional director of quality to each facility's director of quality/risk management. Each facility's director of quality/risk management was given the choice of whether or not to forward the invitation to other senior leaders at their respective facilities.

Another limitation of the study was that the leadership scores were self-reported by the senior leaders. Response bias could potentially limit the findings of the study, even though the MLQ instrument has been previously validated (Mind Garden, 2004).

Moreover, many respondents did not answer all questions on the MLQ and multiple imputation was utilized to complete the data. There is a limitation to the validity that the data is not representative of the IRF's aggregate leadership style, and therefore causal relationships were interpreted and not established. Previous studies (Bahadori et al., 2016; Leonard McRae, 2017; Raup, 2008) cited low response rates as a reason why statistical significance was not achieved; this study also did not achieve the desired number of facilities to demonstrate statistical significance.

Finally, the sample used for the study was from one IRF System located within the United States. The results may produce a limitation for generalizability for other IRF systems due to leadership structure and hierarchy. Further, the results may not be representative for other settings or levels of care within the healthcare industry.

Recommendations

This study may not be representative of all senior leaders and facilities within the IRF system. Evidence from the study showed small linear relationships between transformational, transactional, and laissez-faire leadership of senior leaders and patient satisfaction, however replication of the study is needed. One recommendation is to change the sampling strategy that would be more representative of the IRF facilities and senior leaders. Prior studies found positive correlations between transformational leadership and patient satisfaction, which can be attributed to improved organizational outcomes including higher employee satisfaction and empowerment, lower readmission and mortality rates, increased innovation (Bahadori et al., 2016; Jordan et al., 2015; Leonard McRae, 2017; McNeese-Smith, 1999; Raup, 2008).

A second recommendation for future studies is to survey the senior leader's followers to reflect how the leadership style of the senior leader is interpreted and operationalized in the IRF. The perspective of the follower could potentially differ from the senior leader's self-assessment (Bahadori et al., 2016; Larrabee et al., 2004). Lastly, a third recommendation is to conduct further experimental research using a pre-test, education, and post-test utilizing transformational leadership education. Leonard McRae (2017) found evidence that education increased the relationship between transformational leadership style and patient satisfaction from a weak positive correlation to a moderately strong positive correlation.

Implications

Patient satisfaction is a crucial component of healthcare organizations. Avedis Donabedian linked quality of care to patient satisfaction, but great emphasis was not placed on patient satisfaction until later when the Institute of Medicine introduced the Triple Aim (Locker & Dunt, 1978; Shirley et al., 2016). Poor patient satisfaction can result in higher readmission rates, higher mortality rates, and unsafe processes (Mazurenko et al., 2017). This study examined the relationship of the leadership style of senior leaders and patient satisfaction in IRFs. The results were not statistically significant, and negative linear relationships were found between the two leadership styles of transformational and laissez-faire with patient satisfaction; transactional leadership was found to have a positive linear relationship with patient satisfaction. These results are contradictory with previous research that transformational leadership demonstrated a positive linear relationship with patient satisfaction (Jordan et al., 2015;

Leonard McRae, 2017; McNeese-Smith, 1999). Despite the results of the study not aligning with previous research, implications for positive social change remain.

Prior literature focused on nursing leadership in acute care settings, whereas this study expanded the concentration to the whole senior leadership team to include the CEO, controller, director of case management, human resources director, director of therapy operations, chief nursing officer, director of pharmacy, and director of quality/risk management. Moreover, previous research studying the relationship between leadership style and patient satisfaction had not been completed in IRFs. This study provides the foundational work for further research with leadership styles of senior leaders and patient satisfaction in IRFs.

Implications for Leadership Subscales

As part of this study, the subscales of each leadership style were examined to determine the relationship with patient satisfaction. Jordan et al. (2015) is the only prior study to report individual subscale data, and it was limited to transformational leadership. The implications of reporting the subscale scores are important to note. Exploring the relationship that each subscale has with patient satisfaction affords the possibility of being able to increase patient satisfaction. By looking at the specific subscale relationships, healthcare administrators are able determine which characteristics are negatively or positively associated with patient satisfaction. The individual transformational subscales also afford the opportunity to determine gaps where leaders need further development or opportunities to celebrate those leaders who exhibit strong positive relationships with patient satisfaction. Each leadership subscale has distinctive

characteristics; for example, through inspirational motivation leaders can create a culture that empowers their employees to be engaged and take the steps needed to satisfy patients (Schaubroeck et al., 2016). Healthcare administrators could address specific transformational subscale relationships of their leaders during performance evaluations, by setting goals for improvement, or implementing educational programs. For the leaders that demonstrate strong leadership subscale relationships with patient satisfaction, behaviors and techniques could be studied to replicate in other IRFs. Through additional evaluation of the leadership subscales and the relationship that each has with patient satisfaction, there could be further development for leaders resulting in improved outcomes for patients through higher quality of care as well as job satisfaction and organizational engagement for employees (Bahadori et al., 2016; Boamah et al., 2017; Engelen et al., 2014; Jordan et al. 2015; Leggat, Karimi & Bartram, 2017; Leonard McRae, 2017; McNeese-Smith, 1999).

Implications for Health Administration

Through examining the relationship between leadership style of senior leaders and patient satisfaction, there are implications for changes within health administration. With high patient satisfaction linked to more referrals, higher payments, and quality of care, the study of specific leadership styles and the relationship with patient satisfaction is meaningful to the healthcare industry (Leonard McRae, 2017). In previous studies, transformational leadership was positively correlated to quality of care, which included higher patient satisfaction (Bahadori et al., 2016; Boamah et al., 2017; Engelen et al., 2014; Jordan et al. 2015; McNeese-Smith, 1999). Further education to health

administrators about leadership styles, concentrating on the transformational leadership characteristics and subscales, could potentially increase awareness and improve patient satisfaction, ultimately leading to significant positive social change.

Conclusion

In this study, I examined the relationship between leadership style of senior leaders and patient satisfaction in IRFs. The study yielded mixed results. Transformational leadership and laissez-faire leadership styles were noted to have a negative linear relationship with patient satisfaction, while transactional leadership demonstrated a positive linear relationship with patient satisfaction. None of the leadership styles showed statistical significance with patient satisfaction.

Within each leadership style, the characteristics or subscales were also tested alongside patient satisfaction. While none of the subscales showed statistical significance, there were small linear correlations. For transformational leadership, the subscales of idealized attributes, inspirational motivation, and individual consideration indicated negative linear relationships, while idealized behaviors and intellectual stimulation displayed positive linear relationships. For transactional leadership, both subscales of contingent reward and management by exception-active demonstrated positive linear relationships. For laissez-faire leadership, both subscales of laissez-faire and management by exception-passive depicted negative linear relationships. In this study the results for transformational leadership are different from previous studies where transformational leadership was found to be positively correlated with patient satisfaction (Jordan et al., 2015; Leonard McRae, 2017; McNeese-Smith, 1999).

Patient satisfaction has been correlated to the quality of care and outcomes in healthcare (Batbaatar et al., 2015; Locker & Dunt, 1978). Poor patient satisfaction can result in higher readmission rates, higher mortality rates, and unsafe processes (Mazurenko, et al., 2017). The relationship between leadership style and patient satisfaction is significant to the healthcare industry as well as healthcare administration as a practice. Taking an in-depth look at each leadership style and the transformational leadership subscales can provide meaningful information on those characteristics that have direct effects on patient satisfaction. Education and trainings for senior leaders can influence the effect on patient satisfaction, as well as provide hiring models for future leaders in the organization. Overall, this study showed the need for further research examining the relationship between leadership styles and patient satisfaction.

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Appendix A: A Survey Tool Senior Leadership Style in IRFs

Demographic Information

Please complete the following demographic questions.

1. Please enter your hospital name.

[   ]

2. Were you employed at this hospital in 2018?

◯ Yes

◯ No

Leadership Style Section

Please rate how frequently the description describes you as a leader. The word "others" could include one or all of the following: direct reports, colleagues, peers, supervisors.

3. I provide others with assistance in exchange for their efforts.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

4. I re-examine critical assumptions to question whether they are appropriate.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

5. I fail to interfere until problems become serious.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

6. I focus attention on irregularities, mistakes, exceptions, and deviations from standards.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

7. I avoid getting involved when important issues arise.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

8. I talk about my most important values and beliefs.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

9. I am absent when needed.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

10. I seek differing perspectives when solving problems.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

11. I talk optimistically about the future.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
◯	◯	◯	◯	◯

12. I instill pride in others for being associated with me.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
◯	◯	◯	◯	◯

13. I discuss in specific terms who is responsible for achieving performance targets.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
◯	◯	◯	◯	◯

14. I wait for things to go wrong before taking action.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
◯	◯	◯	◯	◯

15. I talk enthusiastically about what needs to be accomplished.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
◯	◯	◯	◯	◯

16. I specify the importance of having a strong sense of purpose.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
◯	◯	◯	◯	◯

17. I spend time teaching and coaching.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
◯	◯	◯	◯	◯

18. I make clear what one can expect to receive when performance goals are achieved.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
◯	◯	◯	◯	◯

19. I show that I am a firm believer in "If it ain't broke, don't fix it."

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
◯	◯	◯	◯	◯

20. I go beyond self-interest for the good of the group.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

21. I treat others as individuals rather than just as a member of a group.

Not at all	Once in while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

22. I demonstrate that problems must become chronic before I take action.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

23. I act in ways that build others' respect for me.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

24. I concentrate my full attention on dealing with mistakes, complaints, and failures.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

25. I consider the moral and ethical consequences of decisions.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

26. I keep track of all mistakes.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

27. I display a sense of power and confidence.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

28. I articulate a compelling vision of the future.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

29. I direct my attention toward failures to meet standards.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

30. I avoid making decisions.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

31. I consider an individual as having different needs, abilities, and aspirations from others.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

32. I get others to look at problems from many different angles.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

33. I help others to develop their strengths.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

34. I suggest new ways of looking at how to complete assignments.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

35. I delay responding to urgent questions.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

36. I emphasize the importance of having a collective sense of mission.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

37. I express satisfaction when others meet expectations.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

38. I express confidence that goals will be achieved.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

39. I am effective in meeting others' job-related needs.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

40. I use methods of leadership that are satisfying.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

41. I get others to do more than they expected to do.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

42. I am effective in representing others to higher authority.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

43. I work with others in a satisfactory way.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

44. I heighten others' desire to succeed.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

45. I am effective in meeting organizational requirements.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

46. I increase others' willingness to try harder.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

47. I lead a group that is effective.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
○	○	○	○	○

Thank You!

Thank you for your participation!

Beth Elder, MHA

█████████████

Appendix B: Permission to Use MLQ Survey

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.

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Multifactor Leadership Questionnaire™

Instrument (Leader and Rater Form)

and Scoring Guide
(Form 5X-Short)

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by Bruce Avolio and Bernard Bass

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