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The Relationship of Nurse Manager's Leadership Styles in Maintaining a Just Culture

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This is to certify that the doctoral dissertation by

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Abstract

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DNP, Walden University, 2014

MS, Oregon Health and Science University, 2005

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Healthcare leaders must establish a just culture to mitigate preventable medical deaths that occur at 250,000 per year, making medical errors the 3rd leading cause of death in the United States. However, there is a gap in knowledge regarding the attributes of nurse manager leadership styles that contribute to promoting a just culture at the unit level. Guided by the full range leadership theory and the just culture model, the purpose of this descriptive correlational study was to determine the relationship between nurse manager transformational, transactional, and laissez-faire leadership styles and unit level just culture perceptions and the differences between staff nurses' and nurse managers' perceptions of leadership styles and just culture. The Multifactorial Leadership Questionnaire and the Just Culture Assessment tool were administered to 165 U.S. hospital-based staff nurses and nurse managers. ANOVA revealed a statistically significant difference in the mean just culture scores between transformational, transactional, and/or laissez-faire leadership styles ($p < .01$). MANOVA outcomes were significant for the difference between the nursing staff's and nurse managers' perceptions of nurse managers' leadership styles ($p < .01$). This study promotes positive social change identifying transformational and transactional nurse manager leadership skills as a predictor for maintaining a unit level just culture and clarifying the impact of nurse managers' leadership styles on perceptions of patient safety among frontline nurses and hospital safety. Future research should focus on exploring the relationship between nurse-sensitive patient outcomes such as pressure injuries and hospital-acquired infections along with the unit level just culture and nurse manager leadership styles.

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Dedication

I dedicate this dissertation to my mother Hannah Mekuria. Her generous support, words of encouragement, and prayers made this journey possible and I am forever grateful. Your love is undeniable and always available. I will always be grateful to my Grandmother who taught me the power of kindness and perseverance and inspired me to keep seeking more knowledge and trust in God. To my family, my father Solomon Bellete thank you for always keeping me in your prayers; my sisters Dahlia and Grace and my brother Christian, I know you were cheering me on as I set to finish what I started. I am a lifelong learner, and I thank God for giving me the strength to succeed, the courage to fail, and the wisdom to be open minded as earned my PhD. To my patients who I have had the honor to serve, I will continue my quest to make a difference in patient safety. Lastly, I dedicate this to the healthcare professionals who are committed and actively engaged in a culture of safety where patients receive safe and quality care.

Acknowledgments

Thank you to all of you who have traveled with me on this journey. I truly enjoyed the process and learned from the challenges along the way. To my friends, thank you for the moments of laughter and your understanding. I would like to thank the members of my doctoral committee. Their guidance, support, and wisdom allowed me to excel and made my dream possible. Dr. Leslie Hussey, thank you for your words of encouragement, your generosity, and for challenging me to do my best work, to critically think and find my scholarly voice. You have made navigating through my journey as seamless as possible. Thank you to Dr. Sophia Brown for your time, expertise, words of encouragement and valuable feedback which has contributed tremendously to my success. Thank you to Dr. Janice Long and Walden faculty members who I have learned so much from. Each of you made us feel connected in the virtual learning space. You encouraged dialogue, gave us opportunities to work collegially and develop friendships along the way. Thank you to Dr. Nancy Moss , our program director who I have had the pleasure to meet during residency, for your guidance, encouragement and advice throughout this program. Finally, I am grateful to be a part of a community who believes that through our acts of kindness and meaningful actions, we can affect positive social change for the betterment of others locally and globally.

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Chapter 1: Introduction to the Study

Preventable medical harms are events that could have been identified, detected, and mitigated prior to creating adverse and undesirable patient outcomes (Nabhan et al., 2012). The harm from preventable errors have resulted in hospitalized patient deaths in the United States ranging from 210,000 to 440,000 per year (James, 2013). Many organizations, such as The Joint Commission (TJC, 2017a, 2017b), Institute of Medicine (IOM, 2010), and American Nurses Association (ANA, 2016), have made establishing a positive patient safety culture a central component of plans to eliminate preventable harm. A positive patient safety culture is defined by individual and collective behaviors, values, and attitudes of leaders and employees that support the organization's ability to cultivate trust and sustain best practices, safe systems, transparency and communication, and continuous improvement efforts (Boussat, Kamalanavin, & François, 2018; Reason, 2016). A positive patient safety culture can be achieved through the implementation of a just culture model (JCM), which has been recognized by patient safety scholars and multiple states and organizations as the gold standard (ANA, 2016; Battard, 2017; Reason, 2016; Rogers, Griffin, Carnie, Melucci, & Weber, 2017). Maintaining a just culture requires commitment from leadership to balance holding employees accountable for behaviors and not blaming individuals for making human errors (Marx, 2001). However, theories of nursing practice have yet to identify the type of leadership styles that most frequently enable nurse managers to create and maintain such an environment.

Though researchers have identified which leadership styles are conducive to ensuring quality of care and patient safety in healthcare, there has been minimal evidence

indicating the leadership styles that allow nurse managers to best contribute to the maintenance of a just culture at the unit or practice level. Researchers who have studied the impact of nurse leadership styles on staff nurses environment or practice outcomes have mainly used Avolio and Bass's (2004) full range leadership theory (FRLT; Farag, Tullai-McGuinness, Anthony, & Burant, 2017; Manning, 2017; Merrill, 2015; Negussie & Demissie, 2013). Though multiple researchers and national organizations have recognized organizational leaders as the primary drivers of safety culture (Al-Nawafleh, Abu-Helalah, Hill, Masoud, Al-Mahasneh, & Salti, 2016; Meneghetti Baratto et al., 2016; TJC, 2017a), this study was necessary to better understand which leadership styles based on FRLT, best allow nurse managers to promote a just culture at the unit level, which may lead to a reduction of preventable medical harms.

The first chapter offers a summary of the topics of leadership and just culture, provides evidence regarding meaningful gaps in the literature that are addressed by this study, and explains the significance of the research problem and study to the nursing profession. The problem statement, research question, and hypotheses are provided. The chapter also provides definitions, assumptions, and limitations for the study.

Background

The growing complexity of healthcare has placed additional burdens on nurses, who make up the largest healthcare workforce, to resolve ongoing challenges in an environment where patient care requires interfaces with multidisciplinary teams, technology, systems, procedures, and patients' unique healthcare needs (Cummings et al., 2018; IOM, 2010). Advancements in medicine have allowed healthcare organizations to

implement policies designed to prevent or reduce incidents of preventable patient harm (Alotaibi & Federico, 2017; Heron, 2017). The primary goal of healthcare is to provide quality and safe care where patients remain free from injury and receive the right care at the right time. However, rapid changes in healthcare, failed systems, and human error have contributed to a climate in which preventable medical death—now the third leading cause of death in the United States—occurs at a rate of roughly 250,000 per year (Makary & Daniel, 2016).

Preventable medical deaths in hospitals are associated with events and inadvertent complications caused by medical treatment. For example, researchers have shown the prevalence of pressure ulcers and healthcare-associated infections among hospitalized patients as well as the high rates of treatment, medication, and procedural error during hospital stays (Ferreira de Souza, de Sousa Alves, & Muniz de Alencar, 2018; Kennerly et al., 2014; Shu-Hui et al., 2016; Thompson-Moore & Liebl, 2012). A commonly cited precursor to medical error is a negative or ineffective patient safety culture in a complex hospital environment, which leads to fear of reporting mistakes as well as by feelings of blame, shame, and burnout (Vrbnjak, Denieffe, O'Gorman, & Pajnkihar, 2016). Therefore, it is important for healthcare organizations to work toward maintaining a culture that identifies safety challenges and adopts evidence-based solutions rather than endorsing a culture of blame and punishment.

A positive patient safety culture, guided by the just culture model, creates an organizational foundation to reduce undesirable human behaviors and detect failing systems, both of which lead to patient harm. Organizational leaders that do not

incorporate a just culture into their system can compromise the state of patient safety and increases the likelihood for errors or adverse events (Gillian et al., 2018; Goulding & Bedard, 2015). Creating a positive safety culture has been shown to eliminate and reduce errors in volatile but reliable industries such as aviation and nuclear power (Haerkens et al., 2015; Hussain, et al., 2016). In hospital settings, a positive patient safety culture leads to safe practices, a rise in quality of care, an increase in patient and nursing satisfaction (Feng, Bobay, &Weiss, 2008), increased commitment to error reporting (YuKyung & Soyoung, 2017), and decreased prevalence of nurse-associated events such as medication errors and hospital-acquired pressure ulcers (DiCuccio, 2015) as well as reduced patient fall rates (Xie et al., 2017). The just culture model accounts for human errors, sets a foundation for learning from past mistakes, promotes continuous improvement, and encourages fairness, trust, and communication among staff and leaders (Dekker, 2012; Marx, 2001). The ANA (2016) also asserted that a just culture has allowed nurses to speak up, develop a sense of accountability, and engage in performance improvement. Thus, the principles of a patient safety culture have gained popularity in hospital settings to prevent or eliminate patient harm (Gutberg & Berta, 2017). The IOM (2010), TJC (2017a, 2017b), and the Agency for Healthcare Research and Quality have endorsed the implementation of a patient safety culture incorporating the just culture model to improve quality of care and patient outcomes (Kohn, Corrigan, & Donaldson, 2000; TJC, 2017a). Thus the principals of just culture has gained popularity in hospital settings and the important role of middle managers has been recognized to prevent or eliminate patient harm.

Leadership is key in establishing and sustaining a just culture. Nurse managers influence the well-being of staff nurses, which affects their satisfaction, practice, skills, professional development, levels of burnout and engagement (Adams, Chamberlain, & Giles, 2019). The maintenance of a just culture has been attributed not only to the ability of senior leadership to provide inspiration, resources, transparency, accountability, and a clear vision (Ruchlin, Dubbs, & Callahan, 2004) but also to the capability to facilitate change, lead the frontline staff in safety initiatives, and establish trust and open communication upward and downward in the organization (Gutberg & Berta, 2017; Vogelsmeier & Scott-Cawiezell, 2007). These capabilities—both for senior leadership and for nurse managers—are significant to a unit's efforts to embrace the principles of just culture including consoling employees for human errors, implementing coaching and education for risk-taking behaviors, and applying punitive action only for reckless behaviors (Marx, 2001). Sustaining a just culture requires effective leadership for the nursing staff to perceive their work environment to be safe and to have a nonpunitive atmosphere in which error reporting and learning is encouraged (Battard, 2017; Pattison & Kline, 2015). However, supervisors and managers are continually challenged to create and sustain a just culture in their unit due to inadequate leadership training (Bahn, 2013).

The notion that safety culture is leadership-driven is supported by national organizations, such as the IOM (2010), TJC (2017a, 2017b), Agency for Healthcare Research and Quality, and the ANA. The IOM's key recommendations have been focused on leadership responsibilities for maintaining a patient safety culture, including a safety reporting system and an environment promoting teamwork and open

communication (Kohn et al., 2000). Similarly, the ANA (2016) has advised healthcare organizations to establish a safety culture based on trust, respect, and transparency. The TJC (2017a) also requires hospitals accredited by the TJC to have an established patient safety culture that is monitored on an ongoing basis and governed by skilled and mindful leaders dedicated to creating systems that support best practices. To aid organizations in accomplishing these recommendations, the Agency for Healthcare Research and Quality (2018) developed tools including the Hospital Survey on Patient Safety Culture that measures employee perceptions of the organization's patient safety culture.

Theories of leadership style also provide guidance regarding the leadership skills and approaches most commonly used to mobilize, influence, and encourage others toward desired action (Antonakis & House, 2014). Researchers have studied leadership in the context of traits, characteristics, behaviors, and styles, demonstrating that effective leadership is a prerequisite to organizational success. In the past decade, an increased number of studies have been conducted on leadership styles that are conducive to promoting patient safety while providing quality healthcare (Manning, 2017; Merrill, 2015). Most of these publications have been based on Avolio and Bass's (2004) FRLT. The components of FRLT include transformational, transactional, and/or laissez-faire leadership styles.

Transformational leadership is the ability of nurse managers to influence, inspire, and engage a nursing staff resulting in a synergy between nurse leaders and staff nurses to achieve the organization's mission and patient safety initiatives (Turunen, Liukka, & Hupli, 2018). Transformational leaders are confident, influential, inspirational,

innovative, and focused on proactive error prevention and the professional growth of individual employees (Bahn, 2013; Boamah, Spence Laschinger, Wong, & Clarke, 2018). Magnet Recognition—a prestigious designation that a hospital can achieve for nursing excellence, high levels of nurse retention, and the safe delivery of care—requires nurse managers to exhibit transformational leadership skills (Bormann & Abrahamson, 2014). In contrast, transactional leaders value order and structure, micromanage subordinates, believe in a reward and punishment system to achieve compliance, and are focused on ensuring that standards are met while punitively reacting to error (Clarke, 2013). Further, laissez-faire leaders often choose not to adequately lead, supervise, or guide their staff (Antonakis, Avolio, & Sivasubramaniam, 2003).

There have been correlations between nurse managers' transformational and transactional leadership styles and high levels of staff nurse satisfaction and engagement (Bormann & Abrahamson, 2014; Manning, 2017; Negussie & Demissie, 2013) as well as between managerial support and blame-free work conditions (Merrill, 2015), which indicates that this leadership style can lead to a just culture. Transformational and transactional leadership styles may be used interchangeably in response to specific situations, but the laissez-faire style is better to avoid (Antonakis et al., 2003). The complex healthcare environment requires multifaceted leaders who understand when to apply transformational and transactional leadership styles to achieve an organization's vision and goals.

Although patient safety is understood as the number one priority in healthcare, there is limited literature regarding nurse leadership styles that promote just culture at the

unit or practice level. My study addressed the gap in nursing theory's knowledge and provided guidelines to nurse managers practicing in a hospital setting. This study addressed the need to identify the leadership styles of nurse managers that are positively correlated to a just culture at the unit level in a hospital setting.

Problem Statement

Over the past several decades, there has been a focus on the significant rates of hospital-acquired adverse events and preventable death. Adverse events are occurrences of patient harm during the rendering of care by healthcare professionals (Kohn et al., 2000). Patterns of negative and dangerous healthcare environments, including punitive cultures, lack of communication, absence of trust and transparency, feelings of powerlessness to speak up, and dysfunctional healthcare teams have hindered healthcare organizations from preventing safety hazards, learning from past mistakes, or fully implementing patient safety practices and systems (Abdi, Delgoshaei, Ravaghi, Abbasi, & Heyrani, 2015; Cloete, 2015; Duarte, Queiroz, Büscher, & Stipp, 2015). However, healthcare leaders can help mitigate preventable medical deaths, which occur at a rate of roughly 250,000 per year, constituting the third leading cause of death in the United States (Makary & Daniel, 2016). Organizational leaders are essential to safety culture (Al-Nawafleh et al., 2016; Meneghetti Baratto et al., 2016; TJC, 2017a), which allows for better implementation of patient safety initiatives designed to reduce patient harm and preventable deaths (Caris et al., 2017; Fan et al., 2016; Leone & Adams, 2016). A lack of effective organizational leadership contributes to negative safety cultures and increases in

adverse patient outcomes (Boamah et al., 2018). Therefore, it is imperative for leaders to be engaged in establishing a safety culture.

Although there are minimal studies on just culture, scholars have indicated that just culture provides an environment where teamwork, error reporting practices, and open communication can prosper (Miranda & Olexa, 2013). Several national organizations, including the IOM, have identified hospital leaders, specifically middle managers such as nurse managers, as the drivers of a sustained just culture (Kohn et al., 2000; Marx, 2001). However, there have been a lack of evidence-based studies regarding the managerial role in patient safety and quality, especially when compared to the number of studies in nonhealthcare sectors regarding managerial influence on workplace safety (Parand, Dopson, Renz, & Vincent, 2014). Although nurse managers operating in hospital settings have the daily burden of maintaining a balance between safety, quality, and efficiency of patient care; the increased complexity of healthcare, shortages in staffing, and budget constrictions have heightened the significance of the nurse manager's role in maintaining safety and quality of care at the unit level (Goktepe et al., 2018; Saleh et al., 2018). Nurse managers perceive skills such as interpersonal negotiation, decision making, conflict management, and executive planning as essential to lead their unit (Hughes, 2018). However, the literature has not identified specific leadership styles that nurse managers can use to increase their effectiveness in maintaining a just culture at the unit level.

Researchers have explored the perceptions of patient safety culture among nurses (Farsaraei, Aghazadeh, Lotfi, & Sheikhalipour, 2017; Saba, Sedigheh, Safoura, Maryam, & Azam, 2017; Thomas-Hawkins & Flynn, 2015), and the differences between staff

nurses' and nurse managers' perceptions of patient safety culture (Hannele, Pirjo, Tarja, Merja, & Katri, 2013; Turunen, Partanen, Kvist, Miettinen, & Vehviläinen-Julkunen, 2013). However, there is little evidence regarding the types of nurse manager leadership styles that influence nurses' perceptions of just culture at the unit level. Therefore, my study addresses a gap in knowledge on leadership practices that promote patient safety by evaluating the relationship between specific nursing leadership styles and the level of just culture at the unit level.

Purpose

The purpose of this quantitative descriptive correlational study was to (a) determine whether there was a relationship between the nurse managers' transformational, transactional, and laissez-faire leadership styles and their units' just culture and (b) determine whether there was a difference between staff nurses' and nurse managers' perceptions of leadership styles and just culture. The variables were quantitatively measured using the Multi-factorial Leadership Questionnaire (MLQ 5X short) and the Just Culture Assessment Tool (JCAT). The staff nurses and nurse managers working in a hospital setting were administered the MLQ 5X to identify whether the nurse manager behaviors most frequently fell into the leadership styles of transformational, transactional, or laissez-faire, categorizations that served as the predictor variables for this study (Sarros, & Santora, 2001). Simultaneously, the JCAT was administered to the same group of nurses and nurse managers to determine the participants' perception of balance and trust, open communication, event reporting

process, feedback about events, and continuous improvement, responses which constituted the outcome variable of just culture (Petschonek et al., 2013).

Research Questions and Hypotheses

RQ 1: What is the relationship between the perceptions of nurse managers' transformational, transactional, and laissez-faire leadership styles and the perceptions of their unit level just culture as reported by staff nurses and nurse managers?

$H_0$1: There will be no statistically significant relationship between the perceptions of nurse managers' transformational, transactional, and/or laissez-faire leadership styles and the perceptions of their unit level just culture as reported by staff nurses and nurse managers.

H_a1: There will be a statistically significant relationship between the perceptions of nurse managers' transformational, transactional, and/or laissez-faire leadership styles and the perceptions of their unit level just culture as reported by staff nurses and nurse managers.

RQ 2: What are the differences between staff nurses' perceptions of their nurse managers' transformational, transactional, and laissez-faire leadership styles and their unit level just culture; and nurse managers' perceptions of their transformational, transactional, and laissez-faire leadership styles and their unit level just culture?

$H_0$2: There will be no statistically significant differences between staff nurses' perceptions of their nurse managers' transformational, transactional, and laissez-faire leadership styles and their unit level just culture; and nurse managers' perceptions of their

transformational, transactional, and laissez-faire leadership styles and their unit level just culture.

H_a2: There will be no statistically significant differences between staff nurses' perceptions of their nurse managers' transformational, transactional, and laissez-faire leadership styles and their unit level just culture; and nurse managers' perceptions of their transformational, transactional, and laissez-faire leadership styles and their unit level just culture.

Theoretical Framework

A theoretical framework was constructed from the fields of leadership, management, and patient safety to describe the concepts, variables, and relationships within the study that guided this research. Avolio and Bass's (2004) FRLT coupled with Marx's (2001) just culture model (JCM) formulated the appropriate theoretical framework for my study. Avolio and Bass's FRLT supports and emphasizes the role of effective leadership by asserting that organizational change is created and sustained through leadership resilience and practice. The important role of effective leadership in creating and fostering the attributes of a just culture directed the selection of an appropriate leadership theory for this study.

The theoretical principles in this study are transformational leadership, transactional leadership, and a just culture (Archibald, 2017; Bishop & Boyle, 2016; Marx, 2001). Transformational leaders can inspire and motivate their subordinates to perform beyond their job expectations. On the other hand, transactional leaders tend to focus on establishing employee accountability while promoting compliance with

organizational operations through incentives and punishment (Oberfield, 2014). Historically, leaders have been labeled as having attributes that were either transformational or transactional (Kuhnert & Lewis, 1987), but researchers have suggested that successful managers may utilize a combination of transformational and transactional leadership styles (Alshahrani & Baig, 2016; Pishgooie, Atashzadeh-Shoorideh, Falcó-Pegueroles, & Lotfi, 2018). Transactional leaders provide the necessary support and resources to perform a job, and transformational leaders encourage innovation and quality improvement. Transactional styles contingent upon reward and punishment, balanced with transformational attributes of engagement and motivation, positively influence employees' level of trust and while increasing rates of retention (Pishgooie et al., 2018). Therefore, understanding transformational and transactional leadership and how they work together may lead to a just culture.

The just culture model specifies that a safe work environment is established when employees feel that they can openly report adverse events and contribute to the creation of solutions, when employees are not blamed for human errors, when employees receive retraining and coaching for at-risk behaviors, and when punishment is reserved for reckless behaviors or the intentional disregard of risks (Marx, 2001). Further, the level of trust in leadership is often influenced by managerial displays of fairness, integrity, and commitment (Yang, 2016). Transformational leaders create employee perceptions of trust and fairness by modeling integrity, providing support, inviting open communication, and coaching employees (Yang, 2014). According to Marx (2001), leaders must have the ability to console an employee who committed a human error or a simple mistake and

coach an employee who engaged in risky behavior such as deviating from policies unintentionally. In a just culture, leaders need to hold employees accountable for failing to follow policies and procedures or to report safety hazards (Marx, 2001). Accountability can be established through the practice of transactional leadership and the application of active management by exception, providing constructive employee feedback to correct risk-taking behaviors while reinforcing work expectations through punitive actions for repetitive problems or violations (Delegach, Kark, Katz-Navon, & Van Dijk, 2017). Therefore, to achieve a just and fair culture, nurse managers may need to exercise a combination of transformational and transactional leadership styles depending on the situation.

Specific constructs of the theoretical framework that guided this study included (a) the five characteristics of transformational leadership style: idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individual consideration; (b) transactional leadership qualities including contingent reward and management by exception, active (MBEA); and (c) laissez-faire leadership style measured by management by exception, passive (MBEP) and laissez-faire (Avolio & Bass, 2004). The characteristics represent the transformational and transactional leadership styles and are the foundation of a just culture where the staff experience balance and trust, open communication, event reporting process, feedback about events, and continuous improvement (Marx, 2001; Petschonek et al., 2013).

Researchers have supported the assumptions of FRLT, suggesting that leadership actions that foster communication, innovation, and accountability can result in

organizational engagement and a high-functioning workplace (Avolio & Bass, 2004). Researchers have utilized the constructs of FRLT to provide insight into leadership styles and behaviors that promote culture change, suggesting that in an environment where managers practice both transactional and transformational leadership, employee perception of leadership trust and respect is enhanced significantly (Yang, 2016).

The theoretical framework of this study accounted for a phenomenon established by many scholars and national organizations, including IOM (2010) and TJC (2017a, 2017b), concerning the requirement of a leader-driven approach to creating a just culture. The FRLT and the just culture model (JCM) describe leadership styles and behaviors that help establish a healthy organizational culture and a trust-based relationship between leaders or managers and their employees. The framework provided the research foundation to quantitatively explore the relationship between nurse managers' transformational, transactional, and/or laissez-faire leadership styles and their units' just and fair culture promoting patient safety. More detail on the FRLT and JCM is presented in Chapter 2.

Nature of the Study

I used a descriptive, correlational study design to determine whether there is a relationship between nurse manager leadership styles and the unit level just culture. The use of other methodologies such as qualitative approaches, best suited to understand a phenomenon in the context of lived experiences, were not appropriate for the study. Furthermore, an experimental or a quasi-experimental approach was not feasible because

the study contained only one set of a sample of nurses and nurse managers and no interventions were introduced as part of the study.

A quantitative study was appropriate to analyze the relationships between the study's predictor and outcome variables (Frankfort-Nachmias & Leon-Guerrero, 2015). The quantitative descriptive, correlational study drew upon the FRLT and JCM that was used to create a theoretical framework. A quantitative analysis provided descriptive information regarding whether the leadership styles of nurse managers have a positive, a negative, or no impact regarding whether their unit is understood to foster a just and safe culture. The predictor variables of nurse managers' transformational, transactional, and/or laissez-faire (passive-avoidant) leadership styles was measured using the survey of MLQ-5X Short Form, which uses a 5-point Likert scale ranging from *0* (*not at all*) to *4* (*frequently, if not always*; Avolio & Bass, 2004). The outcome variables of a just culture were measured using the Just Culture Assessment tool, which uses a 7-point Likert scale ranging from *1* (*strongly disagree*) to *7* (*strongly agree*; Petschonek et al., 2013). The differences between nurse manger and staff nurse perceptions of leadership styles and just culture was analyzed. Further tests were applied to test the significance, the direction, and level of association between the predictor and outcome variables. The study involved the use of valid and reliable instruments identified from the literature.

To gain a perspective on frontline nursing staff and nurse managers' perceptions of leadership style and just culture, I administered a questionnaire based on valid and reliable survey tools. Additional questions were added to gather relevant demographic information of participants including years of experience, highest education level, current

work hours (part-time versus full time) and gender. Avolio and Bass's (2004) MLQ 5X was used to assess transformational and transactional leadership behaviors of the nurse managers. The just culture attributes were measured by simultaneously administering the JCAT (Petschonek et al., 2013). The MLQ 5X comprises nine domains that measure transformational, transactional, and laissez-faire leadership styles. The five domains of idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individual consideration measured transformational leadership style, the two domains of contingent reward and MBEA measured transactional leadership style, and the two domains of MBEP and laissez-faire measured laissez-fair leadership style (Avolio & Bass, 2004; Bass, 1999). The JCAT measured the staff nurses' perceptions regarding elements identified to contribute to a just culture—balance and trust, open communication, event reporting process, feedback about events, and continuous improvement—and provided an overall just culture composite score.

I used a power analysis software to determine the appropriate sample size (Rudestam, & Newton, 2015). SPSS (V25) descriptive and inferential statistics were applied to analyze the correlation between the predictor and outcome variables. The assumptions for the selected analysis tests used to determine the level of variance or the degree in which the predictor variables explain the changes in the outcome variables were evaluated. Analysis of variance (ANOVA) was found appropriate to analyze the first research question; whereas Multivariate analysis of variance (MANOVA) was utilized to evaluate the second research question (Polit, 2010).

Definitions

The definitions provided in this section ensure standardization of the terminology used throughout this study.

Balance: The healthcare staff's perception of an objective and fair investigation of and managerial response to medical errors (Petschonek et al., 2013).

Continuous improvement: A continuous process that is systematically designed to encompass all stakeholders in developing and executing changes in healthcare delivery processes that meet or exceed quantitative or qualitative quality care measures (McCalman et al., 2018).

Feedback and communication: An open and nonpunitive dialogue between leadership and staff about significant or minor errors and corrective actions through the establishment of effective interpersonal relationships (Wagner, Damianakis, Pho, & Tourangeau, 2013).

Just culture: A patient safety culture model focused on identifying human behaviors and systemic breakdowns that lead to a medical error or potential harm. Individuals are not blamed for human errors or systemic issues but are held accountable by punitive action when engaged in deliberate and reckless behaviors or when breaking safety rules (Ungvarsky, 2016).

Laissez-faire (passive-avoidant leadership): A failure to execute the assigned responsibilities as the head of a unit or department; such duties include bringing conflicts to resolution, providing guidance to subordinates, and proactively managing hazards or risks to the organization (Bass, 1999).

Leadership: The means used to persuade employees to work toward achieving a healthcare organization's mission and goals (Furnham, 2015; as cited in Saleh et al., 2018).

Patient safety culture: The attitudes, beliefs, behaviors, values, norms, typology (leadership style), practice standards, and regulatory policies that shape clinical and administrative operations at macro- and micro-system levels (Leitão & Greiner, 2017; Petitta, Probst, & Barbaranelli, 2017).

Transformational leadership: A leadership approach that creates employee engagement in the organization's mission and fosters an employee's desire to achieve their greatest potential through inspiring synergy, innovation, and professional growth (Boamah et al., 2018).

Transactional leadership: A leadership strategy that leads to a high level of safety compliance through engagement of stakeholders, the clarification of roles and responsibilities, and the surveillance of practices (Clark, 2013; de Oliveira Rodrigues, & Ferreira, 2015).

Trust: The belief that personal needs and welfare will be regarded by another, a condition leading to open and honest communication, cooperation, commitment, and a positive attitude (Pattison & Kline, 2015).

Assumptions

In this study, I made several assumptions that are predicted to influence the outcomes. Through a review of similar studies, I assumed that nurses perceive that a just culture provides a safe and desirable workplace environment and that they desire to work

in a just culture. I also assumed that nurses and nurse managers would provide fair and objective perceptions of managerial leadership behaviors. Finally, I assumed that nurses and nurse managers would provide honest and open responses regarding unit safety culture.

Scope and Delimitations

The scope of this study addressed the influence of nurse manager leadership styles on frontline nurses' perceptions of a fair and just safety culture in their work environment. Types of leadership styles and theoretical frameworks were evaluated to identify the best fit for the study such as authentic, servant, transformational, and transactional leadership. However, nursing-related research provided evidence of the correlation between transformation and transactional leadership and nursing outcomes such as job satisfaction (Negussie & Demissie, 2013) and a favorable safety climate (Merrill, 2015). Additionally, the constructs of transformational and transactional leadership were found to be supportive of the just culture model. Thus, I examined the transformational, transactional, and laissez-faire leadership styles (see Avolio & Bass, 2004), and categories of leadership characteristics developed by other scholars was considered beyond the scope of this study. For example, Lewin's leadership theory includes authoritarian, democratic and laissez-faire leadership styles; however, the authoritarian and laissez-faire leadership characteristics do not promote a just culture (Flynn, 2017). Additionally, Kouzes and Posner's (2017) leadership participation inventory model addressed the transformational leadership styles that are beneficial to a just culture, including practices such as (a) challenging the process, (b) inspiring a shared

vision, (c) enabling others to act, (d) modeling the way, and (e) encouraging the heart. However, the transactional leadership style required for employee accountability in a just culture was not addressed in the model. Therefore, the more comprehensive theory of the FRLT—comprising transformational, transactional, and laissez-faire leadership concepts—was used with the JCM, which describes the attributes of just culture, to examine the research problem and contextualize ideas relevant to this study.

The leadership style of nurse managers and perceptions of unit-level just culture was measured using a Likert scale instrument including the MLQ survey and the JCAT survey, respectively. These instruments were selected as they specifically measure the study variables of transformational, transactional and laissez-faire leadership styles and perceptions of just culture. Furthermore, the survey instruments were chosen based on their respective reliability and validity in measuring the predictive and outcome variables of the study.

The survey instruments were administered to registered nurses working in a hospital setting. Preventable adverse events are higher among hospitalized patients, with studies showing that 46% of preventable adverse events occur in pediatric acute care settings (Berchialla, Scaioli, Passi, & Gianino, 2014), and 51% occur among a hospitalized adult population (Schwendimann, Blatter, Dhaini, Simon, & Ausserhofer, 2018). 32 % of hospitalized patients have experienced two or more adverse incidents of nurse-associated outcomes including pressure sores, falls, medication errors, inappropriate use of restraints, pneumonia, and urinary infections (D'Amour, Dubois, Tchouaket, Clarke, & Blais, 2014). The higher prevalence of preventable adverse events

among hospitalized patients led to the study's focus on the leadership style and just culture among nurses and nurse managers working in hospital settings. Focusing on the hospital setting when considering the effect of nurse manager leadership styles on the level just culture may yield information for a just culture environment that can improve patient care. The delimitation has impacted the research results' applicability to other healthcare settings such as outpatient clinics, home-based care, and long-term care facilities. However, the study's focus on a hospital practice setting should not affect the applicability of the study to similar settings due to efforts to ensure adequate sampling of nurses and nurse managers.

The population of this study consisted of registered nurses in staff and managerial roles, all of whom are at least 19 years of age, working in the hospital setting for at least 1 year. The study was conducted across the United States with nonprobability sampling. Factors such as time, cost, and access prohibited the use of random sampling of the population of registered nurses. The limits of nonprobability sampling may affect the external validity and generalizability of the study. I administered the survey to the participants electronically both for ease of access and to increase the chance of obtaining sufficient sampling (Creswell & Creswell, 2018).

The impact of individual characteristics such as ethnicity, culture, or gender in the participant's style of management or leadership was not discussed in my study. Scholars have recognized a just safety culture as the foundation of quality patient care and have identified the significant role of leaders to the creation and maintenance of a positive safety culture within a healthcare organization (Boysen, 2013; Dekker, 2012; Marx,

2001). However, researchers have not explored the relationship between nurse manager leadership behaviors and the existence of a just culture at the unit level. Therefore, the variables of leadership style and just culture defined the scope of the study.

Limitations

For the study, I used an online survey questionnaire to obtain the data from the participants. The online nature of the questionnaire restricted the ability to gain follow-up information participants may have shared in face-to-face interviews. Due to the self-reported nature of the survey, staff nurses' responses may not have depicted their true feelings, and nurse managers may have rated their leadership styles more favorably, implying transformational and transactional behaviors that may not be consistent or present. However, the study was conducted anonymously without the inclusion of the unique identifiers of individual participants in the study to encourage open and honest responses and to mitigate the effects of researcher bias (Creswell & Creswell, 2018).

The nature of my study also limited administration of the survey to a single point in time, restricting the variables from being measured over time. The study's outcomes may have been potentially be influenced by incidents such as changes in organizational leadership or structure occurring during the survey period. Additionally, it is challenging to ensure that the sample represents the population of nurses and nurse managers working hospital settings when samples are collected at a single point in time using nonrandomized sampling method. Therefore, to increase the likelihood of appropriate representation across the entire population, a large sample size was used, and the population and sample was well defined.

Another limitation was that participants were recruited across the United States on a voluntary basis and may not be a representative of all nurses. The limitations of the sampling method may affect the generalizability of the study to hospitals in other locations based on the relative diversity of the population. In addition, the sampling method did not ensure applicability of the study's results to other healthcare settings, such as outpatient clinics, home-based care, and long-term care facilities.

Finally, I used the survey responses of nurses and nurse manager who chose to participate in the study. The analysis did not account for those participants who dropped out of the study. Statistical controls were not used to address the nonresponders, limiting the ability to generalize the results to the nurses working in United States hospitals who chose not to participate in the study. A robust sample size was obtained to account for drop-out or incomplete survey responses and increased the likelihood that the sample represented the nurses and nurse managers working in hospitals across the United States.

Significance

In an increasingly complex hospital environment, it is important to explore the role that nurse managers have in influencing the patient safety culture at the unit or practice level. This research project addressed an understudied area in professional nursing theory on hospital managers' roles in patient safety and quality (Parand et al., 2014). However, research has shown significant correlations between nurse manager coaching behaviors and a positive safety culture featuring improved error reporting (YuKyung & Soyoung, 2017). The results of the study may contribute to positive social change for nurse managers by providing critical information regarding leadership skills

and behaviors necessary to sustain a just culture at the unit level. It is important for the nursing profession to clarify the significant role a nurse manager plays as a leader in influencing unit-level patient safety culture (Turunen et al., 2013). This study highlighted the role of nurse managers in patient safety, illuminating the importance of ongoing nurse manager training to strengthen nurse managers' knowledge and self-efficacy in service of utilizing appropriate leadership styles to ensure unit level just culture, which could affect patient outcomes.

Summary

I evaluated the impact of nurse managers' leadership styles on the perceptions of a just culture at the unit level. I used a framework constructed from FRLT and the JCM as the theoretical lens of the study. The theoretical structure guided the selection of study participants and the survey tools used to gather the data. The research participants were selected from a population frontline nurses and nurse managers working hospital settings, who were asked to provide their perceptions on leadership styles and just culture at the unit level by completing a survey administered online. The survey was derived from valid and reliable tools including the MLQ and JCAT questionnaires that measured the predictor and outcome variables of the study. This study provides new information on the influence of the nurse managers' leadership style on the frontline nurses' perceptions of just culture.

In Chapter 2, I explore the literature regarding patient safety culture, just culture, and leadership. The literature review includes a description of the theoretical foundation, the concepts of transformational, and transactional literature as well as further description

of just culture and potential relationships between leadership styles and the implementation of just culture. In addition, the chapter details the use of FRLT in studies published within the last 5 years on leadership in nursing.

Chapter 2: Literature Review

Introduction

The IOM has urged hospital leaders to implement and sustain a safety culture that encourages employees to report errors, promotes accountability for positive patient outcomes, and allocates adequate resources for continuous improvement (Kohn et al., 2000). Many studies have shown that effective leadership is needed for a culture of patient safety in healthcare (Al-Nawafleh et al., 2016; Lin, MacLennan, Hunt, & Cox, 2015; Meneghetti Baratto et al., 2016; TJC, 2017a). Recent studies have demonstrated the use of the JCM in the healthcare setting, supporting a safety culture based on trust, error reporting, accountability, an environment free of blame, and a workplace committed to continuous systems (Pattison & Kline, 2015). Nurse leaders are obligated to create a just culture where nurses feel safe to report errors and engage in quality improvement (Vogelsmeier & Scott-Cawiezell, 2007). However, studies have recognized the challenges of maintaining a just and nonpunitive environment, which have contributed to the under-reporting of errors leading to further patient harm (Boamah et al., 2018; Edwards, 2018; Mjadu & Jarvis, 2018). Further, no empirical studies have indicated which specific attributes of nurse manager leadership styles most significantly contribute to maintaining a just culture based on trust and accountability at the unit level.

The 2010 publication of IOM, *The Future of Nursing*, indicated that nurse leaders play a pivotal role in maintaining safe and quality-driven nursing practices. Although nurse leaders are obligated to create a just culture where nurses feel safe to report errors and engage in quality improvement (Vogelsmeier & Scott-Cawiezell, 2007), a lack of

effective leadership is cited as one of the critical reasons for the difficulties in sustaining a positive safety culture that have coincided with an increase in adverse patient outcomes (Boamah et al., 2018).

The purpose of this quantitative, descriptive, correlational study was to (a) determine whether there was a relationship between the perceptions of nurse managers' transformational, transactional, and laissez-faire leadership styles and their units' just culture and (b) determine whether there was a difference between staff nurses' and nurse managers' perceptions of leadership styles and just culture. Multiple researchers have applied FLRT to demonstrate positive correlations between transformational and transactional nurse manager leadership styles and nursing outcomes such as unit safety, structural empowerment, nurse satisfaction levels, and organizational engagement (Boamah et al., 2018; Dorigan & Guirardello, 2017; Merrill, 2015; Negussie & Demissie, 2013; Yang & Yeh, 2018). The three constructs of FLRT, including aspects and behaviors corresponding to transformational, transactional, and/or laissez-faire leadership styles, were used as predictive variables in this study, and the JCM measured as the perception of just culture at the unit level was used as the outcome variable.

In this chapter, I describe the theoretical framework of the study followed by an analysis of the literature related to the key concepts of the study. I also present foundational and historical accounts of patient safety, patient safety culture, and the theoretical aspects of leadership styles and explain the significance of a just culture-based safety culture while emphasizing the critical need for effective leadership to sustain such

culture with focus on FRLT styles of transactional, transformational, and laissez-faire leadership.

Literature Search Strategy

The literature review included a systematic search of electronic databases including EBSCO, CINAHL, MEDLINE, ProQuest, PubMed, and Psych. I used a combination of key phrases critical to the discovery of the literature and research studies relevant to the background, purpose, theoretical framework, methodology, and research question of the study. The pertinent words used singularly and in combination included *leadership, organizational culture, healthcare leadership, leadership styles, transformational leadership, transactional leadership, charismatic leadership, authentic leadership, relationship based leadership, patient safety, patient safety culture, just culture, reporting culture, error reporting, nurse manager role, patient safety culture survey, leadership and patient safety, leadership and patient safety culture, leadership and just culture, punitive culture and leadership, punitive culture and error reporting, leadership punishment and reward, leadership styles and patient safety, leadership style and nurse manager, transformational leadership and nurse manager, transactional leadership and nurse manager, transformational leadership and nursing outcomes, transactional leadership, nursing outcomes, nurse leadership, nurse leadership and engagement, nurse leadership and staff satisfaction,* and *nurse leadership and empowerment*. For historical information on patient safety and leadership, I expanded the search to include articles from 1990 to 2019. I included peer-reviewed studies from the

last 5 years. The following sections of the chapter address the review of the literature related to the theoretical foundation and key concepts of the study.

Theoretical Foundations

I used the FRLT and the JCM to create a theoretical framework to describe the concepts, variables, and relationships constructed from the field of psychology in the context of patient safety. The constructs of the theoretical framework that guided this study included the transformational, transactional, and laissez faire leadership styles as well as just culture attributes (Avolio & Bass, 2004; Marx, 2001; Petschonek et al., 2013). The FRLT and JCM framework was used to analyze the relationship between transformational and transactional nurse manager leadership styles and the nurses' perception of a just culture at the unit level.

Full-Range Leadership Theory

The theory of FRLT originated from Burns's (1978) work on transformational and transactional leadership. Burns emphasized that leaders are either transformational or transactional and highlighted the difference between the two styles of leadership. Transformational leaders can inspire and motivate their subordinates to perform beyond their job expectations, whereas transactional leaders focus on establishing employee accountability and promoting compliance with organizational operations through incentives and punishment (Oberfield, 2014). Bass (1999) further expanded on Burns's (1978) theory, indicating that transformational and transactional leadership styles should not be considered mutually exclusive but rather a set of leadership behaviors that leaders exhibit based on specific circumstances and contexts. Avolio expanded on the concepts

and attributes leading to the development of the full complement of leadership characteristics explicit in FRLT (Avolio & Bass, 2004).

FRLT reveals a spectrum of leadership styles, indicating a positive relationship between effective leadership and transformational and transactional styles and a negative correlation between effective leadership and laissez-faire styles (Avolio & Bass, 2004). Effective leadership is defined by creating a successful workplace environment through inspiring, motivating, establishing professional relationships, and building trust. FRLT consists of eight effective leadership attributes and two ineffective leadership behaviors. The five characteristics of transformational leadership style are idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individual consideration (Avolio & Bass, 2004). Transactional leadership style is defined by contingent reward and MBEA. Additionally, there is laissez-faire leadership, which is characterized by two categories of passive-avoidant and MBEP (Avolio & Bass, 2004).

The FRLT theory explains that transformational leadership attributes, when balanced with transactional leadership behaviors, help leaders govern through inspiration and motivation while keeping employees compliant with regulations through contingent reward system and active management (Avolio & Bass, 2004). Leaders may periodically slip into laissez-faire and ineffective leadership styles, but high-quality leadership is gained from applying a combination of the transformational and transactional leadership styles on a consistent basis (Antonakis et al., 2003). Transformational leadership engages employees in the organization's mission and encourages synergy, innovation, and professional growth (Perko, Kinnunen, Tolvanen, & Feldt, 2016), helps create an

atmosphere where nurses feel empowered to speak up about safety concerns (Brunetto et al., 2016), and positively impacts nurses' perceptions of safety climate, management support, prioritization of safety, blameless culture, and worker safety (Merrill, 2015). Transactional leadership attributes complement the transformational leadership style by encouraging a high level of safety compliance through engagement of stakeholders, clarifying roles and responsibilities, and monitoring stakeholder practices (Clark, 2013; de Oliveira Rodrigues & Ferreira, 2015). Therefore, transformational and transactional leadership behaviors support the JCM by creating trust between leaders and employees while upholding employee accountability for their behavioral choices (Marx, 2001).

Avolio and Bass's (2004) FRLT has been used extensively in previous studies on the relationship between transformational and transactional leadership and nursing outcomes. For example, Negussie and Demissie (2013) found a positive correlation between transactional and transformational leadership styles and nurse job satisfaction. Boamah et al. (2018) published similar results which demonstrated a positive and significant correlation of nurse managers transformational leadership style and nursing staff's structural empowerment, which was found to be positively associated with job satisfaction. Manning (2017) also supported the notion that transactional and transformational leadership styles have a positive impact on nursing staff by showing a significantly positive relationship with staff engagement. Further, Farag et al. (2017) indicated that combined elements of transformational and transactional leadership styles have an overall positive impact on nurses' safety climate as transformational leadership was attributed to none-punitive response to errors; and elements of transactional

leadership led increased open communication, learning opportunities and adequate feedback from supervisors regarding mistakes. Thus, in situations where managers practice transactional and transformational leadership, employee perception of leadership trust and respect can be enhanced significantly (Yang, 2016). Synergistically utilizing transformational and transactional leadership styles may result in sustaining a just culture based on fairness or balance, and open communication, event reporting, feedback about events, and continuous improvement.

The Just Culture Model

The JCM was utilized in conjunction with FRLT to complete the framework for the study. According to Marx (2001), creator of the JCM, the model is focused on strengthening the organization's ability to reduce risk or harm and improve employee performance, which can create safer hospital systems. The JCM emphasizes leadership accountability to design safe systems and respond in a fair and just manner when negative events occur. Employee are also held accountable for their behavioral choices and for reporting hazards and adverse events to leadership (Pattison & Kline, 2015; Petschonek et al., 2015). To address unsafe behaviors that may contribute to patient harm, the JCM guides leadership in identifying the type of employee actions such as human error, risk-taking behaviors, and reckless behaviors associated with adverse events (Marx, 2001). According to Marx (2001), proper identification of employee behaviors help establish an environment of psychological safety where event reporting is encouraged.

Human error occurs when a systems issue or a lapse in a person's judgment lead to a mistake during care delivery (Marx, 2001). Leaders who console employee who

commit an error create trust and focus the attention on systems improvement (Rogers et al., 2017). Trust among leadership and employees help establish a culture based on fairness, open communication, and accountability for actions (YuKyung & Soyoung, 2017). To create an environment of trust, rather than blaming employees for their mistakes, leaders remain nonjudgmental and empower employees to engage in processes to prevent future errors (Cromie & Bott, 2016). The feedback loop between leadership and their employees mitigates system issues while managing unsafe behaviors (Marx, 2001). Leadership feedback and communication foster learning and accountability, keeping employees involved in organizational culture and continuous improvement.

Psychologically safe working units empower employees to report concerns and seek feedback (Derickson, Fishman, Osatuke, Teclaw, & Ramsel, 2015). Environments safe from both physical and psychological harm promotes a workplace where respect and transparency are promoted, and staff are engaged in continuous improvement (Morath, Filipp, & Cull, 2014). The JCM suggests that employees will start to feel safe to report mistakes and adverse events when leaders console employees and focus on improving systemic factors rather than applying punitive action in response to human error or mistakes (Marx, 2001). The evidence supports the role of consoling and motivating leadership behaviors in improving staff engagement in error and hazard reporting enabling the organization to improve their operations.

In a just culture, employees' risk-taking behaviors, defined as the act of circumventing established processes and systems without being fully aware of the negative consequences, is addressed through ongoing employee coaching, feedback, and

monitoring by managers (Marx, 2001). For example, practice drift is a phenomenon where care providers take shortcuts and bend the rules while caring for patients (Chastain & Burhans, 2018). Nurses may break protocol due to lack of time and workload, leading to not using proper protective equipment, breaking sterile barrier during a procedure, improper hand hygiene, or medication workarounds like not using the automated medication barcode scanning system or patient identification band system (Westphal, Lancaster, & Park, 2014). To adequately address risk taking behaviors, Marx (2001) suggests for unintentional rule violations managers should conduct ongoing coaching, education, surveillance of practice, and incentivization of appropriate behaviors rather than taking punitive actions. However, Marx (2001) promotes the use of punitive actions when employees are engaged in behaviors that lead to unjustifiable risks.

In a just culture, leadership response to reckless behaviors is just as critical to their response to human error and risk-taking behaviors. On the rare occasions where an individual knowingly disregards rules and regulations or engages in unjustifiable risks place patients and employees at risk, leaders and managers should take disciplinary actions to correct the behavior (Marx, 2001). In a just culture, the purpose of punitive actions is to deter employees from engaging in reckless behaviors in which they are consciously risking patients and staff safety (Marx, 2001). Although researchers have found correlations between staff perceptions of fear and blame and the under-reporting of errors (Poorolajal, Rezaie, & Aghighi, 2015); employees also appreciate leaders who use punishment to correct behaviors, but employees' trust is higher when the punitive measures are justified (Wang & Murnighan 2017).

The Framework of Full-Range Leadership Theory and Just Culture Model

The FRLT and JCM provided a framework to evaluate the relationship between transformational and transactional nurse manager leadership styles and the nurses' perception of a just culture environment at the unit level. The JCM encourages leaders to instill a sense of accountability for behavioral choices in their subordinates (Dekker, 2012). Moreover, the JCM requires shared accountability between leadership and employees' where leaders must provide safe systems and work environment for employees and employees are responsible for the decisions they make in their daily work (Marx, 2001). Therefore, leaders can use the JCM to promote a safety culture based on trust where there is shared accountability and open communication among leaders and staff, fostering ownership of patient safety practices. However, it is important for leaders to have the skills necessary to balance accountability and fairness and sustain a just culture (Dekker, 2012).

The FRLT describes the essential attributes of transformational and transactional leadership styles that managers can apply to lead their followers toward a just culture. The FRLT emphasizes the leadership attributes of idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, individual consideration, contingent reward and MBEA (Avolio & Bass, 2004). Idealized attributes are augmented by idealized behaviors transformational leadership behaviors where leaders prioritize their employees' needs, inspirational motivation attributes that instill optimism and motivation to exceed organizational expectations, and intellectual stimulation characteristics that encourage innovation, continuous improvement, and learning (Avolio

& Bass, 2004; Bass, 1999; Bass & Riggio, 2006). Transformational leadership can inspire motivation by articulating the reasons and for regulations; whereas transactional leadership attributes can further contribute to leaders' abilities to use contingent rewards to clarify expectations and performance goals and to MBEA to identify deviations from standard of care and correct the causes proactively (Bass & Riggio, 2006).

In the event of medical errors, leaders must find the root cause and implement innovative systems solutions with the involvement of their employees (Dekker, 2012). Additionally, humans are fallible (Reason, 2016), but transformational leaders can use specific behaviors, such as idealized influence, to show concern for an employee's well-being while maintaining employees' trust and pride in them and provide individual consideration and intellectual stimulation to engage the individual in problem-solving and coaching (Bass & Riggio, 2006). When a human error occurs, managers should take a nonpunitive approach, consoling employees who may feel a sense of loss from committing the error and evaluating potential system breakdowns (Marx, 2001). A leader who practices idealized attributes, idealized behaviors, inspirational motivation and intellectual stimulation can manage human errors by building trust, using empathy to address employees' needs, and inspiring continuous improvement and learning to prevent future adverse events.

Marx (2001) encouraged leaders to distinguish risk-taking behaviors from human errors, which involved circumventing hospital policies that would often lead to errors. To mitigate risk taking practices managers should use coaching, feedback, and proactive surveillance of practice. Transformational leaders that utilize individual consideration are

concerned about their employees' professional growth (Avolio & Bass, 2004; Bass, 1999; Bass & Riggio, 2006); therefore, they may have the inclination to use coaching and feedback when employees are engaged in unsafe and risk-taking behaviors (Marx, 2001). Transactional leadership qualities of contingent reward and MBEA allows nurse managers to actively monitor employees' performance, provide coaching, and use a reward system to encourage safe behaviors (Avolio & Bass, 2004; Bass, 1999; Bass & Riggio, 2006). Marx (2001) indicated leaders must recognize reckless behaviors and take punitive actions; through MBEA, transactional leaders use disciplinary actions to correct inappropriate behaviors. Therefore, nurse managers can manage at-risk behaviors using transformational and transactional leadership styles; and reckless behaviors using transactional leadership attributes.

Furthermore, FRLT clarifies the negative impact of laissez-faire leadership, on the organization. An laissez-faire manager is disengaged, avoids taking positions, refrains from solving problems, and does not display a sense of urgency (Bass & Riggio, 2006), leading to low levels of employee engagement and institutional mismanagement of errors. Marx (2001) discouraged passive leadership, which could result in poor perceptions of just culture. Therefore, nurse managers should utilize transformational and transactional leadership styles and avoid laissez-faire leadership styles to manage human errors, risk-taking behaviors, and reckless behaviors associated with adverse events.

The appropriate and consistent management of employees' behavioral choices may lead to a sustained just culture environment at the unit level (see Figure 1). I chose the FRLT and JCM frameworks for this study because they provided the most

appropriate leadership styles for implementing a safety culture. Furthermore, the FRLT and the JCM provided a strong foundation for research on nursing best practices and patient safety culture outcomes related to effective leadership among nurse managers.

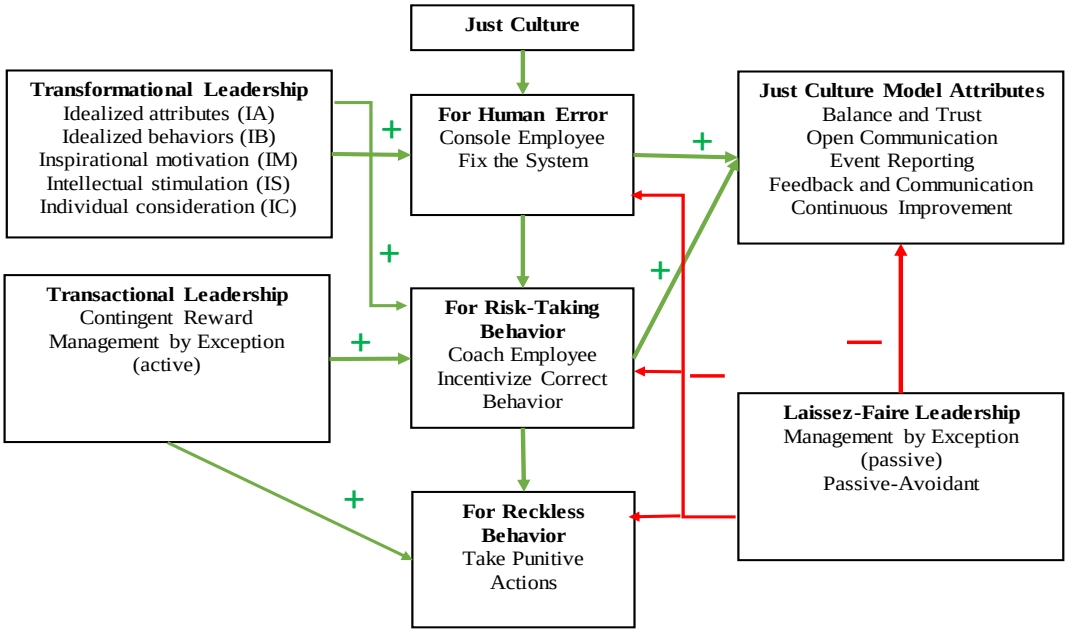

Figure 1. Transformational, transactional, and laissez-faire leadership styles and their effect on the JCM.

Literature Review Related to Key Variables and Concepts

Patient Safety and Impact of Medical Errors

Patient safety has become a central subject in healthcare demanding attention and prioritization during changes and discoveries in medicine that are taking place at an overwhelming rate nationally and globally. Patient safety in health care is defined as a system focused on prevention of injury and reduction of errors through the integration of

evidence-based practices and human factors (Kai & Lipschultz, 2015). The definition of evidence-based practice is the application of scientific evidence to practice; in contrast, human factors focus on the optimization of systems utilizing human behaviors, strengths, and weaknesses (Brower, 2017; Hignett & Wolf, 2016).

The evolution of patient safety came to prominence during the 1990s when there was a significant realization that hospitals are unsafe places due to multiple studies indicating that, despite advances in modern medicine, large numbers of patients were being harmed or dying from medical errors. Approximately a decade before the release of the IOM (2010) publication, Leape et al. (1991) conducted a study uncovering a significant number of preventable medical errors among 51 hospitals across the state of New York. Approximately 28% of errors were attributed to preventable events of negligence or a failure to follow the standard of care; such failures affected both surgical and non-surgical patients. Among the surgical patients, the highest errors included wound infections (14 %), technical failures (13 %), and late complications (11 %). Non-surgical patients experienced drug-related harm (19 %), diagnostic errors (8 %), and therapeutic errors (8 %; Leape et al., 1991).

Similarly, a study conducted in Utah and Colorado hospitals showed the impact of medical errors on patients' lives. The study concluded that 35 % of the adverse event cases in non-surgical patients and 16 % of errors in surgical patients were due to negligence in care. On the average, 45 % of adverse events were attributed to mishaps in surgical procedures with medication errors (19 %) leading the cause of patient harm in non-surgical patients (Thomas et al., 2000). In 1997, healthcare reform efforts in the

United States included an executive order for the formation of an Advisory Committee on Consumer Protection and the Quality in the Health Care Industry. In 1999, the IOM Committee on Quality of Health Care in America published *To Err is Human*, which showed approximately 98,000 deaths were occurring annually in the United States, and over 50 % were attributed to preventable events (Kohn et al., 2000). The commonalities in research studies showing the inevitable nature of medical errors supported the Advisory Committee on Consumer Protection and the Quality in the Health Care Industry's (1998) findings that the top priorities for healthcare reform must be the establishment of patient safety and the concentration of healthcare efforts on error reduction.

Despite the increased focus on patient safety throughout the decades, preventable medical errors continue to claim 250,000 to 400,000 lives in the United States annually (Makary & Daniel, 2016). As a result, scholars have published multiple studies focused on patient safety and error reduction. Surprisingly, studies published in recent years provided similar results to the studies conducted by Leape et al. (1991) and Thomas et al. (2000). Classen et al. (2011) examined the frequency of adverse events in three tertiary hospital settings that reported medication errors, procedural errors, and hospital-acquired infections as the top three causes of preventable patient deaths. The trend of comparable findings continued with later studies including Ferreira et al. (2018) who revealed that medication-related errors (30%), pressure injuries (21%), unplanned extubations (17%), and infections (15%) accounted for a significant number of adverse events among intensive care patients. Nurse-sensitive adverse events are mostly considered preventable

events and have been linked to increased healthcare costs and increased lengths of stay. Such events include pressure ulcers, falls, medication administration errors, pneumonia, and urinary tract infections (Tchouaket, Dubois, & D'Amour, 2017). Findings in these studies indicated that medical errors continue to stem from the failed interactions between patients and interventions of healthcare professionals within the healthcare system.

Hindering the progress in harm prevention were the inconsistencies among leaders relating to how causes of harm were identified and managed and, more specifically, a lack of knowledge regarding errors due to minimal error reporting practices among their staff. The challenges to error management were significant in situations of preventable harm which Kizer, a quality healthcare expert introduced as "never events" that should be eliminated from healthcare (Nabhan et al., 2012); such events are deemed by Medicare as non-reimbursable care (Lembitz & Clarke, 2009). According to James (2013), preventable adverse events in the hospital setting are caused by (a) errors of commission such as providing the wrong treatment, (b) errors of omission such as inadvertently withholding treatment, (c) errors of communication or failure to exchange critical information between two providers or between provider and patient, (d) errors of context or inability to account for patients ability to adhere to treatment, and (e) diagnostic errors such as missed or mistaken diagnoses. Healthcare professionals who are uncomfortable reporting errors of omission, communication, or misdiagnosis are less likely to alert their leaders of an adverse event due to fear of blame and reprimand (Benedicto, 2017). Researchers indicated that under-reporting of medication errors range from 25% to 75% (Hutchinson, Sales, Brotto, & Bucknall, 2015). Furthermore,

employees who are not empowered and do not have a healthy relationship with their supervisors are less likely to engage in practices necessary for improving their workplace (Ulrich & Kear, 2014). Therefore, a significant number of adverse events may continue to exist in the healthcare system unnoticed and unmitigated, causing further patient harm.

To mitigate the causes of medical errors, Kohn et al. (2000) first had to capture the attention of healthcare leaders and politicians by declaring medical errors as the eighth-leading cause of death. To eliminate injury and death from medical mistakes, Kohn et al. (2000) published specific recommendations, several of which were based on an analysis of safety culture. Patient safety culture has been linked to increases in reporting behavior and identification of errors and has led to a reduction in patient harm (Ulrich & Kear, 2014; YuKyung & Soyoung, 2017; Xie et al., 2017). The authors proposed a call to action designed to address the national epidemic of medical errors which required healthcare leaders to establish a foundation of a positive safety culture (Kohn et al., 2000). The goal of a safety culture is further described in the next section.

Patient Safety Culture

Organization leaders must establish a process that invites leaders, practitioners, and patients to learn from errors and mitigate future harm to promote patient safety and reduce errors. Patient safety systems should foster positive behaviors, attitudes, teamwork, communication, civility, and leadership commitment while fomenting organizational safety culture (Meneghetti Baratto et al., 2016; Roche, 2016). Although scholars agreed with the Advisory Committee on Consumer Protection and the Quality in the Health Care Industry (1998) regarding the prioritization of patient safety and error

reduction, there was no proposed standardized methodology to accomplish either goals nationally. Kohen et al. (2000) recognized the gap in sustainable safety interventions; their IOM *To Err is Human* report introduced patient safety culture as a foundational prerequisite of patient safety and error reduction in healthcare.

A positive patient safety culture is defined by individual and collective behaviors, values, and attitudes, both of leaders and employees, that support the organization's ability to operate using best practices, safe systems, trust and open communication, fairness, while reporting safety events to foster continuous improvement and learning (Boussat et al., 2018; Reason, 2016). In a positive safety culture, healthy norms, typology (leadership style), practice standards, and regulatory policies shape the clinical and administrative operations at the organizational and patient care delivery levels (Leitão & Greiner, 2017; Petitta et al., 2017; Sherwood, 2015). Organizations that value safety and quality establish a safe environment when there is a higher degree of beliefs and values shared by leaders and employees (Petitta et al., 2017). Therefore, a safety culture requires the collective efforts from all individuals working in the organization to make the provision of healthcare safer for patients and employees.

Industry sectors such as the aviation and the nuclear power industries have demonstrated the significant effect of positive safety culture in reducing errors and fatalities due to system failure and dangerous human behavior (Haerkens et al., 2015; Hussain et al., 2016). A positive patient safety culture has been linked to a higher rate of employee willingness to report safety events, effective communication and teamwork, improved patient outcomes, and staff and patient satisfaction. Employee participation in

reporting of errors and adverse events to leadership is fundamental to an organization's ability to identify and learn from hazardous situations as well as its ability to mitigate and eliminate future patient harm (Yoo & Kim, 2017). Furthermore, organizational learning requires teamwork, employee engagement, and effective communication throughout the organization. These activities have been associated with increased staff satisfaction (González, Fernández, & Rodríguez, 2019; Sharma, Lampley, & Good, 2015). The positive correlations between teamwork, engagement, communication, and staff satisfaction could further explain study outcomes that have shown organizations with a healthy patient safety culture to excel in the contexts of patient outcomes and patient satisfaction.

Smith, Yount, and Sorra (2017) conducted a study comparing patient safety culture survey scores with hospitals patient outcome and patient satisfaction scores. The results of the survey showed that higher safety culture scores in feedback and communication about errors, communication openness, management support of patient safety, overall perceptions of patient safety, and teamwork were associated with lower hospital-acquired infections and higher patient satisfaction regarding communication about medication and discharge ($p < .05$). Findings forwarded by Smith et al. (2017) were corroborated by a Xie et al. (2017) study aimed at evaluating the impact of a patient safety training program for nurse managers. The results showed a significant increase in patient safety culture scores for nurse managers six months after training and a significant decrease in pressure ulcer rates and fall rates ($p < .05$). Additionally, a YuKyung and Soyoung (2017) study indicated that there was a significantly positive association

between a high level of nursing staff's patient safety culture perceptions and staff commitment to report errors to management ($p < .001$).

YuKyung and Soyoung's (2017) study was supported by Yoo and Kim's (2017) findings that showed a significant positive correlation between safety culture within units ($p < .001$) and communication of patient safety ($p < .01$) and attitudes toward incident reporting by nurses. Furthermore, in a qualitative study, all of the physician and nurse participants shared that their fear of blame and shame deterred them from reporting adverse events due to the negative patient safety culture. The researchers noted a theme of a decrease in the participant's likelihood to report incidents due to their experiences of receiving negative or no feedback from management and feelings of incompetence and embarrassment when engaged in reporting (Soydemir, Seren Intepeler, & Mert, 2017). Negative experiences, inappropriate input from leadership, and the lack of a safety culture lead to undesirable attitudes, perceptions, and behaviors toward reporting safety errors (Breathnach et al., 2011; Yoo & Kim, 2017). Therefore, it is critical to establish a positive patient safety culture to move toward a system that prioritizes patient safety and error reduction in an era where preventable deaths from medical error continue to rise. A model of just culture that promotes the attributes of a positive patient safety culture such as balance or fairness, trust and open communication, event reporting, employee feedback about events, and continuous improvement are discussed in the following section.

Just Culture

Just culture is a model that has been used to create shared values, behaviors, and beliefs among supervisors and their employees. The JCM has gained increased support and promotion by national organizations, such as the IOM (2010), TJC (2017a, 2017b), and ANA, as well as scholars who promote the notion of a positive safety culture as one that is grounded by the balance of accountability between individuals and systems (Aveling, Parker & Dixon-Woods, 2016). Furthermore, a just culture strengthens the organization's ability to use best practices, maintain safe operations, and manage errors objectively and fairly to create and maintain a positive culture (Petschonek et al., 2013). In a just culture, leaders create balance, fairness and trust; establish employee and leadership accountability; promote incident reporting; and model open communication and feedback (Marx, 2001; Pattison & Kline, 2015; Petschonek et al., 2013). The evidence supports the need to implement JCM in hospital settings to improve patient safety processes.

Creating balance or fairness and trust. The JCM is focused on addressing systems issues while managing unsafe behaviors (Marx, 2001). In a just culture, balance and trust are established through the balance of employee accountability for behavioral choices and leadership accountability to provide a safe healthcare system and workplace environment (YuKyung & Soyoung, 2017). To manage risky behaviors, the JCM guides leadership in identifying the type of human actions such as human errors, risk-taking behaviors, and reckless behaviors associated with adverse events to appropriately address the incident (Marx, 2001). A just culture encourages leaders to conduct a thorough

investigation of errors including input from individuals involved in the adverse event and their peers to avoid bias and prejudice, to ensure fairness, and to eliminate assumptions (Cromie & Bott, 2016). Marx (2001) encouraged the use of just culture algorithms, standardized tools that assist leaders in evaluating whether an error was due to a human error, risk-taking behavior, or reckless behavior. However, Cromie and Bott (2016) and Dekker (2012) argued that the use of the algorithm limits the leader's ability to view the incident from a multidimensional perspective and could lead to a premature assignment of culpability without complete investigation of the facts. Regardless of whether a decision-making algorithm is used, the leader's actions are more significant in maintaining fairness and objectivity, encouraging open communication, and engaging staff in systems improvement when investigating errors.

Human error is the most significant contributing factor to adverse patient events and often stems from systems issues that require leadership interventions such as staffing, inadequate training, and time pressures (Nezamodini, Khodamoradi, Malekzadeh, & Vaziri 2016). A just culture supports a learning organization by shifting the priorities from individual blame and correction to systems thinking (Marx, 2001). Nezamodini et al. (2016) reported that, among intensive care unit nurses, fatigue caused the highest rate of human errors (21%) followed by inadequate knowledge (14%). A study evaluating medical device operating errors found that a majority of human errors were due to a lack of sufficient knowledge, failure to comply with standards, or usability challenges, all of which were exacerbated by factors such as heavy workload (Jin et al., 2016). The JCM

highlights that human errors are often symptoms of other problems and not simply causes of negative events (Dekker, 2012).

Appropriate management of human error creates an environment of trust and fairness where employees feel safe to report incidents and speak up about unsafe conditions before patients are harmed (Marx, 2001). Therefore, effective leadership skills are critical in addressing human errors that often stem from systemic issues such as staffing, inadequate training, and time pressures. In a just culture, leaders need to have the skills to console the individual involved in a human error and to engage in innovative solutions required to improve the system that lead to the error in the first place (Marx, 2001). Additionally, the JCM encourages leaders to enforce accountability when employees are engaged in at-risk or reckless behaviors (Dekker, 2012).

Promoting accountability. Accountability requires defining acceptable and unacceptable behaviors while examining underlying contributory factors resulting in errors (Cromie & Bott, 2016; Sherwood, 2015). Leaders must understand that accountability does not equate to blame. Accountability is being responsible for one's actions whereas blaming is assigning culpability and wrong-doing (Dekker, 2012). The accusation of individuals ironically leads to a decreased level of employee accountability and encourages a reluctance to report errors or negative safety events (Soydemir et al., 2017). Accountability thrives in an environment where leaders communicate clear guidelines and expectations and employees are knowledgeable about their roles and responsibilities (Aveling, et al., 2016). Holding individuals accountable only works when those individuals are encouraged and given the authority to be part of designing and

regulating their work unit; accountability works when employees feel a sense of ownership regarding the outcomes of their decisions (Dekker, 2012). Therefore, accountability requires leaders to apply their motivational and empowerment skills to discourage employees from risk-taking behaviors, engage employees in quality improvement and mindfulness regarding the choices they make on a daily basis.

In a just culture, leaders promote accountability through the use of coaching and mentoring when employees are engaged in risk-taking behaviors. An example of risk-taking behaviors includes circumventing procedures and taking shortcuts to do a job quickly and efficiently, perhaps unaware of the potential risks (Marx, 2001). Coaching is a powerful tool that has been successfully used to engage nurses in evidence-based practice (Friesen, Brady, Milligan, & Christensen, 2017), to improve hand-off communication (Herawati, Nurmalia, Hartiti, & Dwiantoro, 2018), and to increase patient safety culture (YuKyung & Soyoung, 2017). YuKyung and Soyoung (2017) found a positive correlation between nurse managers' application of coaching behaviors and increased patient safety culture perceptions of nurses ($p < .001$). Therefore, nurse managers need to have the skills to manage risk-taking behaviors by providing nurses with timely feedback, education about potential hazards, and opportunities to make practice changes in their work units to promote a just culture environment.

Even in a just culture where there is a balance between accountability for actions and a systemic approach to error management, it is not possible to address all errors using consoling and coaching. Leaders need to apply punitive actions against employees who disregard known risks and engage in reckless behaviors (Marx, 2001). Reckless or non-

tolerable behaviors should be defined by the leadership and communicated to the employees to set the desired expectations in the workplace (Page, 2007). Punitive actions are reserved for disruptive or inappropriate behaviors to maintain a culture of trust and open communication about errors. Disciplinary actions are needed when disruptive behaviors in healthcare settings create perceptions of injustice that affect the working relationships of among team members (Afzali, Nouri, Ebadi, Khademolhoseyni, & Rejeh, 2017). Most importantly, inappropriate behaviors negatively impact patient care and team morale (Rosenstein, 2013). Therefore, the use of a JCM will enable leaders to take the appropriate actions to discourage reckless and risk-taking behaviors while promoting safe behaviors that lead to quality patient care.

Incident reporting practices. Establishing a learning culture requires open communication and psychological safety, where nurses are encouraged to report events. Psychological safety is an essential component of a safety culture and is determined by one's perception of the acceptability of speaking up among team members or within their work environment (Jones & Durbridge, 2016). Healthcare organizations where employees feel psychologically safe have a higher probability of staff reporting hazards or safety concerns.

Organizational leaders will not be able to detect patient safety events without creating an environment of psychological safety where event reporting is encouraged. Researchers have found that a lack of peer support, individual's attitudes toward medical errors, and fear of consequences may influence under-reporting (Poorolajal et al, 2015). A significantly low level of reporting of adverse events (4-50%), impedes the

organization's ability to apply improvement methods such as root cause analysis to fix systems issues including poor culture, lack of protocols, and lack of communication structures (Breathnach et al., 2011; Perotti & Sheridan, 2015). The JCM promotes incident reporting through the establishment of trust-based relationships in which employees understand that leaders will not hold them accountable for system failures. Therefore, in a just culture environment, reporting of safety events is encouraged to allow the organization to improve its care delivery system continually.

Open communication and feedback. A high percentage of safety events are attributed to a breakdown in communication between the interdisciplinary team members; between professionals and patients and family members; and between professionals from different care settings or services (Jones & Durbridge, 2016; TJC, 2017a). Poor communication leads to mismanagement of patient care including failure to follow up, failure to provide appropriate and timely treatment, failure to provide proper patient education, and failure to manage patient risk factors (Jones & Durbridge, 2016; Oren et al., 2018). Open communication and feedback keep employees engaged and aligned with organizational safety priorities, values, beliefs, and an organizational mission (Al-Nawafleh et al., 2016; Meneghetti Baratto et al., 2016).

Just culture promotes open communication (Marx, 2001) and asserts that leaders' ability to effectively communicate organizational priorities using multiple modalities will foster staff buy-in and adherence to hospital procedures and protocols (Dharampal, Cameron, Dixon, Ghali, & Quan, 2016). Buluş, Atan, and Sarıkaya (2017) defined effective communication skills to include active-participative listening. In a just culture,

leaders play a critical role in communicating unit level priorities; shared safety values will guide practices by positively influencing staff behaviors.

Systemic focus on quality improvement. In a just culture, leaders must remain vigilant to identify and mitigate systemic issues proactively. Just culture encourages an organizational commitment to patient safety by providing appropriate resources to prevent professionals such as nurses from performing workarounds or experiencing inadequate staffing. Healthcare leaders must be able to balance cost efficiency with high-reliability systems and operations (Archibald, 2017).

Additionally, the investigation of human factors helps to determine the contributory factors of safety events involving professionals, equipment, technology, the environment of care, and organizational systems (Mitchell, Williamson, & Molesworth, 2016). Human factors are defined as the designing of systems and technology considering the end-user's ability and limitations to safely, effectively, and intuitively implement the use of the technology or systems in the intended environment (Henriksen, Dayton, Keyes, Carayon, & Hughes, 2008). Human factors have become increasingly essential as healthcare technology has advanced with the introduction of safety systems such as smart intravenous pumps, decision support technology, electronic medical records, simulation-based teaching, and team training (Bae, Rask, & Becker, 2018; Klipfel et al., 2014). In a just culture, leaders are held accountable for their responsibilities in investing in highly reliable systems, human factors, and staff training to ensure quality care and prevention of patient harm.

Leadership and Safety Culture

The importance of leadership in establishing a just and safe culture cannot be underestimated (Kohn et al., 2000; TJC, 2017a). Leadership is a complex topic that scholars have explored throughout history by studying what drives a person to emerge as a leader and what constitutes an effective leader (Chan & Drasgow, 2001; Conger, 1989; Conger & Kanungo, 1994). Effective leadership styles such as transformational leadership have been associated with promoting employee engagement (Manning, 2017), a positive safety climate (Merrill, 2015), reduction of staff burn-out (Lewis & Cunningham, 2016), and improved patient outcomes (Boamah et al., 2018). Therefore, it is also essential to explore the concept of leadership and leadership styles to understand the type of managerial leadership characteristics that are conducive to creating an atmosphere of fairness and trust, feedback, event reporting, open communication, and continuous quality improvement.

Evolution of Leadership Styles

The historical context and the evolution of the theoretical foundations of leadership need to be explored to understand the intricacies of leadership. Throughout the centuries, scholars and theorists have debated and discussed the characteristics that make a leader. There are multiple and diverse leadership styles described in the literature, but the single commonality among all leaders is that they need dedicated followers (Vroom & Jago, 2007). Followership, which is fostered through healthy partnerships, has gained increased attention as the antecedent of effective leadership. Followership is defined as an employee's willingness to cooperate and follow a leader toward achieving a common

goal and as belief in shared responsibilities for the quality of work outcomes (Bjugstad, Thach, Thompson, & Morris, 2006). Scholars have researched the impact of five major leadership theories on followership extensively throughout the decades including the great man, trait-based, behavioral, relationship-based, and transactional, as further discussed in this section.

The great man theory. In the 19th century, Thomas Carlyle, a philosopher, contributed the great man theory of leadership which proposed the notion that effective leaders are individuals with unique traits that enable them to rise above others and become natural leaders (Kirkpatrick & Locke, 1991). Leadership was considered to be an inherently innate talent, a birthright, and a permanent skill. Due to the development of the great man theory, in the early twentieth century, many scholars in behavioral science were engaged in research studies evaluating personality traits, characteristics, and intellectual abilities of leaders (Cawthon, 1996).

Trait-based theories. There was an evolution from the great man theory toward theories of trait and behavior as many scholars believed that leadership could be acquired through knowledge and developed through experience. However, some theorists still believed and held on to the notion that leaders were born (Cawthon, 1996). In contrast to the great man theory, theories of trait focused on a person's ability, characteristics, and behaviors without distinguishing whether traits can be learned or are innate. However, researchers were challenged in finding correlations of specific traits and attributes to effective leadership (Van Seters & Field, 1990). Researchers began to advance their use of aptitude tests at the beginning of the twentieth century to show the correlation between

intelligence and effective leadership (Vroom & Jago, 2007). However, scholars continued to study and challenge the claims that effective leaders have certain personality traits through the exploration of other non-aptitude traits that may predict leadership behaviors.

Stogdill (1975) conducted a meta-analysis and contradicted previous studies that indicated personality trait could be a determinant of an effective leader. The meta-analysis showed that higher intelligence correlated with effective leadership, but the findings did not support the notion that leadership traits define effective leaders. Stogdill's review of 124 studies revealed a grouping of characteristics, behaviors, and abilities could not be used reliably to differentiate leaders from their followers (Vroom & Jago, 2007). Mann's meta-analysis report corroborated Stogdill's (1975) findings concluding that there were no strong relationships found between leadership traits and characteristics and effectiveness (Mann, 1959).

In contrast, Lord, de Vader, and Alliger (1986) argued that Stogdill's (1975) review was misconstrued, littered with methodological artifacts and overgeneralizations of the research studies that dealt with subordinate perceptions of leadership rather than leadership traits and the impact on leadership effectiveness. Lord et al. (1986) conducted a meta-analysis evaluating the relationship between personality traits and leadership perceptions. The results showed multiple traits including intelligence, dominance, and masculinity-femininity were significantly associated with followers' perceptions of leaders. Six prominent traits that differentiate leaders from non-leaders included ambition and desire to lead, integrity, confidence, intelligence, and knowledge of leadership (Kirkpatrick & Locke, 1991). Therefore, traits alone may not predict the effectiveness of

a leader but need to be considered as part of what distinguishes a leader from a follower. The culmination of the studies on leadership and traits propelled the concept of leadership as a behavioral phenomenon.

Behavior-based theories. Researchers began to highlight the behavioral aspects of effective leaders by studying perceptions of subordinates regarding their leaders' attributes (Lord et al., 1986). Hemphill (1949) suggested the social situation was just as important as the leader's characteristics, including awareness of followers needs, being considered as part of the group, and being viewed as a high achiever. Hemphill (1949) developed a leadership measurement tool that included situational factors and personal characteristics of a leader. The research findings correlating behaviors with leadership led to researchers exploring the actions of effective leaders associated with their practices.

Various researchers debated the role of behavior in leadership and variations in relationships between leadership styles and the indicators that determine leadership effectiveness began to emerge. The most common researched theories were behavioral theories such as House's path-goal theory of leadership that focused on the relationship between leaders and followers including the leader's ability to fully engage followers in organizational priorities. House's path-goal theory predicted that leadership behaviors that motivate and increase employee satisfaction lead to effective leadership outcomes (House & Mitchell, 1975). Similar to Hemphill (1949), House's path-goal theory is focused not on leadership power but on how leaders can best serve their employees through motivation, coaching and guidance (House & Mitchell, 1975). Hemphill (1945) and House and Mitchell (1975) did not emphasize leadership traits alone, but they

stressed how the actions of leaders would influence the behaviors of their subordinates. The deliberate actions of leaders continued to be recognized as an essential part to gaining employee commitment and accountability toward achieving an organizations vision and goal as further described in the relationship-based theories below.

Relationship-based theories. In the leadership and social science literature, there was a shift from investigating who becomes a leader to how a leader adapts to and performs in different circumstances (Hollander, 1992). Thus, leadership theories that highlighted relationship-based leadership continued to develop such as transactional and leader-member exchange theory. Hollander (1992), in his transactional leadership model, emphasized the active role of the follower and the need for meaningful exchange where leaders provide guidance and incentives while followers perform according to the leader's expectations. (Graen and Ginsburg as cited in Brower, Schoorman, & Tan, 2000) developed a similar model, the leader-member exchange theory, which posited that effective leadership is built on trust, integrity, and the level of performance between leaders and members.

However, leader-member exchange introduced a different phenomenon to the current theories noting that leaders do not treat all employees equally. Employees who are "in group" or are trusted, as well as high performers, receive greater empowerment and opportunities for professional growth. Over time, the relationship and the perceived trust between leaders and employees continue to grow and stabilize, increasing employee commitment and followership, and decreasing resistance to change (Brower et al., 2000). Therefore, transactional and leader-member exchange theories emphasized the value of

positive exchange between leaders and followers; such models suggested that leaders relied on trust, incentives, and integrity to influence their followers to achieve a common goal rather than a punitive approach for compliance.

The theoretical bases of the influential power of leadership through building relationships with their followers has furthered the scientific knowledge of the phenomenon of leadership. Relationship-based leadership refutes the idea that leaders are born with unique traits and abilities and promotes the idea that effective leadership characteristics can be learned and adapted. The movement behind skill based effective leadership styles brought new theories that gained momentum in the 1980s. These theories emphasized the leader's ability to be charismatic, transformational, innovative, and visionary (Bass, 1999).

Transformational-based theories. Since the early 1990s, most researchers have focused on the theories of charismatic, transformational, and authentic leaders and have shown the positive association with organizational outcomes and leadership effectiveness. Burn (1978) regarded transformational leadership as an augmentation of transactional leadership enhancing employee followership and commitment to leadership, indicating that transformational leaders achieve greater outcomes as change agents who also have transactional leadership skills. Authentic leaders are self-aware, value honesty, stand for social justice, and act according to their values (Avolio & Gardner, 2005; Bass & Steidlmeier, 1999). Authentic leadership ideals may promote transactional and transformational leadership through the benefits of truthfulness and openness that create positive relationships with followers (Milić, Grubić-Nešić, Kuzmanović, & Delić, 2017).

The measurement of transformational and transactional leadership outcomes should include social change through the ability to meet employee needs and expectations (Burns, 1978).

The five foundational authentic principles of transformational leadership include idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individual consideration (Bass, 1999; Bass & Steidlmeier, 1999). Charismatic leadership is a similar theory where leaders use the influence of magnetism, especially during the time of chaos. Charisma is associated with characteristics of self-confidence, sensitivity to others' needs, drive to achieve, risk-taking behavior, and visionary leadership (Conger, 1989). Transformational leaders are also considered to be charismatic leaders with the ability to share their vision and connect with their followers at a deeper level (Hollander, 1992).

Transformational leaders encourage teamwork among their employees and within the organization. Transformational leaders use inspiration to create a more profound sense of organizational commitment in their employees. Motivational techniques used by transformational leaders include promoting innovation and open dialogue with their employees, creating a safe atmosphere to learn from mistakes, and allowing employees to explore and implement innovative ideas for quality improvement (Sarros, & Santora, 2001). Employee motivation leads to high levels of engagement where employees achieve higher than expected results in their workplace. Coaching techniques include providing individualized guidance and constructive feedback (Bass, 1999).

Transformational leaders are focused on coaching, mentoring, and inspiring their subordinates enhancing their performance and thus creating a culture of safety.

Leadership Styles to Promote Positive Nursing Outcomes

Since the 1990s and early 2000s, a growing number of research studies have shown how the theories based on leadership styles of intellect, charisma, inspiration, and motivation were correlated to positive organizational outcomes at an opportune time where issues with safe medical care reached a crucial point in history. The literature review showed a higher number of nursing leadership research focused on the effects of transformational and transactional leadership styles on nursing related outcomes and mostly driven by the FRLT. Leaders should embody both transformational and transactional leadership skills to manage various situations that require motivating and communicating the vision (transformational), as well as monitoring work performance and outcomes (transactional; Bass & Avolio, 1998). Researchers with the use of MLQ leadership style measurement tool, identified the importance of utilization of both transformational and transactional leadership styles by nurse managers to promote high levels of employee performance which is further described in the following paragraphs.

Lindholm, Sivberg, and Udén (2000) found nurse managers who displayed characteristics of a transformational and transactional model reported experiencing less management problems and had more acceptance and confidence in their management approach affecting nursing practice. Recent studies have continued to highlight the importance of the synergistic use of transformational and transactional leadership styles for nurse managers. Farag et al. (2017) discovered that high perceptions of

transformational and transactional leadership were correlated with a positive safety climate attributes, such as open communication, teamwork, and appropriate management safety actions ($p < .001$). Additionally, the researchers found that a positive safety climate highly correlated with safe medication administration practices ($p < .001$) and nurses' willingness to report medication errors ($p = .03$; Farag et al., 2017). Similarly, Merrill (2015) explored the link between nursing leadership styles of transformational, transactional and lasses-faire and safety climate elements. The results showed a significant positive correlation between transformational leadership style and transactional leadership style and safety climate elements including management and pharmacy support, socialization and training, safety emphasis, and employee safety ($p = .01$); except for blameless culture which had a positive correlation with both leadership styles, but only transformational leadership showed statistically significance ($p = .05$). Laissez-faire leadership style had a negative correlation with all aspects of safety climate ($p = .05$; Merrill, 2015).

Hu et al. (2016) corroborated the above research indicating surgeon leaders transformational and transactional leadership style were positively correlated with staff's ability to speak up and the surgical teams' willingness to share information which is critical for operating room safety; and the correlation with transformational leadership was found statistically significant ($p < .001$). Information sharing ($p < .001$) and speaking up culture was found negatively correlated with surgeons who displayed laissez-faire leadership style (Hu et al., 2016). Therefore, both transformational and transactional leadership styles are necessary for leaders to maintain a positive safety climate and

quality patient outcomes. Additionally, researchers also showed the influence of transformational and transactional leadership styles on nurse satisfaction, engagement, bullying and burnout which could affect the nurse's ability to provide quality care.

Researchers have explored the role of transformational, transactional, and laissez-faire leadership styles in reducing negative outcomes such as bullying, burnout, and emotional distress. In analyzing the role of leadership in deterring bullying behaviors at work, Mills, Keller, Chilcutt, and Nelson (2019), found a negative correlation between bullying and transformational and transactional leadership. Hospital staff including nurses who rated their nurse leaders as transformational leader reported experiencing the least amount of bullying behaviors in their unit ($p < .001$) followed by transactional leadership ($p < .001$). Transformational leadership accounted for a higher percentage (22%) of the variance in the reduced bullying behaviors experienced. Laissez-faire leadership had the least impact in deterring bullying behaviors, indicating the criticality of transformational and transactional leadership styles in creating an environment of civility and professionalism. The negative behaviors or bullying are inversely related to quality of care ($p < .001$) and positively correlated with errors and adverse events ($p < .001$; Purpora, Blegen, & Stotts, 2015). Transformational leadership has also been negatively correlated with emotional exhaustion and depressive symptoms among psychiatric nurses ($p < .05$; Madathil, Heck, & Schuldberg, 2014). Therefore, nurse supervisor leadership behaviors that are transactional and transformational promote nurses physical and psychological health related to their workplace. Transformational and transactional leaders can create a positive work environment which leads to positive

patient and staff outcomes. Furthermore, researchers have proven that leaders with transformational and transactional leadership styles create an environment of professionalism, staff satisfaction and workplace engagement.

Negussie and Demissie (2013) used the FRLT framework to evaluate the correlation between transactional and transformational leadership styles and nurse intrinsic job satisfaction (recognition, advancement, and responsibility) and nurse extrinsic job satisfaction (salary, supervision, and work conditions). The study identified a significant positive correlation between the nurse managers transactional and transformational leadership styles and nursing staff intrinsic and extrinsic job satisfaction ($p < .001$). Laissez-faire leadership style had a negative relationship with intrinsic and extrinsic nurse staff satisfaction ($p < .05$). Boamah et al. (2018) published similar results demonstrating transformational leadership styles of nurse managers had a significant positive relationship with nurses' structural empowerment ($p < .001$), which then had a significantly positive correlation with job satisfaction ($p < .001$) and negative correlation with adverse events ($p < .05$). The study emphasized that nurse managers that apply transformational and transactional leadership skills can increase nursing staff structural empowerment which improves job satisfaction and reduces the incidents of adverse events (Boamah et al., 2018). Structural empowerment is essential for achieving staff nurse satisfaction, retention, and organizational commitment, and Khan, Griffin, and Fiszpatrick (2018) reiterated in their study that transformational leadership ($p < .001$) and transaction leadership styles ($p < .001$) had a moderately positive correlation with staff's perception of empowerment, whereas laissez-faire leadership was negatively correlated

($p < .001$). Staff engagement was found to have a correlation with increase patient safety culture scores ($p < .001$; Amiri, Khademian, & Nikandish, 2018). Manning's (2017) research also supported the findings that transactional and transformational leadership styles have a positive impact on nursing staff by showing a significantly positive relationship with staff engagement of vigor, dedication, and absorption ($p < .001$). Therefore, research supports FRLT which emphasizes that nurse managers success is based on their ability to recognize situations that can be best resolved by using either transformational or transactional leadership styles; and their efforts to avoid laissez-faire leadership behaviors.

The 2010 publication of IOM, *The Future of Nursing*, indicated that nurse leaders play a pivotal role in maintaining safe and quality-driven nursing practices. Additionally, leaders who are committed to a positive culture and safety promote error reporting and work with frontline staff to improve systems and eliminate harm (Kanerva, Kivinen, & Lammintakanen, 2017). Nurse managers' commitment to safety is integral as part of middle management leadership for members who influence and are positioned to lead safety at the point of care delivery (Feng et al., 2008). The JCM specifies that trust and balance or fairness is established when employees feel they can openly report adverse events and contribute improvement solutions; employees are not blamed for human errors; employees receive re-training and coaching for at-risk-behaviors; and punishment is reserved only for reckless behaviors or intentional disregard of risks (Marx, 2001). To fulfill the nurse leader role in establishing a just culture at the unit level, nurse managers

must utilize appropriate leadership styles to create an environment of fairness and trust, feedback, open communication, and continuous quality improvement.

Transformational and transactional leadership stimulate behavioral change in employees to produce an alignment of employee actions and organizational goals (Bass, 1999). In an environment where managers practice transactional and transformational leadership, it is theorized that employee perception of leadership trust and respect is enhanced significantly (Yang, 2016). The key for a sustainable, just culture is fairness and accountability (Marx, 2001). The level of leadership trust is often influenced by the leader's display of fairness, integrity, and commitment (Yang, 2016). Additionally, nurse leaders' function as role models of safe behaviors and are influential in nursing care delivery at the bedside (Salmela, Koskinen, & Eriksson, 2017). Studies have suggested that transformational and transactional leadership styles promote relationship building, accountability and engagement resulting in increased employee work satisfaction (Negussie & Demissie, 2013), positive perception of patient safety climate (Merrill, 2015) and high levels of organizational commitment (Manning, 2017). Nevertheless, there remains relatively minimal knowledge of the extent to which just culture implementation at the unit level can be explained by the nurse managers' transformational and transactional leadership styles. Therefore, this study explored the relationship between the nurse managers' transformational, transactional and laissez - faire leadership styles and their units' just and fair patient safety culture.

Differences in Perceptions Between Staff Nurses and Nurse Managers

In addition to exploring the relationship between leadership styles and just culture, I explored the differences between nurse manager self-rating and staff nurses' perceptions of their nurses' managers transformational, transactional, and laissez-faire leadership styles and unit level just culture. I found it urgent to understand how employees experienced, perceived, and interpreted leadership styles and just culture because employee perceptions were more likely to influence their attitudes and behaviors than other objective measures or managers' perceptions. Previous researchers have found critical information when comparing nurse managers and staff nurses' perceptions of leadership styles and patient safety.

Kristensen et al. (2015) discovered that nurse clinical leaders had a higher mean safety climate and team work score than frontline nurses ($p < .05$). Turunen, Partanen, Kvist, Miettinen, and Vehviläinen-Julkunen (2013) identified that although nearly half of the nurse manager and staff nurse participants agreed that there were unit level safety issues, significantly higher percentage of nurse managers (65%) than staff nurses (47%) indicated that patient safety is always takes priority over work efficiency ($p = .011$). Additionally, the survey questions related to non-punitive response to errors revealed that 25% of the staff nurses felt that most of the time, managements response to errors is focused is on writing up or counseling the individual (s) involved rather than fixing the problem; whereas only 8% of nurse managers reported a having punitive approach to managing mistakes (Turunen et al., 2013). Parand et al. (2014) reported statistically significant differences between senior manager and frontline staff related to

organizational safety and quality processes such as timeliness of care ($p = .004$), and organizational improvement culture ($p = .014$). Other researchers focused on identifying differences in quality and safety initiative perceptions among managers and clinical staff identified that while managers rated clinical care bundle, monitoring data overtime, and change processes higher than clinical staff ($p < .001$); the clinical staff rated collaborating with a partner organization, support from management, and support from providers higher than the managers ($p < .001$; Parand et al., 2014).The larger gaps in perceptions of safety between managers and staff lead to an increase in error rates which compromises patient safety (Kristensen et al., 2015). Similarly, differences in nurse manages self-rated and staff nurses' perceptions of leadership styles can be problematic.

McGuire and Kennerly (2006) expected that nurse managers may rate themselves as higher on the transformational leadership style scale acknowledging that self-reporting may result in bias. In addition, the researchers suggested nurse managers may not be clear about the concept of transformational leadership and may be limited to practice transformational leadership due to cultural and organizational constraints. As predicted nurse managers transformational scores were higher ranging from 3.89 to 4.28 and staff nurses rated their nurse managers higher on transactional leadership skills (McGuire & Kennerly, 2006). In another study, nurse managers identified their leadership styles as more transformational ($M = 3.03$), then as transformational ($M = 2.22$) and less as laissez-faire ($M = 1.05$); where staff nurses rated their manager as transformational ($M = 2.85$), transactional ($M = 2.3$) and laissez-fair ($M = 1.38$). Although the researchers

discovered differences between nurse managers and staff nurses' perceptions, it was found to be non-significant (p = .719; Albagawi, Laput, Pacis, & AlMahmoud, 2017).

The researchers mentioned above suggest exploring the differences in perceptions among nurse managers and staff nurses in areas that affect performance and patient outcomes. In this study, a statistical analysis was performed to determine whether there was a difference between staff nurses' and nurse managers' perceptions of leadership styles and just culture. The results would lead to a better understanding of the relationship between nurse manager and staff nurses' perceptions of leadership styles and just culture.

Summary

Chapter 2 examined the critical need for nurse managers to embrace certain leadership practices that are likely to promote a just and safe culture at the unit level. Healthcare leaders are challenged with the responsibility to create a positive patient safety culture to eliminate preventable patient deaths occurring at approximately 250,000 per year in the United States (Kohn et al., 2000; Makary & Daniel, 2016; TJC, 2017a). To sustain a positive safety culture, leaders must be flexible inspirational and possess the ability to stay current with technological and regulatory changes. Scholars have been critically examining the various leadership traits, behaviors, and styles across the centuries signifying that the essence of a leader determines the level of success of an organization (Conger, 1989; Conger & Kanungo, 1994; Kim-Yin & Drasgow, 2001). Effective leaders utilize their talent to influence their employees to strive to exceed job performance expectations and embrace the organization's mission and values (Yang & Yeh, 2018). Effective leaders are charismatic, innovative and can motivate and engage

employees to become a part of the organization's culture (Bass & Riggio, 2006). Simultaneously, leaders of a successful healthcare organization in the 21st century also demonstrate the skills necessary to create a trust-based and a non-punitive relationship with their employees while setting and communicating the expectations of accountability (Pattison & Kline, 2015). Therefore, I utilized FRLT, which included inspirational and charismatic leadership, and the JCM, which promoted trust and relationship building between leaders and followers for the theoretical framework of the study.

The balance of trust and accountability creates a just culture where leaders (a) provide an environment where employees feel supported and safe to voice concerns and are not punished for making mistakes; (b) coach employees to avoid risk-taking behaviors; and (c) hold employees accountable for acting recklessly, disregarding rules and policies, and causing actual or potential patient harm (Marx, 2001). Successful leaders can foster a just culture built upon balance and trust, open communication, event reporting, employee feedback, and continuous improvement which promotes safe and quality patient care. This study explores the influence of the nurse manager's transformational and transactional leadership styles on successfully creating a just culture at the unit level. Chapter 3 details the research methodology for the study.

Chapter 3: Research Method

Introduction

The purpose of this quantitative, descriptive, correlational study was to determine whether there was a relationship between nurse managers' transformational, transactional, and laissez-faire leadership styles and their units' just culture as well as whether there was a difference between staff nurses' and nurse managers' perceptions of leadership styles and just culture. This chapter includes a description of the study design, sample, instrumentation, data analysis and ethical consideration for the study. The overview of the study design consists of the rationale and the alignment with the research question. The instruments, target population, and sample size appropriate for the study are also described. A discussion is also included on the data calculation process and analysis.

Research Design and Rationale

A descriptive, correlational study was appropriate to examine data collected from a survey to address the research questions: (a) What is the relationship between the perceptions of nurse managers' transformational, transactional, and laissez-faire leadership styles and the perceptions of their unit level just culture as reported by staff nurses and nurse managers? and (b) What are the differences between staff nurses' perceptions of their nurse managers' transformational, transactional, and laissez-faire leadership styles and their unit level just culture and nurse managers' perceptions of their transformational, transactional, and laissez-faire leadership styles and their unit level just culture? A descriptive, correlational method was appropriate for this nonexperimental

study to systematically investigate the relationship between the predictor and outcome variables of the study (Frankfort-Nachmias & Leon-Guerrero, 2014). This design also allowed for descriptive and inferential statistical analysis that provided empirical data on the nature of the relationships between the variables listed in the research questions (Polit, 2010). Time and resource constraints were influential in choosing to conduct a one-time cross-sectional survey rather than a longitudinal study.

The predictor variable for the first research question was the perception of nurse managers leadership style (transformational, transactional, or laissez-faire) and the outcome variable was the perception of the unit's just culture (balance and trust, openness of communication, quality of the event-reporting process, feedback and communication, and continuous improvement) as reported by staff nurses and nurse managers. The predictor variables for the second research question were the perceptions of nurse manager leadership styles (transformational, transactional, or laissez-faire) as reported by staff nurses and the self-reported leadership styles (transformational, transactional, or laissez-faire) by nurse managers; the outcome variables were the perceptions of the unit level just culture as reported by staff nurses and perceptions of the unit level just culture as reported by nurses (marked by balance and trust, open communication, event reporting, employee feedback about events, and continuous improvement). A quantitative approach was suitable for generating predictive knowledge from studying these research variables (Frankfort-Nachmias & Leon-Guerrero, 2014).

Methodology

Population

I included registered nurses in staff and manager roles working in U.S. hospitals. Although there is no published data on the percentage of registered nurses working in a hospital setting, according to Bureau of Labor Statistics (2017) the projected registered nurse employment in 2016 was approximately 3 million across the United States. Registered nurses are professionals who are licensed through a state board exam after receiving a bachelor's or an associate degree in nursing. Registered nurses can be generalists or specialists and perform patient assessments, treatment planning, education, and counseling. Additionally, registered nurses use critical thinking skills while administering individualized patient treatments and medications and serve as advocates and care coordinators through their collaborative efforts with other healthcare professionals (ANA, n.d.). Nurse managers are registered nurses who are in a formal leadership position and have the responsibility for managing staff nurses, budget, human resources and quality care of their assigned unit/s. Additionally, nurse managers are a bridge between the organization's administration and the care delivery unit who can foster a culture of trust and teamwork. The success of a group depends on the nurse manager's ability to be a leader providing a safe and healthy environment for the healthcare team to advance professionally and provide safe and quality patient care (American Organization of Nurse Executives, 2015). I obtained access to this population through the utilization of a Qualtrics sample recruitment platform.

Sampling and Sampling Procedures

I used a nonprobability convenience sample of registered nurses working as a staff nurse or as a nurse manager in hospitals in the United States for the study. The sample may not represent the general population due to nonrandomization (Creswell, 2018). A randomized sampling approach was not feasible for the study because there is no access to the complete list of registered nurses working in the United States, and the participation in the study was voluntary. Additionally, time and cost prohibited the use of randomization. I used the Qualtrics sample recruitment platform to gain access to a convenient sample of registered nurses.

The inclusion criteria for my study were the following:

1. Registered nurses currently working in the hospital setting in a full-time (40 hours a week) or in a part time (less than 40 hours a week) capacity.
2. Nurse managers working in a hospital setting and having the responsibility of managing registered nurses in one or more units in a full-time (40 hours a week) or in a part time (less than 40 hours a week) capacity.

Exclusion criteria were:

1. Registered nurses working in healthcare settings outside of the hospital such as outpatient clinics, home-based care, and long-term care facilities.
2. Nurse managers who are working outpatient clinics, home-based care, and long-term care facilities.

Power analysis is used to determine the appropriate sample size for the study within the degree of confidence. Adequate sampling can prevent Type II errors. The

probability of Type II error should be less than 20% ($1\text{-}\beta \geq 0.80$). Additionally, a robust sample size increases the significance of the study findings, so it is important to select the appropriate effect size. There were no similar studies found to benchmark for the effect size; therefore, the effect size for this study was set at 0.2 (medium). The sample size should be based on factors including the power of 0.8, an alpha error of probability of 0.05, and a confidence interval level of 95% (Frankfort-Nachmias & Leon-Guerrero, 2014). I used G* Power 3 software to conduct the power analysis (Heinrich-Heine-Universität Düsseldorf, 2019). The power analysis indicated a target sample size of 158 participants. A large number of registered nurse population within the United States made the sample size feasible for the study. Qualtrics distributed the e-mail request for participation and the survey tools which is further described below in the Recruitment section.

Procedures for Recruitment, Participation, and Data Collection

Recruitment. The Qualtrics platform was used to reach a research panel of pre-validated registered nurses; and their profiles were used to match the individual with the research study. After I received IRB approval from the Walden IRB, I e-mailed my approved email recruitment flyer to Qualtrics. Qualtrics sent the e-mail invitation for the study to approximately 5,266 registered nurses in a staff or managerial role working in hospitals in the United States. The sample size is based on an anticipated 3% response rate. I did not have direct access to the e-mail addresses of the potential participants.

Participation. Individuals who were registered nurses received an e-mail invitation asking for their voluntary participation. The e-mail included the purpose of the

study and the approximate time it took to complete the survey. The e-mail prompted the potential participants to click on the link included in the e-mail if they are interested in participating in the study (see Appendix A). I did not have access to the individual registered nurses' information including their e-mail addresses, which were managed by Qualtrics.

Once the potential participants clicked on the link, they were taken to the screening questions. The screening questions were framed to examine whether the participants were staff nurses or a nursing supervisor/managers (with direct supervisory responsibilities over staff nurses) working in a hospital setting. The questions included: (a) Are you a registered nurse in a staff or nurse manager working in a hospital setting? (b) Are you a registered nurse or nurse manager working in outpatient areas, emergency room, long term care or home care? (c) None of these choices apply to me. The nurses who selected the option indicating they work in a hospital setting were advanced to the rest of the survey. The nurses who selected the other responses were automatically sent to the end of the survey with a message that they did not meet the qualifications for the study. This process was implemented to ensure the appropriate type of nurses were recruited for the study.

Individuals who qualified for the study advanced to the rest of the survey, which started with the consent form. The consent form included my contact information as well as the use of the survey for the partial fulfillment of my degree requirements. The consent also described the amount of time it took to complete the survey and the potential benefits and risks for engaging in the survey. The participants were informed that once

they accessed the survey link, their personal information, such as names and e-mails, were not collected and not attached to the survey to maintain their anonymity and confidentiality. The consent also explained how to participate in the survey and that participants could withdraw from the study survey at any time without consequences. Finally, the consent form informed the participants that they would receive an incentive for participating in the survey. At the bottom of the consent, the participants had to select whether they chose to opt in or out of the survey.

Once the registered nurse participants selected the option consenting to participate, they were assigned a unique identifier not connected to their personal information. One of the demographic questions asked the registered nurse if he or she worked in a hospital setting as a staff nurse or a nurse manager. The response to the demographic question determined which MLQ 5X survey the nurse received. The staff nurses received the MLQ 5X rater form and the JCAT survey, and the nurse managers received the MLQ 5X self-form and the JCAT survey. The participants who submitted the survey received a thank you message and were provided a small incentive in the form of a five-dollar gift card.

The study survey was hosted on Qualtrics and closed once the targeted sample size (N = 158) of staff nurses and nurse managers was reached or exceeded. The responses of the survey were password protected and did not include any personally identifiable information. The participants could use their assigned participant ID to claim the incentive, which maintains the anonymity of the participant receiving the incentive (Qualtrics, n.d.).

Data collection. I built the survey using the Qualtrics platform. The survey data were collected using Qualtrics database via a survey link. I built my survey by inputting the consent form information on the cover page and entering the survey questions in the database. The platform was designed to open the appropriate survey based on the registered nurses' selection of their role as either a staff nurse or a nurse manager. After I confirmed the survey tool included the consent form, screening questions, and the survey questionnaire in the appropriate order, a survey link from Qualtrics was generated for potential participants. I set a password to access the survey responses. The Qualtrics servers are also protected using Web Application Firewalls and an Intrusion Detection System that monitors access (Qualtrics, n.d.).

The survey included questions to gather demographic information including gender, age, years worked in the current hospital, years worked in a hospital setting as a registered nurse, average number of work hours in the current hospital, current position (staff nurse or manager or supervisor), type of specialty unit of current job, and highest level of education (see Appendix B). Avolio and Bass's (2004) MLQ 5X self-form for managers and rater form for staff nurses was utilized to assess the leadership styles of the nurse managers (see Appendix E). The just culture attributes were measured by simultaneously administering the JCAT (see Appendix F). Once the sample size was reached and the survey was closed, the survey responses were transferred to an Excel spreadsheet, then to IBM SPSS Statistics software (V25) located on my personal home computer, which is password protected.

Instrumentation and Operationalization of Constructs

I used the MLQ 5X short version to assess transformational and transactional leadership behaviors of the nurse managers (Avolio & Bass, 2004) and the MLQ 5X rater form to survey the staff registered nurses. Permission to use the MLQ 5X short version survey was obtained through purchasing MLQ Remote Online Survey License from the Mind Garden website (see Appendix C). The just culture attributes were measured by simultaneously administering the JCAT (Petschonek et al., 2013). I received e-mail permission to use the JCAT from the corresponding author (see Appendix D).

The staff nurses and the nurse managers received a survey consisting of a total of 65 questions, which took approximately take 15-20 minutes to complete. The survey included seven demographic questions, 36 questions on the MLQ 5X, and 22 questions on the JCAT. The staff nurses received MLQ 5X Short Rater Form, whereas nurse managers received the MLQ5X Short Leader Form. The participants could stop taking the survey at any time after starting the questionnaire. The surveys that were saved in the Qualtrics database only included the fully completed surveys.

MLQ 5X Short Form. The MLQ 5X Short Form is available through Mind Garden through the purchase of a remote online survey license. The survey was originally developed by Bass and revised by Avolio and Bass (2004). MLQ 5X has been used to measure key leadership behaviors in the context of effective leadership that leads to organizational success (Avolio & Bass, 2004). I used the MLQ 5X Short Form to measure nurse managers' leadership styles of transformational, transactional, and laissez-faire or passive-avoidant (Avolio & Bass, 2004). The MLQ 5X Short Form is comprised

of 12 domains with a total of 45 questions. In my study, I used the 36 questions that corresponded to the nine domains that measure transformational, transactional, and laissez-faire leadership. The MLQ survey is designed to measure responses to questions using a Likert scale of 0 = *not at all*, 1 = *once in a while*, 2 = *sometimes*, 3 = *fairly often*, or 4 = *frequently if not always*. The leader form and the rater form of the MLQ 5X survey were used in this study, which contain the same questions that are worded appropriately for the manager and the subordinate. For example, the questions to nurse managers were worded as "I spend time teaching and coaching," whereas the questions to staff nurses were worded as "my leader spends time teaching and coaching" (Avolio & Bass, 2004). The composite scores of the corresponding characteristics of transformational, transactional, and laissez-faire leadership was used to produce the variable scores.

The MLQ 5X measured nine areas of leadership characteristics categorized into the three components of transformational, transactional, and laissez-faire. The five characteristics that measured transformational behavior included idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individual consideration. Transformational leadership style was measured by the two categories of contingent reward and MBEA, and laissez-faire leadership style was measured by MBEP and laissez-faire. The operational definitions of these variables are included in Table 1.

Table 1

MLQ-5X Short Form Constructs and Definitions

MLQ Leadership Constructs	Definition
Transformational Variables	
Idealized influence (attributed)	Creates a strong association and followership with subordinates through conducing oneself in the interest of the group.

Idealized influence (behavioral)	Instills the importance of purpose and mission in others; behaves ethically.
Inspirational motivation	Shows optimism and focus to accomplish set goals.
Individualized consideration	Treats subordinates as individuals with varied needs and goals; coaches and teaches individuals to accomplish their personal and professional goals.
Intellectual stimulation	Re-examines situations objectively prior to making decisions; and encourages others to view problems from various perspectives.
Transactional Variables	
Contingent reward	Rewards and incentivizes appropriate behavior and accomplishment of subordinates
Management-by-exception active	Proactively audits and monitors processes, systems and subordinate behaviors to mitigate issues.
Laissez-faire Variables	
Passive-avoidant leadership	Disengaged from managerial and leadership responsibilities; minimal visibility and availability to subordinates; and lacks problem solving skills.
Management-by-exception, passive	Addresses problems as they arise; often does not engage in proactive measures to mitigate negative incidents.

The MLQ 5X survey has a high level of construct validity (Avolio & Bass, 2004). Construct validity is essential as it examines whether the questions measure the concepts in the study and whether the scores translate into meaningful use in practice. The MLQ 5X Short form has been validated demonstrating that the instrument is designed to assess the variables or attributes associated with the three styles of leadership including transformational, transactional, and laissez-faire using 36 item questionnaires. The previous 6-factor version of the MLQ 5R was upgraded to include three newly created factors based on the literature differentiating charismatic leadership from transformational leadership. Nine samples (N = 2154) were analyzed to establish the construct validity of the tool. The instruments psychometric properties were tested using confirmatory factor analysis showing intervariable correlations between the constructs

under each of the leadership styles (Avolio & Bass, 2004). The MLQ 5X Short form has been used in multiple settings including the military and hospitals.

Avolio and Bass (2004) examined research studies consisting of a total of 2,080 leaders and 1,706 subordinates that used the self and the rater survey of MLQ 5X Short form. The optimal values that indicate the reliability of an instrument in maintaining internal consistency in measuring the same concept is a Cronbach's alpha range between 0.7 and 0.9 (Creswell & Creswell, 2018). MLQ 5X Short Form has been reported as having internal consistency with a Cronbach's Alpha range of 0.76 and 0.89 and has been utilized internationally in the sectors of business, government, healthcare, and military (Avolio & Bass, 2004). Therefore, the questions designed for each of the nine leadership dimensions in the MLQ tool have been found to measure the same construct with consistency. I selected the MLQ 5X Short Form based on the reliability and validity of the tool and the widespread use in nursing research.

There are intercorrelations found among the four questions designed for each of the nine subscales of the leadership styles allowing the researcher to create one composite score for that subscale. The tool is not designed to label a leader as a transformational, transactional or a laissez-faire leader but rather indicates whether the leader is more likely to exhibit one of the three leadership styles than the others. Therefore, a higher composite score in one of the leadership styles as compared to the national average scores, means the nurse manager is more likely to practice the leadership style with a higher score than the other two leadership styles (Avolio & Bass, 2004).

Just Culture Assessment Tool Survey. The JCM focuses on identifying human behaviors and system breakdowns and balances accountability with a non-blame system to encourage open communication, trust, feedback and reporting of events (Ungvarsky, 2016). The JCAT was developed by Petschonek et al. (2013) to measure the just culture perceptions of healthcare professionals in the hospital setting. Petschonek et al. (2013) utilized the just culture literature to develop the dimensions and associated questions. The instrument is intended to evaluate the perceptions of just culture of healthcare providers directly involved in patient care and most likely to influence patient safety. The JCAT includes the subscale dimensions and one higher order dimension of just culture. Each dimension consists of a set of related questions that were use tested the reliability of the tool in a study consisting of 998 pediatric hospital healthcare staff. The optimal values that indicate the reliability of an instrument in maintaining internal consistency in measuring the same concept is a Cronbach's alpha range between 0.7 and 0.9 (Creswell & Creswell, 2018). The Cronbach alpha was found to be higher than 0.70 in all the dimensions except for the quality of event reporting process ($\alpha = 0.63$). According to the just culture literature, the event reporting process is a critical component of a JCM which justified the need to keep this dimension as part of the JCAT (Petschonek et al., 2013).

Petschonek et al. (2013) conducted a content validity evaluation by receiving feedback from healthcare professionals who are experts in the field of patient safety on the initial list of questions. As a result of the feedback, the researchers refined the survey. Additionally, the survey responses from 404 respondents were used to test the model further and remove items with a minimal meaningful contribution to the measure and

with a neutral response rate of 25% or higher (Petschonek et al., 2013). The JCAT is congruent with the constructs of the JCM which attempts to create fairness and balance of accountability when investigating adverse events (Marx, 2001).

The questions of the JCAT survey measured the staff nurses' safety culture perceptions in the dimensions of balance and trust, openness of communication, quality of the event-reporting process, feedback and communication about events, and an overall goal of continuous improvement (see Table 2). I used the 22 questions that corresponded to the five domains to measure the overall just culture scores. Each dimension had questions measured on a Likert scale (see Appendix G). The tool uses a 7-point Likert scale for the responses ranging from *1* (*strongly disagree*) to 7 (*strongly agree*) to rate questions such as whether "staff members fear disciplinary action when involved in an event" (Petschonek et al., 2013). The survey was scored based on the combined mean scores of the five-dimension questions producing one variable outcome score for the overall higher order dimension of just culture.

Table 2

Just Culture Assessment Tool Dimensions and Definitions

Just Culture Assessment Tool Dimensions	Definition
Balance	Employees feel they are not blamed for human errors or mistakes and there is objectivity in reporting and addressing medical errors.
Trust	Employees level of belief and confidence in their supervisors, peers, and the organization.
Openness of Communication	Employees inclination to speak up and share their concerns, including reporting adverse events to their immediate supervisors and hospital administrators.
Quality of Event Reporting Process	Employees perception of the whether they are encouraged to report events; there is a user-friendly event reporting system; they are provided adequate time to report events and get involved in process improvement activities.
Feedback and Communication About Events	Employees perception of how well the organization shares information on adverse events and the follow-up actions taken to prevent future similar events.
Overall Goal of Continuous Improvement	Employees perception that organizational learning takes place when adverse events occur as a continuous improvement strategy.

Data Analysis Plan

The data analysis was completed using the IBM SPSS (V25) Statistics software to examine the strength of the relationship between nurse manager transformational, transactional, and laissez-faire leadership styles and staff nurse perception of just culture; and to answer the research questions below.

RQ 1: What is the relationship between the perceptions of nurse managers' transformational, transactional, and laissez-faire leadership styles and the perceptions of their unit-level just culture as reported by staff nurses and nurse managers?

$H_0$1: There will be no relationship between the perceptions of nurse managers' transformational, transactional, and laissez-faire leadership styles and the perceptions of their unit-level just culture as reported by staff nurses and nurse managers.

H_a1: There will be a relationship between the perceptions of nurse managers' transformational, transactional, and laissez-faire leadership styles and the perceptions of their unit-level just culture as reported by staff nurses and nurse managers.

The targeted sample size for a predictor variable with 3 groups and one outcome variable with a power of 0.8 and an effect size of 0.25 was 158. Using SPSS, I applied a one-way analysis of variance (ANOVA) which is used analyze statistically significant differences between the means of two or more independent groups with one outcome variable (Polit, 2010). The study variables met the assumptions for an ANOVA test, having an outcome variable measured as continuous (interval) and one predictor variable with three independent and unrelated groups (Frankfort-Nachmias & Leon-Guerrero, 2015). For a statistically significant ANOVA finding, I applied the Games-Howell post hoc test, that is used when equal variances cannot be assumed, to further explore where the differences are found between the independent groups (Polit, 2010).

RQ 2: What are the differences between staff nurses' perceptions of their nurse managers' transformational, transactional, and laissez-faire leadership styles and their unit-level just culture; and nurse managers' perceptions of their transformational, transactional, and laissez-faire leadership styles and their unit-level just culture?

$H_0$2: There will be no differences between staff nurses' perceptions of their nurse managers' transformational, transactional, and laissez-faire leadership styles and their

unit-level just culture; and nurse managers' perceptions of their transformational, transactional, and laissez-faire leadership styles and their unit-level just culture.

H_a2: There will be differences between staff nurses' perceptions of their nurse managers' transformational, transactional, and laissez-faire leadership styles and their unit-level just culture; and nurse managers' perceptions of their transformational, transactional, and laissez-faire leadership styles and their unit-level just culture.

The anticipated target sample size was 158 registered nurses, including 79 staff nurses and 79 nurse managers working in a hospital setting. The descriptive statistics for the demographic information included the mean, standard deviation, and range scores. A bivariate analysis was applied to examine the relationship between demographic responses and survey responses. Using SPSS, I applied a multivariate analysis of variance (MANOVA) test to determine the association between the predictor variables (nurse managers perception of self-leadership style, staff nurses' perceptions of manager's leadership style) outcome variables (nurse managers perception of units just culture, staff nurses' perceptions of the units just culture). The study variables met the assumptions of a MANOVA having the outcome variables of the overall mean scores of just culture transformational, transactional, and laissez-faire leadership and having a categorical variable with two independent groups of staff nurses and nurse managers (Polit, 2010).

Threats to Validity

It is essential to evaluate external and internal validity of a study as threats can emerge that may affect the researcher's ability to generalize the study outcomes to the population or establish that there is a relationship between the predictor and outcome

variables. Internal validity ensures that the observed changes of differences in the outcome variable are the direct result of the predictive variables and no other variables (Vogt, Gardner, & Haeffele, 2012). I conducted a nonexperimental design examining the relationship between leadership styles and just culture without manipulating the variables unlike experimental studies (Reio, 2016). External validity provides the researcher with the ability to generalize the study to other populations and settings (Creswell & Creswell, 2018). It is essential to analyze the internal and external threats to validity in experimental and non-experimental studies. For this quantitative descriptive study, I analyzed the threats to internal and external validity in the following sections.

External Threats to Validity

The sample selection using a convenience sampling technique posed a threat to the external validity of the study. The demographic background of the participants who volunteer to be in the study may not be diverse and representative of the population under study. The inability to ensure diversity of the sample population limited the generalizability of the study.

I recruited the participants from a non-randomized sample of registered nurses working in a hospital setting across the United States and used cross-sectional data collection method limiting the survey administration to a single point in time. Therefore, the participants selected voluntarily may not be representative of all nurses. Additionally, the sampling method did not allow for the applicability of the research results to other healthcare settings, such as outpatient clinics, home-based care, and long-term care facilities.

Threats to Internal Validity

Maturation, history, mortality, and statistical regression are threats to validity due to influential factors on the outcome variable, other than the predictor variable of the study. Maturation can pose threats to internal validity when other factors are introduced over the period of the study phase that may impact the outcome variable. The factors that may influence the outcome variable of just culture perception includes changes in management, implementation of training related to the study subject, organizational culture, and safety culture. Similarly, history or changes in the participant's environment may pose a challenge as to whether the changes in the outcome variable or the perception of just culture was in relations to the predictor variable of the nurse managers leadership styles or the historical event such as other organizational changes. Threats to validity also occurs due to mortality when the participants decide to drop out before completing the study. The analysis of the data did not account for those participants who dropped out of the study. Statistical controls were not used to address the non-responders, limiting the ability to generalize the results to the nurses working in United States hospitals who chose not to participate in the study. Additionally, statistical regression can occur due to extreme scores from participants. The probability of having a regression artifact is higher when a non-randomized sample is used from the population. Furthermore, due to the self-reported nature of the survey, staff nurses' responses may not depict their true feelings and nurse managers may rate their leadership styles more favorable to transformational and transactional. I did not control for the threats to validity mentioned above during this study. The participants were informed that the surveys are collected anonymously

without any unique identifiers of individual participants to encourage open and honest responses (Creswell & Creswell, 2018).

Ethical Procedures

I submitted the application for Institutional Review Board (IRB) to the Walden University IRB for approval before collecting data. The study was approved until June 26, 2020 (approval number: 067-27-19-0345756). The approval from the IRB is to ensure ethical research procedures are followed, the integrity of the research is maintained, and adequate protection of the study participants are upheld (Creswell & Creswell, 2018). Before distributing the study survey, the potential participants received the consent electronically which outlined the purpose, risks, and benefits from participating in the study. The consent clearly stated that the study was being conducted as part of the fulfillment of my Doctoral degree requirements. The consent form included information that the participation is voluntary, and they can withdraw from the study at any time. A statement assuring the confidentiality and the privacy of their information was included on the consent form. Personal information such as name, address, and the name of the workplace was not collected to ensure the privacy of the participants. The consent form that was sent to the participants electronically with the survey link, had a choice to select at the end of the consent to either continue with the survey or to exist the survey. The participants who chose to continue were taken to the survey questions. Each participant received a unique participant ID number, which was used to provide the incentive for participating in the survey because it did not link to their personal information. The participant completed the study electronically.

I applied data protection methods to secure the information collected from study participants. I created a password for the database where the survey responses were collected. I transferred the data to a password-protected personal laptop which contained the Microsoft Excel Spreadsheet and the IBM SPSS (V25) software I used to analyze the data. After 5 years, I will delete the data from the personal computer files and hard drive. I will ensure the information on the personal computer is erased using reset mechanism prior to discarding or recycling the computer for any reason. I will also ensure the data is deleted from the Qualtrics survey platform. Only aggregated data results would be published or reported.

Summary

The primary purposes of this quantitative descriptive correlational study were to (a) determine if there was a relationship between the nurse managers' transformational, transactional and laissez-faire leadership styles and their units' just culture, and to (b) determine whether there was a difference between staff nurses' and nurse managers' perceptions of leadership styles and just culture. The null hypotheses were tested to answer the research questions. The study design, procedure, sampling, setting, instrumentation, ethical procedures, and data gathering techniques were explained in this chapter. I used a valid and reliable surveys, MLQ and JCAT, to obtain data on the predictor and outcome variables of the study. The data were analyzed using descriptive statistics and multiple linear regression to identify the possible correlation between the variables. In Chapter 4, I describe the review of the study's data collection and results.

Chapter 4: Results

Introduction

The purpose of this quantitative, descriptive, correlational study was to determine whether there was a relationship between the perceptions of nurse managers' transformational, transactional, and laissez-faire leadership styles and their units' just culture as well as whether nurses and nurse managers had different perceptions of leadership styles and just culture. The research questions and hypotheses were:

RQ 1: What is the relationship between the perceptions of nurse managers' transformational, transactional, and laissez-faire leadership styles and the perceptions of their unit-level just culture as reported by staff nurses and nurse managers?

$H_0$1: There will be no relationship between the perceptions of nurse managers' transformational, transactional, and laissez-faire leadership styles and the perceptions of their unit-level just culture as reported by staff nurses and nurse managers.

H_a1: There will be a relationship between the perceptions of nurse managers' transformational, transactional, and laissez-faire leadership styles and the perceptions of their unit-level just culture as reported by staff nurses and nurse managers.

RQ 2: What are the differences between staff nurses' perceptions of their nurse managers' transformational, transactional, and laissez-faire leadership styles and their unit-level just culture; and nurse managers' perceptions of their transformational, transactional, and laissez-faire leadership styles and their unit-level just culture?

$H_0$2: There will be no differences between staff nurses' perceptions of their nurse managers' transformational, transactional, and laissez-faire leadership styles and their

unit-level just culture; and nurse managers' perceptions of their transformational, transactional, and laissez-faire leadership styles and their unit-level just culture.

H_a2: There will be differences between staff nurses' perceptions of their nurse managers' transformational, transactional, and laissez-faire leadership styles and their unit-level just culture; and nurse managers' perceptions of their transformational, transactional, and laissez-faire leadership styles and their unit-level just culture.

Chapter 4 presents the results of my study. The research question and the hypothesis guided the data analysis. A one-way analysis of variance (ANOVA) and a one-way multivariate analysis of variance (MANOVA) provided information on the significant correlations between the predictive and outcome variables. I used Cronbach's alpha analysis to test the internal consistency of the measurement tools and tested the model constructs for reliability. In Chapter 4, I describe the research questions, hypotheses, data collection, data analysis, and results from the responses of the demographic questions, MLQ 5X Short and JCA surveys.

Data Collection

The invitation for participation in the study was sent to 5,266 registered nurses over 2 weeks based on an anticipated 3% response rate. I followed the procedure as outlined in Chapter 3 without discrepancies to execute the data collection. Qualtrics sent out my e-mail invitation to registered nurses in the United States asking for voluntary participation in the study by clicking on the link included in the e-mail (see Appendix A). I did not have access to the contact information of the participants. If the registered nurses chose to participate, the survey link took them to a separate survey website not

connected to their e-mail. I used Qualtrics to build and host the survey, which was password protected and collected anonymously with no personally identifiable information.

Once the participants clicked on the link sent via e-mail, they were taken to the screening questions. The screening question options were (a) Are you a staff nurse or a nursing supervisor/manager (with direct supervisory responsibilities over staff nurses) working in an outpatient setting, a clinic, emergency room, long-term care or home care? (b) Are you a staff nurse or a nursing supervisor/manager (with direct supervisory responsibilities over staff nurses) working in a hospital unit setting? (c) None of these choices apply to me. The nurses who selected option *b* were able to advance to the consent page. The participants who chose options *a* or *c* received an end of survey message thanking them for their time and explaining that they did not meet the qualifications to advance to the study.

Individuals who qualified based on the screening questions were taken to the consent form page and at the bottom of the consent page had an option to select to continue or end their survey participation. The participants were assigned a unique identifier not connected to their personal information, which allowed them to claim a five-dollar gift card for participating in the survey. The participants who opted to advance to the study received demographic questions (see Appendix B) and the survey questionnaires. The survey consisted of the MLQ5X Short and JCAT for which permission was obtained (see Appendices C & D). The staff nurses were provided the rater version of the MLQ 5X survey, whereas the nurse managers were provided the

leader (self-rating) version (see Appendix E). The questions for both rater and leader survey were the same but worded based on the role of the participant. For example, the question for the leader was presented as "I spend time teaching and coaching" and was introduced to the rater as "spends time teaching and coaching" (Avolio & Bass, 2004). The staff nurses and the nurse managers received the JCA tool survey (see Appendix F). At the end of the survey, the participants had a link to enter their unique ID number to obtain their incentive for participating in the survey. One hundred and sixty-five staff nurses and nurse managers participated in the study.

I downloaded the raw survey data from Qualtrics survey platform to an excel spreadsheet on my personal computer and did not contain data that could potentially be used to identify a participant. The personal computer used to store the downloaded survey information is password protected. I transferred the data from the excel spreadsheet into the SPSS (V25) database. I saved the data in a password-protected personal computer and password-protected hard drive. There was no paper copy of the raw data. The data results were analyzed using SPSS (V25), including the output of description and inferential statistics, as described in the Results section.

Results

Baseline Descriptive Statistics

I used SPSS (V25) to analyze the descriptive statistics to present the summary of the sample data obtained from the demographic questions and the survey questionnaires derived from the MLQ 5X Short and the JCA tool. I examined the frequencies and percentages for the variables in the study. I met the minimum sample size requirement of

158 participants, based on a power analysis conducted using the G* Power 3 software using the power of 0.8, an alpha error of probability of 0.05, and a confidence interval level of 95% (Frankfort-Nachmias & Leon-Guerrero, 2014; Heinrich-Heine-Universität Düsseldorf, 2019). A total of 165 registered nurses working in a hospital setting across the United States participated in the study, of which 84 were staff nurses, and 81 were nurse managers with nursing supervisory responsibilities.

I used the results of a national nursing workforce survey conducted in 2017 for the comparison benchmark for the demographic characteristics examined in the representative sample (Smiley et al., 2018). Most of the study participants were female (*n* = 148, 90%) compared to male participants (*n* = 17, 10%), which correlated with research showing that only 9% of registered nurses are males (Smiley et al., 2018). The national nursing workforce survey indicated that the average age of registered nurses was 51, with 14% over the age of 65 and only 10% and 9% between ages 30 and 34 and 35 and 39, respectively. However, most of my study participants were between ages of 30 and 39 (*n* = 53, 32.1%), and there were no participants over the age of 60. Many of the study participants had greater than 16 years of experience as a registered nurse (*n* = 58, 35.2%), though a high number of participants were in their current jobs from 1 to 5 years (*n* = 81, 49.1%). The national nursing workforce survey data also showed that 32% of registered nurses had their license for 0 to 10 years, and 19% have had their license for 11 to 20 years, which is comparable to the number of years of registered nurse experience collected from this study. Additionally, most participants worked 20 to 40 hours (*n* = 87, 53%) followed by those working greater than 40 hours (*n* = 51, 31%). According to the

national nursing workforce survey, most nurses worked full time (65.4%) followed by part time (12.1%). Further, the highest number of my study participants had their baccalaureate degrees (*n* = 82, 50%), which correlated with the national nursing workforce survey data (41.8%). The second highest group in this study were those with an associate degree (*n* = 35, 21%) and master's degree (*n* = 35, 21%), which supports the national nursing workforce survey indicating an increase in nurses with their master's degrees. Most participants indicated that they worked in a medical and surgical unit (*n* = 41, 25%), with the next largest group of participants working in critical care or intensive care unit (*n* = 33, 20%). However, I could not compare work unit results to the population, as the national nursing workforce data only collected the total percentage of registered nurses working in a hospital setting (55.7%). The sample of this study does not represent the population in age but is comparable in the other demographics data. The demographical data, which show the frequencies and percentages, are shown in Table 3.

Table 3

Frequencies and Percentages of Participants' Demographic Data

Variable	Response	*N*	%
Gender			
	Female	148	90%
	Male	17	10%
Age			
	19-29	38	23%
	30-39	53	32.1%
	40-49	37	22.4%
	50-59	37	22.4%
	60+	0	0%
Years in current hospital			
	1-5 years	81	49.1%
	6-10 years	32	19.4%
	11-15 years	21	12.7%
	>16 years	31	18.8%
Years of experience in hospital setting			
	1-5 years	50	30.3%
	6-10 years	33	20%
	11-15 years	24	14.5%
	>16 years	58	35.2%
Number of hours worked per week in current position			
	>16 hours	5	3%
	16-30 hours	22	13.3%
	31-40 hours	87	52.7%
	>40 hours	51	30.9%
Type of specialty unit of current work			
	Medical/surgical unit	41	24.8%
	Intensive or critical care	33	20%
	Pediatric unit	26	15.8
	Maternal/infant care unit	18	10.9%
	Telemetry, cardiac or step down	14	8.5%
	Specialty unit (such as oncology or spinal cord injury)	13	7.9%
	Perioperative unit	9	5.5%
	Oncology/bone marrow unit	6	3.6%
	Acute psychiatry unit	5	3.0%
Highest nursing degree obtained			
	Diploma	8	4.8%
	Associate	35	21.2%
	Baccalaureate	82	49.7%
	Master's Degree	35	21.2%
	Doctoral Degree	5	3.0%
Current role			
	Staff nurse	84	%
	Nurse manager	81	%

Descriptive Statistics Between Participant Groups

I selected the chi-square test of homogeneity to compare the demographic data between the staff nurses (N = 84) and the nurse managers (N = 81). The chi-square test is designed to examine whether there were equal frequencies of the participants characteristics by testing the differences between the two independent participant groups (Kremelberg, 2011), which in this study were staff nurses and nurse managers. The assumptions for the chi-square test were met with each categorical dependent variable having three or more independent categories (Nishishiba, Jones, & Kraner, 2014). Additionally, there was no relationship and independence of observations was found between each of the groups. The chi-square test assumptions for sample size were met to test the differences in age, years of experience in current hospital, years of experience as a registered nurse, and the number of hours worked per week in current position. The sample size in each of these dependent categories met the assumptions of having five or more expected frequencies of five or more responses (Scott & Mazhindu, 2005; see Table 4). The chi-square analysis was applied for the variables that met the sample size requirement including age, years of experience in current hospital, years of experience as a registered nurse, and the number of hours worked per week in the current position. The participants' current work unit and highest nursing degree obtained violated the assumption of chi-square sample size requirement (N = 5) in each of the cells. Therefore, Fisher's exact test (*rx2*) was used to test for differences in the type of specialty unit of current work and highest degree obtained between nurse managers and staff nurses.

Table 4

SPSS Output for Expected Count Sample Size Determination for Each Category of the Nurse Manager and Staff Nurse Demographic Data

		Staff nurse	Nurse manager	Total
Age	19-29	19.3	18.7	38.0
	30-39	27.0	26.0	53.0
	40-49	18.8	18.2	37.0
	50-59	18.8	18.2	37.0
Years as RN	1-5 years	25.5	24.5	50.0
	6-10 years	16.8	16.2	33.0
	11-15 years	12.2	11.8	24.0
	Greater than 16 years	29.5	28.5	58.0
Years in current role	1-5 years	41.2	39.8	81.0
	6-10 years	16.3	15.7	32.0
	11-15 years	10.7	10.3	21.0
	Greater than 16 years	15.8	15.2	31.0
Number of hours worked/ week	<30 hours	15.2	10.8	22.0
	31-40 hours	44.3	42.7	87.0
	>40 hours	26.0	25.0	51.0
Specialty unit worked	Med/surg unit	20.9	20.1	41.0
	Cardiac telemetry/step down unit	7.1	6.9	14.0
	Critical care/intensive care unit	16.8	16.2	33.0
	Perioperative unit	4.6	4.4	9.0
	Maternal/infant care unit	9.2	8.8	18.0
	Pediatric care unit	13.2	12.8	26.0
	Acute psychiatry unit	2.5	2.5	5.0
	Oncology/bone marrow unit	3.1	2.9	6.0
	Other specialty units	6.6	6.4	13.0
Highest degree	Diploma	4.1	3.9	8.0
	Associate	17.8	17.2	35.0
	Bachelors	41.7	40.3	82.0
	Masters	17.8	17.2	35.0
	Doctoral	2.5	2.5	5.0
Total		84.0	81.0	165.0

Note. RN = registered nurse

A chi-square test of homogeneity was conducted to analyze the differences in the demographic data including age, years of experience in current hospital, years of experience as a registered nurse, and number of hours worked per week in current position between the nurse manager and staff nurse participants in this study. There were more staff nurses than nurse managers (n = 23, 24.7% vs. n = 15, 18.5%) within the age of 19 to 20, and more nurse managers between the ages of 40 to 49 (n = 22, 27.2% vs. n = 15, 17.9%). There were equivalent sample sizes of nurse managers and staff nurses in the other age category groups. The chi-square test of homogeneity, which showed the multinomial probability distributions, were equal in the population, $X^2(3) = 3.001$, p = .391. There were more staff nurses with 1 to 5 years of experience as a registered nurse than nurse managers (n = 30, 35.7% versus n = 20, 24.7%). However, more nurse managers have been working longer (n = 15, 18.5%) than staff nurses (n = 9, 10.7%). The results of the chi-square test of homogeneity showed the multinomial probability distributions were equal in the population, $X^2(3) = 3.477)$, p = .324.

There were very slight differences in the years of experience in their current role between staff nurses and nurse managers, with most having been in their role for 1 to 5 years (n = 39, 46.4% and n = 42, 51.9%, respectively). The chi-square test of homogeneity showed the multinomial probability distributions were equal in the population, $X^2(3) = 2.192$, p = .534. Most staff nurses (n = 48, 57.1%) and nurse managers (n = 39, 48.1%) worked between 31 and 40 hours, whereas more nurse managers worked over 40 hours (n = 31, 38.3% vs. n = 20, 23.8%) than staff nurses. The chi-square test of homogeneity showed the multinomial probability distributions were not

equal in the population $X^2(3) = 8.252$, $p = .041$. The observed frequencies, percentages and chi-square analysis of the demographic variables described above for the nurse manager and staff nurse groups are presented in Table 5.

Table 5

SPSS Output of Comparisons of Baseline Characteristics by the Nurses' Roles

Demographics	Staff nurse	Nurse manager	Overall sample	Chi-square test
Age in years				$X^2(3) = 3.001$, $p = .391$
19-29	23 (27.4%)	15 (18.5%)	38 (23%)	
30-39	27 (32.1%)	26 (32.1%)	53 (32.1%)	
40-49	15 (17.9%)	22 (27.2%)	37 (22.4%)	
50-59	19 (22.6%)	18 (22.2%)	37 (22.4%)	
Years as RN				$X^2(3) = 3.477)$, $p = .324$
1-5 years	30 (35.7%	20 (24.7%)	50 (30.3%)	
6-10 years	16 (19%)	17 (21%)	33 (20%)	
11-15 years	9 (10.7%)	15 (18.5%)	24 (14.5%)	
Greater than 16 years	29 (34.5%)	29 (35.8%)	58 (35.2%)	
Years in current job				$X^2(3) = 2.192$, $p = .534$
1-5 years	39 (46.4%)	42 (51.9%)	81 (49.1)	
6-10 years	17 (20.2%)	15 (18.5%)	32 (19.4%)	
11-15 years	9 (10.7%)	12 (14.8%)	21 (12.7%)	
Greater than 16 years	19 (22.6%)	12 (14.8%)	31 (18.8%)	
Hours worked per week				$X^2(3) = 8.252$, $p = .041$
< 30 hours	15 (19.1%)	11 (13.6%)	22 (13.3%)	
31-40 hours	48 (57.1%)	39 (48.1%)	87 (52.7%)	
>40 hours	20 (23.8%)	31 (38.3%)	51 (30.9%)	

Note. RN = registered nurse

I used the Fishers exact test (r x 2) to examine for differences in type of current job unit. Results revealed equivalent sample sizes in most of the categories except in the perioperative unit where there were no nurse manager respondents from perioperative unit as compared to 9 staff nurse respondents The Fishers exact test (r x 2) showed, the mutinominal probability distributions were equal in the population, $X^2(8) = 13.852$, $p = .078$, for the current work unit. Most nurse managers ($n = 37$, 53.6%) and staff nurses ($n = 45$, 45.7%) had their baccalaureate degrees, while most nurse managers had obtained their master's degree ($n = 28$, 34.6%) compared to the staff nurses ($n = 7$, 8.3%). A few

nurse managers (n = 4) and one staff nurse had earned their doctoral degree. The Fisher's exact test (r x 2) revealed that, the mutinominal probability distributions were not equal in the population, $X^2(4) = 24.66$, $p < .001$, for the highest degree earned. The observed frequencies percentages, and the Fisher's exact test (r x 2) of the demographic variables for nurse manager and staff nurse groups are presented in Table 6.

Table 6

SPSS Output of Comparisons of Baseline Characteristics by the Nurses' Roles

Demographics	Staff nurse	Nurse manager	Overall sample	Chi-square test
Current job type, *n* (%)				$X^2(8) = 13.85$, $p = .078$
Med/surg unit	18 (21.4%)	23 (28.4%)	41 (24.8%)	
Cardiac telemetry/ step down unit	9 (10.7%)	5 (6.2%)	14 (8.5%)	
Critical/intensive care unit	15 (17.9%)	18 (22.2%)	33 (20.0%)	
Perioperative unit	9 (10.7%)	0 (0%)	9 (5.5%)	
Maternal/infant care unit	11 (13.1%)	7 (8.6%)	18 (10.9%)	
Pediatric care unit	12 (14.3%)	14 (17.3%)	26 (15.8%)	
Acute psychiatry unit	2 (2.4%)	3 (3.7%)	5 (3.0%)	
Oncology/bone marrow	3 (3.6%)	3 (3.7%)	6 (3.6%)	
Other specialty unit	5 (6.0%)	8 (9.9%)	13 (7.9%)	
Highest degree earned, *n* (%)				$X^2(4) = 24.66$, $p < .001$
Diploma	7 (8.3%)	1 (1.2%)	9 (4.8%)	
Associate	24 (28.6%)	11 (13.6%)	35 (21.2%)	
Bachelors	45 (53.6%)	37 (45.7%)	82 (49.7%)	
Masters	7 (8.3%)	28 (34.6%)	35 (21.2%)	
Doctoral	1 (1.2%)	4 (4.9%)	5 (3.0%)	

Descriptive Statistics of Continuous Variables

I computed the composite scores for each of the transformational leadership, transactional leadership, laissez-faire leadership, and just culture variables by calculating the mean scores of their related factors based on recommendations by Avolio & Bass (2004) and Jupp (2006). The staff nurses and the nurse managers responses to the MLQ 5X and the JCAT survey provided the information for the analysis of transformational,

transactional, laissez-faire leadership, and just culture scores. The MLQ 5X survey used a Likert scale of *0 = not at all, 1 = once in a while, 2 = sometimes, 3 = fairly often,* or *4 = frequently if not always* to examine transformational, transactional, and laissez-faire leadership styles. A composite score was created for transformational leadership by taking the average of the 20 related questions that measure the characteristics of transformational leadership style. Similarly, I calculated composite scores for transactional leadership from the average of the corresponding items, which included 8 questions. For the laissez-faire leadership style, the corresponding items that I used to calculate the average score were the 8 questions that were designed to measure the laissez-faire leadership style. The scores for all three leadership styles ranged from 0 to 4., The JCAT survey responses provided the analysis of the just culture score. I calculated the composite score using the average of the 22 questions that measure just culture. The JCAT survey used a Likert scale from *1 = strongly disagree, 2 = disagree, 3 = somewhat disagree, 4 = neither agree or disagree, 5 = somewhat agree, 6 = agree,* and *7 = strongly agree*. Before analysis, reverse scoring was applied for negatively worded survey items in the JCA tool. The just culture scores ranged from 2.03 to 7.00, with higher scores indicating higher perceptions of just culture within the work unit.

The transformational, transactional, and laissez-faire composite scores for each of the staff nurse and nurse manager participants were ranked based a national percentile produced from scores of a normative sample (N = 27,285) based on U.S. data (Avolio & Bass, 2004). According to Avolio and Bass (2004), the MLQ survey was not designed to label a manager as transformational or transactional but rather to determine whether the

manager is more transformational than the norm, more transactional than the norm or more laissez-faire than the norm. The comparison of the scores to the national percentile rank data was used to determine whether participant rated the nurse manager or themselves higher as being more transformational than the norm, more transactional than the norm or more laissez-faire than the norm. There was a higher number of managers that were identified as more laissez-faire than the norm (*n* = 67, 40.6%; see Table 7).

Table 7

Frequencies and Percentages of Nurse Managers' Leadership Styles

Variable	Response	*N*	%
Leadership Style			
	More Transformational than Norm	44	26.7%
	More Transactional than Norm	54	32.7%
	More Laissez-Faire than Norm	67	40.6%

Internal Consistency

Cronbach's alpha test of reliability and internal consistency was conducted on the survey responses for the JCA tool questionnaire and the MLQ survey questionnaire using SPSS (V25). The objective of the Cronbach's alpha test was to provide the mean correlations and measure the internal consistency between each pair of items that make up the three leadership styles. The desired result is 0.7 and higher, whereas 0.5 to 0.6 indicate poor or unacceptable outcomes (Tropia, 2008). In comparison, the results of the reliability analysis of the questions that make up the composite score for transformational leadership indicated a strong acceptable reliability score. The Cronbach's alpha test included the 20 questions that formed the composite scores for the MLQ survey output of transformational leadership. For transactional leadership style, I included the

corresponding 8 questionnaire items and the result showed lower but acceptable Cronbach's alpha score (α = .732). Cronbach's alpha for laissez-fair leadership style included composite score of 8 questions. Similar to transformational leadership style, the reliability score for laissez-fair leadership style was strong. I included the 22 questions that constituted the just culture composite score, in the Cronbach's alpha analysis and the results for the just culture score indicated strong reliability. The results indicated that the multiple questions include in the composite scores for the measured variables above demonstrated internal consistency. The results of the Cronbach's alpha statistics are presented in Table 8.

Table 8

Cronbach's Alpha Reliability Statistics for Just Culture Score, Transformational Leadership, Transactional Leadership, and Laissez-Faire Leadership

Variable	Cronbach's alpha	Number of items
Just culture score	.905	22
Transformational leadership	.905	20
Transactional leadership	.732	8
Laissez-faire leadership	.910	8

Research Question 1

RQ 1: What is the relationship between the perceptions of nurse managers' transformational, transactional, and laissez-faire leadership styles and the perceptions of their unit level just culture as reported by staff nurses and nurse managers?

$H_0$1: There will be no relationship between the perceptions of nurse managers' transformational, transactional, and/or laissez-faire leadership styles and the perceptions of their unit level just culture as reported by staff nurses and nurse managers.

H_a1: There will be a relationship between the perceptions of nurse managers' transformational, transactional, and/or laissez-faire leadership styles and the perceptions of their unit level just culture as reported by staff nurses and nurse managers.

One-Way Analysis of Variance (ANOVA). I applied the ANOVA test to address whether a statistically significant relationship exists between the perceptions of nurse managers' transformational, transactional and/or laissez-faire leadership styles and the perceptions of their unit level just culture as reported by staff nurses and nurse managers. I utilized SPSS (V25) to run the ANOVA test determine if there were any statistically significant differences between the means just culture scores between the means of the nurse managers leadership styles including transformational (n = 44, M = 5.89, SD = .589), transactional (n = 54, M = 5.476, SD = .711), and laissez-faire (n = 67, M = 4.5, SD = .889; see Table 9). There were variations noted in the sample sizes of each leadership style groups and the assumptions of the ANOVA test were analyzed.

Table 9

SPSS Output for One-Way ANOVA for Just Culture Scores Measured for Transformational, Transactional, and Laissez-faire Leadership Styles

					95% Confidence Interval for Mean			
	N	*M*	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Min.	Max.
Transformational	44	5.9879	.58924	.08883	5.8087	6.1670	4.45	7.00
Transactional	54	5.4769	.71110	.09677	5.2828	5.6709	3.50	6.80
Laissez-faire	67	4.5113	.88907	.10862	4.2945	4.7282	2.03	6.40
Total	165	5.2211	.97859	.07618	5.0706	5.3715	2.03	7.00

ANOVA analysis of assumptions. The study variables met the assumptions for an ANOVA test, having an outcome variable measured as continuous (interval) and one

categorical predictor variable with three independent and unrelated groups (Frankfort-Nachmias & Leon-Guerrero, 2015). There were no outliers in the data, assessed by inspection of a boxplot for values greater than 1.5 box lengths from the edge of the box (see Figure 2).

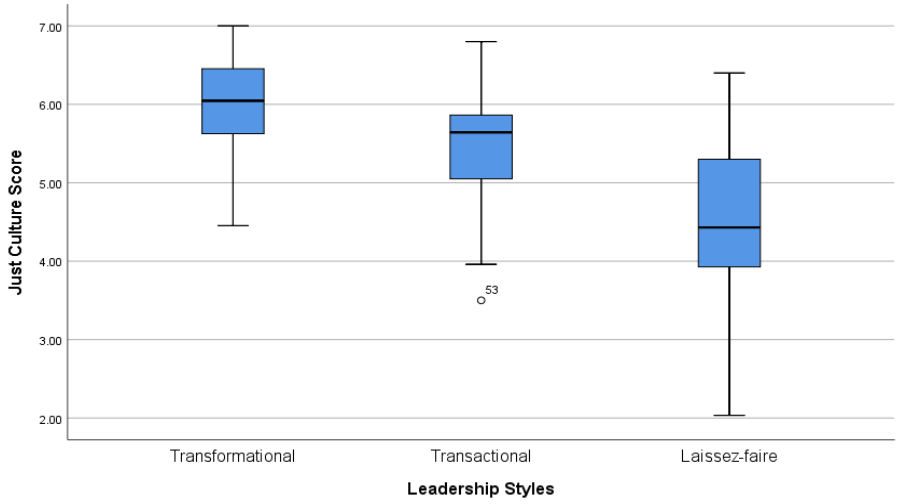

Figure 2. SPSS output for outliers. This figure illustrates no outliers for the outcome variable of the mean just culture score for the predictor variable groups of transformational, transactional, and lasses-faire leadership styles.

The just culture scores were normally distributed for the transformational, transactional, and laissez-faire leadership styles, as assessed by Shapiro-Wilk's test ($p > .05$; see Table 10). In addition, visual inspection of normal Q-Q plots for mean just culture scores of transformational, transactional, and laissez-faire leadership styles showed data points falling about the straight line indicating normal distribution (see Figure 3).

Table 10
SPSS Output for Test of Normality of Distribution Using Shapiro-Wilk for the Variables Transformational, Transactional, and Laissez-Faire Leadership Styles

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Leadership styles	Statistic	*df*	Sig.	Statistic	*df*	Sig.
Just culture score	Transformational	.063	44	.200*	.979	44	.612
	Transactional	.113	54	.082	.972	54	.239
	Laissez-faire	.080	67	.200*	.976	67	.217

*. This is a lower bound of the true significance.

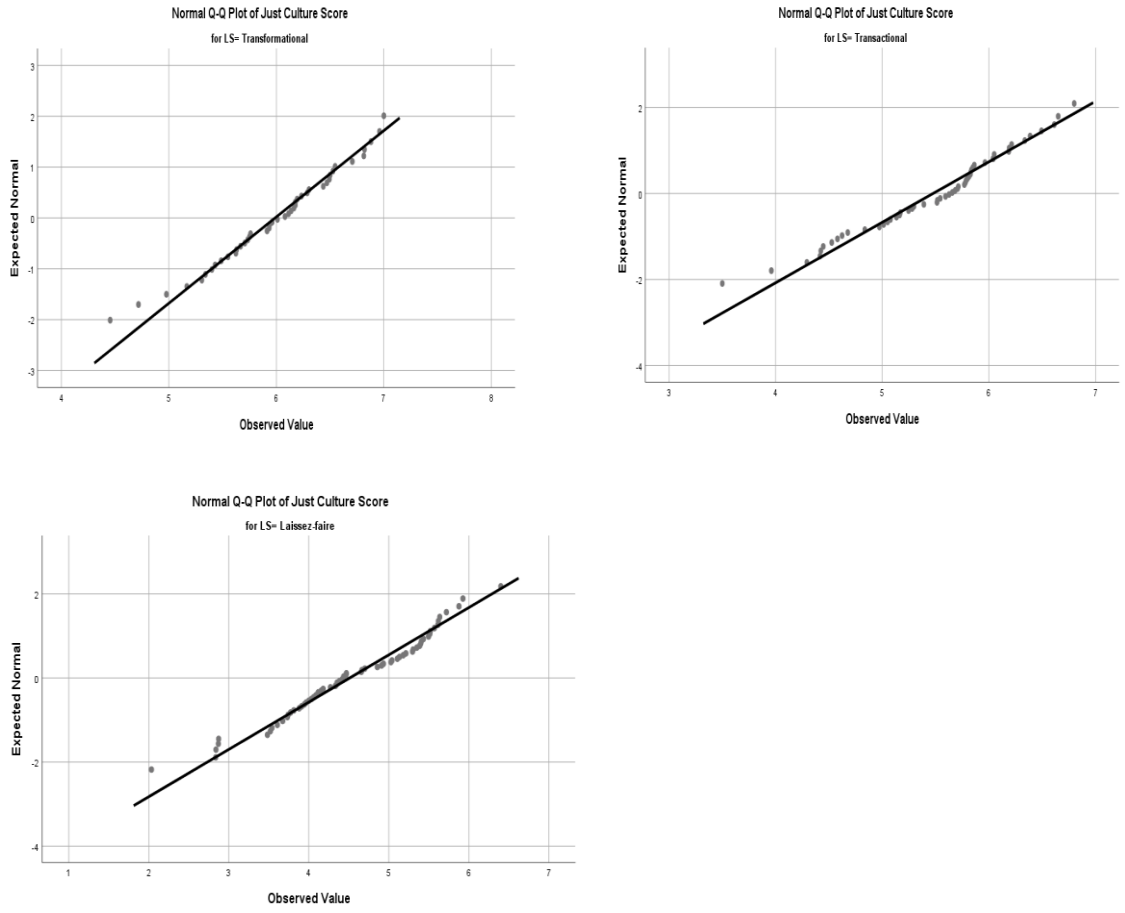

Figure 3. SPSS output for Q-Q plot. The figure illustrates homoscedasticity with points falling about the straight line and absence of or minimal curvature of the standardized residual.

The Levene's test showed *p*-value at a significant level indicating that homogeneity of equal variance cannot be assumed, $F(2, 162) = 5.218$, $p = .006$ (see Table 11). To reduce the chances for Type I error due to violation of some of the ANOVA assumptions, a robust sample size was obtained, and the significance level was changed (Warner, 2013). I used the G* Power 3 software ® to conduct the power analysis (Heinrich-Heine-Universität Düsseldorf, 2019). The power analysis based on the factors including the power of 0.8, an alpha error of probability of 0.05, and a confidence interval level of 95% (Frankfort-Nachmias & Leon-Guerrero, 2014). The power analysis indicated that the target sample size should be 158 participants. The study yielded an adequate sample size of 165, with more than 30 per group. The variabilities between the group sizes was not large. The significance level was set at $p < .01$ (Warner, 2013).

Table 11

SPSS Output for Homogeneity of Variance for the Variables of Transformational, Transactional, and Laissez-Faire Leadership Styles

		Levene Statistic	*df1*	*df2*	Sig.
Just Culture Score	Based on Mean	5.218	2	162	.006
	Based on Median	4.624	2	162	.011
	Based on Median and with adjusted *df*	4.624	2	152.117	.011
	Based on trimmed mean	5.371	2	162	.006

Statistical analysis of ANOVA. As homogeneity of equal variance could not be assumed, so Welch's ANOVA was used to determine if there was a statistically significant difference in just culture scores among the groups of transformational, transactional and laissez-faire nurse manager's leadership styles, $F(2, 107.051) = 55.253$, $p < 0.001$, partial $\eta 2 = .402$ (see Tables 12 and 13). The mean plot shows the variance of

the just culture mean scores across the predictor variables with the highest mean in the transformational leadership style group and the lowest mean in the laissez-faire leadership style group (see Figure 4).

Table 12

SPSS Output for Tests of Equality of Means Between Leadership Styles

	Statistic[a]	*df1*	*df2*	Sig.
Welch	55.253	2	107.051	.000
Brown-Forsythe	59.340	2	161.106	.000

Note. a. Asymptotically F distributed.

Table 13

SPSS Output Testing of Between Subjects Effects for the Outcome Variable Just Culture Score

Source	SS	*Df*	MS	*F*	Sig.	Partial eta squared
Corrected model	63.153[a]	2	31.577	54.478	.000	.402
Intercept	4543.878	1	4543.878	7839.334	.000	.980
LS	63.153	2	31.577	54.478	.000	.402
Error	93.899	162	.580			
Total	4654.883	165				
Corrected Total	157.053	164				

Note. a. *R* Squared = .402 (Adjusted *R* Squared = .395)

Figure 4. SPSS output for the mean of just culture score. This figure illustrates the plot showing higher just culture scores for transformational leadership style followed by transactional leadership style; and low just culture scores for laissez-faire leadership style.

As equal variances could not be assumed, I applied the Games-Howell post-hoc test to determine which leadership styles had significant differences in the just culture scores. There were statistically significant higher mean just culture scores for the more transformational than norm nurse manager group (M = 5.99, SD = .58) as compared to the more transactional than norm nurse manager group (M = 5.48, SD = .71), p = .00; and the more laissez-faire than norm nurse manager group (M = 4.51, SD = .88), $p < .001$. The mean just culture score for the more transactional than norm nurse manager group (M = 5.48, SD = .71) was statistically significantly higher than the more laissez-faire than norm nurse manager group (M = 4.51, SD = .88, $p < .001$; see Table 14). According to

Cohen's *d*, the magnitude or the effect size for the differences in just culture scores was medium (partial $\eta 2$ = .402; Lakens, 2013). Therefore, the null hypothesis was rejected.

Table 14

SPSS Output for Multiple Comparison

						95% confidence interval	
	(I) leadership styles	(j) leadership styles	Mean difference (i-j)	Std. Error	Sig.	Lower bound	Upper bound
Games-Howell	Transformational	Transactional	.51103*	.13136	.001	.1983	.8237
		Laissez-faire	1.47654*	.14032	.000	1.1431	1.8099
	Transactional	Transformational	-.51103*	.13136	.001	-.8237	-.1983
		Laissez-faire	.96551*	.14547	.000	.6202	1.3108
	Laissez-faire	Transformational	-1.47654*	.14032	.000	-1.8099	-1.1431
		Transactional	-.96551*	.14547	.000	-1.3108	-.6202

*. The mean difference is significant at the 0.05 level.

Note. Results show which predictor groups have statistically significant differences in the mean just culture score.

Research Question 2

RQ 2: What are the differences between staff nurses' perceptions of their nurse managers' transformational, transactional, and laissez-faire leadership styles and their unit level just culture; and nurse managers' perceptions of their transformational, transactional, and laissez-faire leadership styles and their unit level just culture?

$H_0$2: There will be no differences between staff nurses' perceptions of their nurse managers' transformational, transactional, and laissez-faire leadership styles and their unit level just culture; and nurse managers' perceptions of their transformational, transactional, and laissez-faire leadership styles and their unit level just culture.

H_a2: There will be differences between staff nurses' perceptions of their nurse managers' transformational, transactional, and laissez-faire leadership styles and their

unit level just culture; and nurse managers' perceptions of their transformational, transactional, and laissez-faire leadership styles and their unit level just culture.

One-Way Multivariate Analysis of Variance (MANOVA). I conducted a MANOVA to determine whether significant differences existed for the transformational, transactional, laissez-faire leadership style mean scores and the just culture mean scores among staff nurses and nurse managers, addressing the second null hypothesis. I used the G* Power 3 software to conduct the power analysis (Heinrich-Heine-Universität Düsseldorf, 2019). The power analysis based on the factors including the power of 0.8, an alpha error of probability of 0.05, and a confidence interval level of 95% (Frankfort-Nachmias & Leon-Guerrero, 2014). The power analysis indicated that the target sample size should be 158 participants. The total sample size was 165 with similar sample size found in the variable groups of nurse managers (n = 81) and staff nurses (n = 84). The outcome variables in the analysis corresponded to transformational, transactional, laissez-faire leadership styles and just culture scores; and the predictor variables corresponded to type of nursing role (staff nurses and nurse managers). The assumptions of the one-way MANOVA were evaluated.

MANOVA analysis of assumptions. A primary assumption of MANOVA was met as the outcome variables are measured as continuous using a composite of series of questions that make up the participants overall mean scores of just culture, transformational, transactional, and laissez-faire leadership styles. The predictor variable is measured as categorical variable with two independent groups of staff nurses and nurse managers (Frankfort-Nachmias & Leon-Guerrero, 2015). The sample size in the

categorical groups were enough to utilize the MANOVA analysis, with 84 staff nurses and 81 nurse managers. The other assumptions of the MANOVA were examined using SPSS (V25) including normality, homogeneity, and multicollinearity (Warner, 2013).

The first assumption of MANOVA is that there is a normal distribution and absence of significant outliers in the data. The normality test was conducted in both univariate terms for each of the outcome variables and in multivariate terms examining the linear combination of the outcome variables (Frankfort-Nachmias & Leon-Guerrero, 2015). The analysis showed that there were no univariate outliers in the data, as assessed by inspection of a boxplot for values greater than 1.5 box-lengths from the edge of the box for the outcome's variables of transformational leadership, transactional leadership, laissez-faire leadership, and just culture (see Figures 5 to 8).

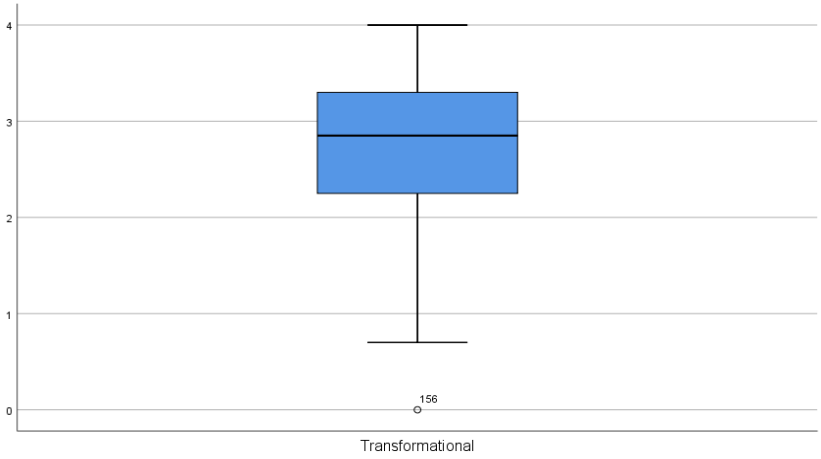

Figure 5. Box plot of the outcome variable of transformational leadership showing no significant outliers.

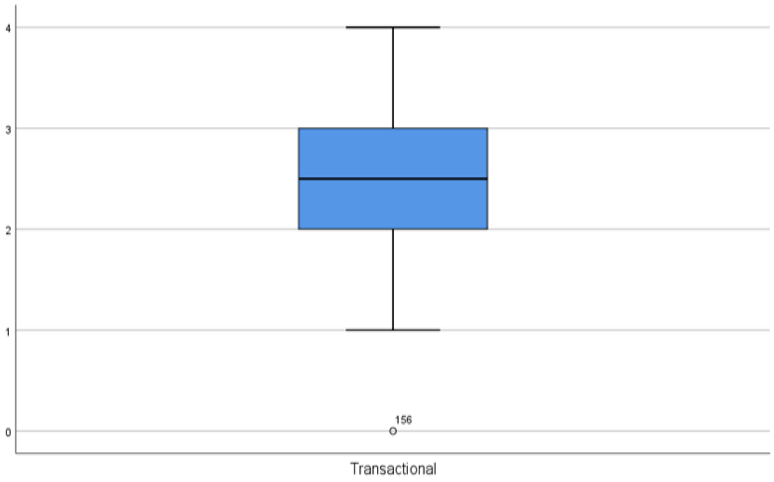

Figure 6. Box plot of the outcome variable of transactional leadership showing no significant outliers.

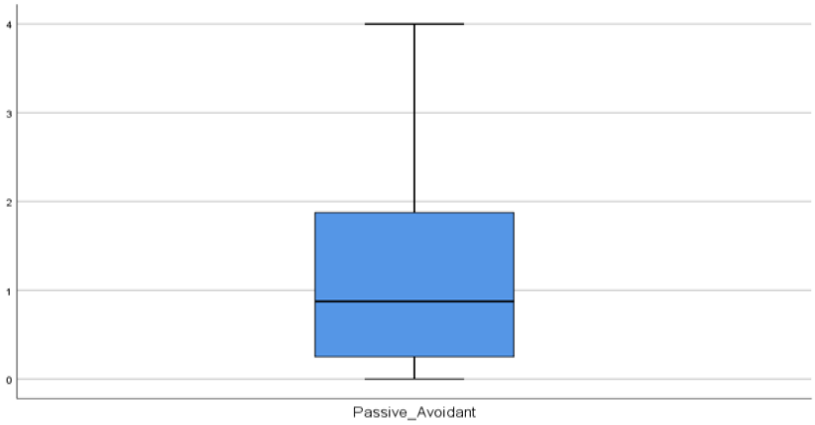

Figure 7. Box plot of the outcome variable of laissez-faire (passive avoidant) leadership showing no significant outliers.

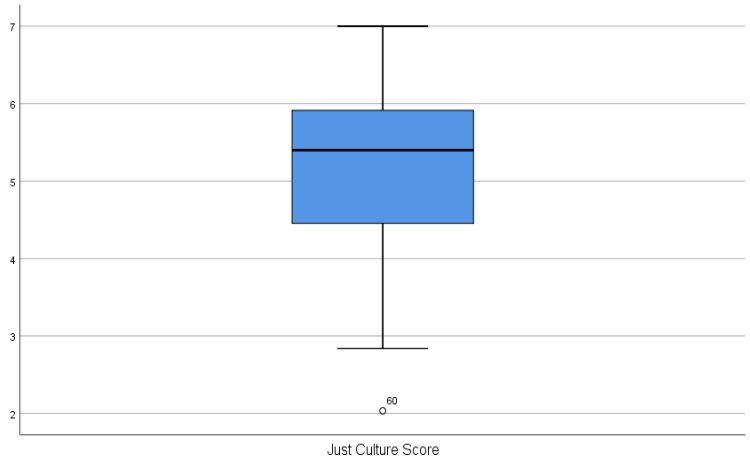

Figure 8. Box plot of the outcome variables of just culture score showing no significant outliers.

Transformational, transactional, laissez-faire, and just culture scores were normally distributed as assessed by visual inspection of normal Q-Q plots, showing points falling about the straight line (see Figure 9). A significant result for the Box's M test (p = .032) and the Levene's output for transformational (p = .024) and laissez-faire (p = .033) leadership style indicated that homogeneity of variance metrics was violated (see Table 15).

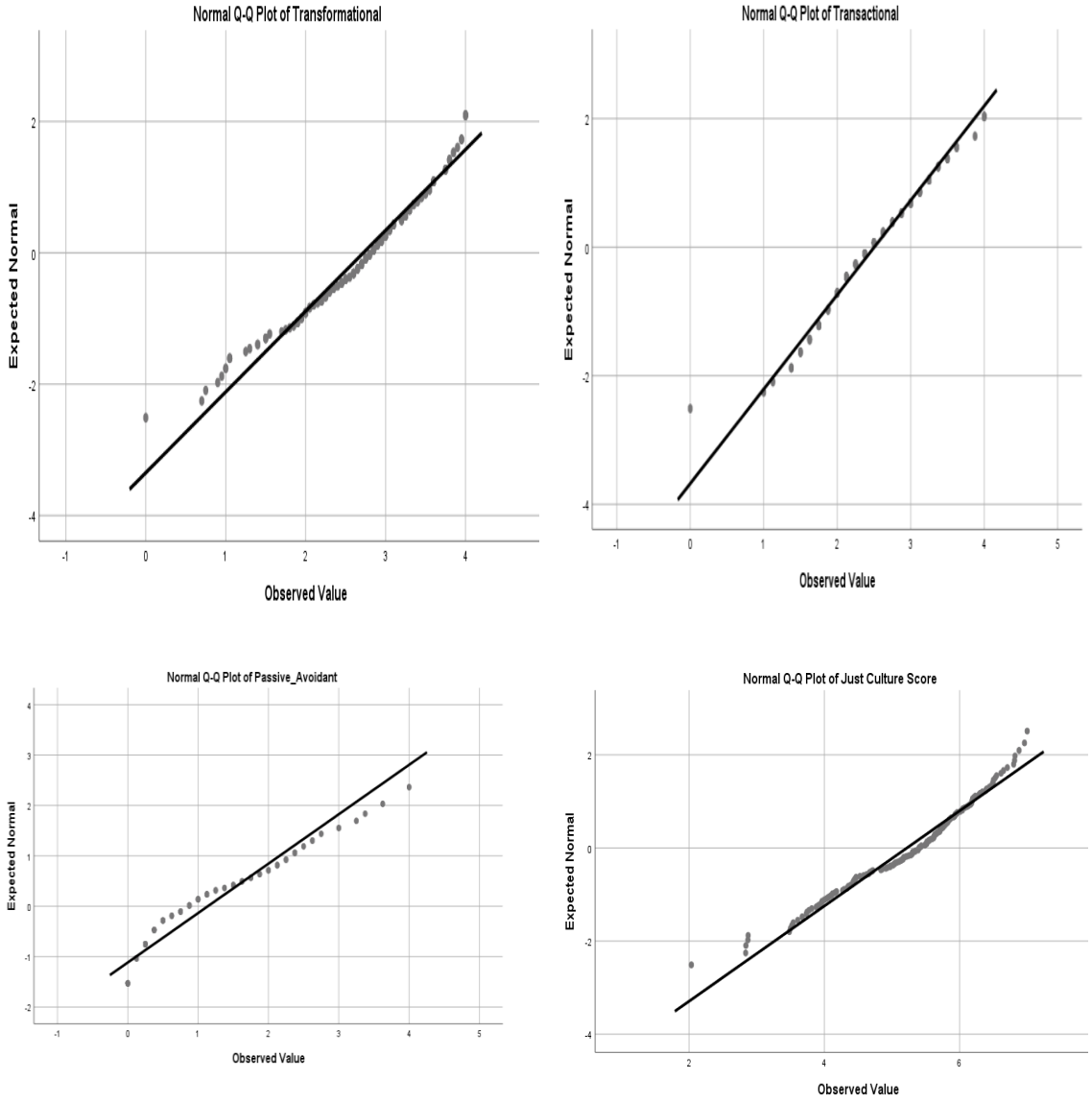

Figure 9. SPSS output for Q-Q plot. The figure illustrates homoscedasticity with points falling about the straight line and absence of or minimal curvature of the standardized residual.

Table 15

Box Plot Test of Equality of Covariance Matrices

Box's *M*	*F*	*Df1*	*Df2*	Sig
20.302	1.976	10	125535.055	.032

Pearson correlation analysis showed that there was no high multicollinearity with r value less than 0.8. There was a positive strong correlation between transformational and transactional leadership style ($r = .755$, $p < .01$) and between transformational leadership style and just culture scores ($r = .708$, $p < .01$). There was a moderate correlation found between transactional leadership style and just culture scores ($r = .544$, $p < .01$). There was a negative correlation between laissez-faire leadership style and transformational ($r = -.458$, $p < .01$), transactional leadership style ($r = -.176$, $p = .023$) and just culture scores ($r = -.553$, $p < .01$; see Table 16). Analysis of collinearity statistics was further tested using variance inflation factors, which showed variance inflation factor scores below 10 and tolerance scores above 0.2 (see Table 17). The violation of the homogeneity of variance assumption was recognized as the limitation of this study and may reduce the statistical power (Warner, 2013). Therefore, the statistical significance level set at (lower α level) $p < .01$ to reduce type I error.

Table 16

Correlation Output Between Outcome Variables of Transformational, Transactional, Laissez-Faire Leadership Styles, and Just Culture Score

Correlation	Transformational	Transactional	Laissez-faire	Just Culture Score
Transformational	1			
Transactional	.755	1		
Laissez-faire	-.458	-.176	1	
Just culture score	.708	.544	-.553	1

Table 17

Variance Inflation Factors and Tolerance Scores for Outcome Variables

	Tolerance	Transactional
Transformational	.279	3.590
Transactional	.386	2.592
Laissez-faire	.616	1.624
Just culture score	.424	2.360

Statistical Analysis of MANOVA. SPSS (V25) was utilized for the analysis of the MANOVA test. The descriptive data shows that there were slightly more staff nurse participants (n = 84) than nurse managers (*n* = 81). To address the second null hypothesis, I examined the differences between perceptions of nurse manager leadership style and unit level just culture between nurse managers and staff nurses. The mean scores showed higher levels of perceptions of transformational leadership style among nurse managers (*M* = 3.027, *SD* = .679) as compared to the staff nurses (*M* = 2.429, *SD* = .827). Similarly, perceptions of transactional leadership style were higher in nurse managers (*M* = 2.66, *SD* = .694) than staff nurses (*M* = 2.348, *SD* = .634). The staff nurses had higher mean scores of laissez-faires (passive avoidant) leadership style perceptions (*M* = 1.436, *SD* = 1.052) as compared to the nurse managers (*M* = .832, *SD* = .890). Just culture mean scores were higher in the nurse manager group (*M* = 5.357, *SD* = .986) as compared to the staff nurses (*M* = 5.089, *SD* = .958; see Table 18). The statistical significance of the differences was further evaluated.

Table 18

SPSS Output for Descriptive Statistics for Leadership Styles by Groups

Variable	Current role	*M*	Std. Deviation	*N*
Transformational	Staff nurse	2.4286	.82664	84
	Nurse manager	3.0265	.67920	81
	Total	2.7221	.81288	165
Transactional	Staff nurse	2.3482	.63414	84
	Nurse manager	2.6667	.69400	81
	Total	2.5045	.68115	165
Laissez-faire	Staff nurse	1.4360	1.05291	84
	Nurse manager	.8302	.89034	81
	Total	1.1386	1.01981	165
Just culture score	Staff nurse	5.0891	.95802	84
	Nurse manager	5.3579	.98675	81
	Total	5.2211	.97859	165

I utilized the multivariate test results for Pillai's Trace due to the violation of homogeneity of variance to examine whether the differences between the groups were statistically significant (Warner, 2013). There was a statistically significant difference between the groups of nurse managers and the staff nurses on the combined outcome variables, $F(4, 160) = 11.086$, $p < .001$; Wilks' $\Lambda = .217$; partial $\eta 2 = .217$ (see Table 19).

Table 19

SPSS Output Multivariate Test Between the Independent Variable Groups

Effect		Value	*F*	Hypothesis *df*	Error *df*	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[c]
Intercept	Pillai's Trace	.981	2120.660[b]	4.000	160.000	.000	.981	8482.639	1.000
	Wilks' Lambda	.019	2120.660[b]	4.000	160.000	.000	.981	8482.639	1.000
	Hotelling's Trace	53.016	2120.660[b]	4.000	160.000	.000	.981	8482.639	1.000
	Roy's Largest Root	53.016	2120.660[b]	4.000	160.000	.000	.981	8482.639	1.000
Current Role	Pillai's Trace	.217	11.086[b]	4.000	160.000	.000	.217	44.343	1.000
	Wilks' Lambda	.783	11.086[b]	4.000	160.000	.000	.217	44.343	1.000
	Hotelling's Trace	.277	11.086[b]	4.000	160.000	.000	.217	44.343	1.000
	Roy's Largest Root	.277	11.086[b]	4.000	160.000	.000	.217	44.343	1.000

The univariate ANOVA showed that there was a statistically significant difference in transformational leadership style mean scores, $F(1, 163) = 25.672$, $p < .0001$; partial $\eta 2 = .136$; transactional leadership style mean scores, $F(1, 163) = 9.479$, $p = .002$, partial $\eta 2 = .055$; laissez-faire leadership style mean scores, $F(1, 163) = 15.869$, $p < .0001$; partial $\eta 2 = .089$, between the groups of nurse managers and staff nurses. The differences between the just culture means scores between nurse managers and staff nurses was not statistically significant ($p = .078$; see Table 20). Although there the effect scores were low, there were statistically significant differences of the overall mean scores showing nurse managers had a higher perception of having transformational and transactional leadership styles than the staff nurses' perceptions about their nurse

managers leadership styles. The staff nurses had higher perceptions of laissez-faire leadership styles of their nurse managers than the nurse managers perceptions of their own leadership styles. Therefore, the null hypothesis was rejected.

Table 20

SPSS Output Testing Between-Subjects Effects for the Outcome Variables

Source	Dependent variable	Type iii sum of squares	*Df*	Mean square	*F*	Sig.	Partial eta squared	Noncent. Parameter	Observed power[e]
Corrected Model	Transformational	14.745[a]	1	14.745	25.672	.000	.136	25.672	.999
	Transactional	4.182[b]	1	4.182	9.479	.002	.055	9.479	.864
	Laissez-faire	15.132[c]	1	15.132	15.869	.000	.089	15.869	.977
	Just culture score	2.981[d]	1	2.981	3.153	.078	.019	3.153	.423
Intercept	Transformational	1227.123	1	1227.123	2136.478	.000	.929	2136.478	1.000
	Transactional	1037.055	1	1037.055	2350.764	.000	.935	2350.764	1.000
	Laissez-faire	211.787	1	211.787	222.100	.000	.577	222.100	1.000
	Just culture score	4500.554	1	4500.554	4761.345	.000	.967	4761.345	1.000
Current Role	Transformational	14.745	1	14.745	25.672	.000	.136	25.672	.999
	Transactional	4.182	1	4.182	9.479	.002	.055	9.479	.864
	Laissez-faire	15.132	1	15.132	15.869	.000	.089	15.869	.977
	Just culture score	2.981	1	2.981	3.153	.078	.019	3.153	.423
Error	Transformational	93.622	163	.574					
	Transactional	71.908	163	.441					
	Laissez-faire	155.431	163	.954					
	Just culture score	154.072	163	.945					
Total	Transformational	1331.008	165						
	Transactional	1111.094	165						
	Laissez-faire	384.484	165						
	Just culture score	4654.883	165						
Corrected Total	Transformational	108.367	164						
	Transactional	76.090	164						
	Laissez-faire	170.563	164						
	Just culture score	157.053	164						

Summary

The purpose of this chapter was to examine the relationship between perceptions of the unit level just culture and the leadership styles of nurse managers. Through a quantitative research approach, the hypothesis of the study was tested through a statistical analysis of the data. The results exploring the two-null hypothesis of the study showed statistically significant findings among the predictor and outcome variable. The ANOVA test used to analyze the first research question revealed a statistically significant correlation between the nurse managers leadership styles and just culture score; thus, the null hypothesis was rejected. Similarly, the MANOVA test applied to the second research question indicated that there is a statistically significant difference between the nurse managers and the staff nurses' perceptions of leadership styles and just culture scores. The second null hypothesis was rejected.

Chapter 5 includes the interpretation of the findings with comparisons to current similar scientific literature exploring correlations of nurse manager leadership style to nursing outcomes. The analysis of results is described in the context of the studies theoretical framework consisting of the FRLT and the JCM. I explain the limitations to generalizability, validity, and reliability. The recommendations for future research and the implications of the study for positive social change are provided, keeping within the scope of this study.

Chapter 5

Introduction

Chapter Five offers a synthesis of the research findings from this study and integrates these findings with the study's guiding theoretical framework of the FRLT and JCM. A synopsis of the problem, study purpose, and discussion of the theoretical model as it relates to the current study are provided. Limitations of the study and implications for social change, and suggestions for future research conclude this chapter.

The primary purposes of this quantitative descriptive correlational study were to (a) determine if there was a relationship between the perceptions of nurse managers' transformational, transactional and laissez-faire leadership styles and their units' just culture, and to (b) determine whether there was a difference between staff nurses' and nurse managers' perceptions of leadership styles and just culture. A quantitative research methodology was applied using SPSS (V25) to analyze the data collected from 165 registered nurses working in a full time or part-time capacity in a hospital setting across the United States. The study included nurse managers (N = 81) with formal supervisory responsibilities over staff nurses and staff nurses (N = 84) with one year or more experience in the hospital setting. The study participants do not represent the population in age but were comparable to the 2017 national nursing workforce data in other demographical aspects. Most of the participants were female (90%) with baccalaureate degrees (50%) between ages 30 and 39 (32%) and greater than 16 years of experience (35.2%) who are currently working 20 to 40 hours (53%). The goal of this study was to

add new research to the nursing profession regarding the relationship between nurse manager leadership styles and just culture in a hospital setting.

A hospital's patient safety culture has a significant influence in reducing errors (Kohn, et al., 2000; TJC, 2017a) that have resulted in hospitalized patient deaths in the United States ranging from 210,000 to 440,000 per year (James, 2013). A positive patient safety culture leads to better patient outcomes such as lower infection rates and patient satisfaction scores ($p < .05$; Smith et al., 2017), decrease in pressure ulcer and fall rates ($p < .05$; Xie et al., 2017), and staff commitment to report errors ($p < .001$; YuKyung & Soyoung, 2017). In contrast, in a negative safety culture, nurses have reported feelings of incompetence and shame when incidents occurred, which deterred them from reporting errors, increasing the likelihood of reoccurrence of the error (Soydemir et al., 2017). However, in a just culture, individuals are not blamed for mistakes but are held accountable for engaging in purposeful, reckless behaviors (Ungvarsky, 2016), which can reduce errors and prevent patient harm or death.

Nurse managers who are often considered middle managers in the organization play a significant role in the sustainability of a just culture based on their ability to manage human errors, at-risk behaviors, and reckless behaviors effectively (Marx, 2001). Effective leadership skills from nurse managers are required to sustain a just culture where employees perceive their work environment to be safe and to have a nonpunitive atmosphere in which error reporting, open communication, and learning is encouraged (Battard, 2017; Gutberg & Berta, 2017; Pattison & Kline, 2015). Therefore, it was important to determine whether transformational or transactional leadership were

associated with nurses' perceptions of unit level just culture. This study filled the gap in identifying nurse managers, leadership styles, or behaviors that promote a just culture at the unit level.

My study results revealed a positive, statistically significant relationship between transformational leadership style and transformational leadership style and higher perceptions of a unit level just culture. Additionally, the results identified a statistically significant relationship between laissez-faire leadership style and lower perceptions of a unit level just culture. I also discovered a statistically significant difference between nurse managers' and staff nurses' perceptions of nurse managers leadership styles. Although not statistically significant, there was also a difference between nurse managers and staff nurses' perceptions of the unit just culture. In this chapter, I further describe the meaning of the findings, limitations, implications for social change, and recommendations for future research in the field of just culture and leadership styles for nurse managers.

Interpretations of Findings

The results of the study revealed findings that expand the existing body of knowledge regarding the role of leadership styles in establishing a just culture environment. Research suggests that nurse managers leadership styles impact nurse job-related outcomes (Merrill, 2015; Mills et al., 2019; Negussie & Demissie, 2013). The findings from my study and previous research that define the nurse manager as a leader who through strong transformational and transactional leadership skills can increase a

nurse’s safety perceptions, satisfaction, empowerment, and engagement are addressed in the following sections.

Leadership Styles and Just Culture

There were no previous studies linking nurses' perceptions of their nurse manager's leadership behaviors to their unit-level just culture. However, the results of this study are consistent with studies showing a positive relationship between transformational and transactional leadership styles and attributes of a safety culture such as safety climate, communication, and error reporting practices. For example, Farag et al. (2017) discovered a high correlation between transformational and transactional leadership styles and open communication, teamwork, and appropriate management safety actions ($p < .001$) as well as an indirect correlation with safe medication administration practices ($p < .001$) and nurses' willingness to report medication errors ($p = .03$). The reduction of medication errors and patient length of stay were also positively impacted by reduced staff absenteeism and better nurse-to-patient ratios, which is highly correlated with transformational leadership behaviors (Paquet et al., 2013).

Similarly, Merrill (2015) found a significant positive correlation between transformational leadership style and transactional leadership style and safety climate elements including management and pharmacy support, socialization and training, safety emphasis, and employee safety ($p = .01$) as well as a significant correlation between transformational leadership and blameless culture ($p = .05$). Hu et al. (2016) also indicated that surgeon leaders' transformational leadership style has a statistically

significant correlation with staff's ability to speak up ($p < .001$), which is critical for operating room safety.

Transformational and transactional nurse manager behaviors have also been found to have positive correlations with environmental, physical, and mental factors that could affect nursing practice. Researchers have indicated positive correlations between transformational and transactional leadership and nurse satisfaction ($p < .001$; Negussie & Demissie, 2013); reduced bullying behaviors ($p < .001$; Mills et al., 2019); lower emotional exhaustion and depressive symptoms ($p < .05$; Madathil et al, 2014); staff empowerment ($p < .001$; Khan et al., 2018); and staff engagement ($p < .001$; Manning, 2017). Researchers have also identified the positive correlations between decreased adverse events and job satisfaction (Boamah et al., 2018); higher safety climate perceptions and nursing satisfaction (Dorigan & Guirardello, 2017); negative behaviors of bullying and decreased quality of patient care and increased error and adverse events (Purpora et al., 2015); and staff empowerment and patient safety culture perceptions (Amiri et al., 2018). Similar to my study, Negussie and Demissie (2013) and Manning (2017) found transformational leadership to have a higher impact on producing positive outcomes for nurses, followed by transactional leadership. However, Avolio and Bass (2004) emphasized that transformational and transactional leadership styles are not mutually exclusive, and effective leaders can exercise each of the leadership behaviors appropriately.

Transformational and transactional leaders have also demonstrated the ability to improve the quality of the nursing staff work environment. Nurse managers are in the

position to influence the nursing practice environment by creating an atmosphere that supports the nurse's well-being, improving their job satisfaction, engagement, professional development, and skills (Adams et al., 2019). Managers can utilize transformational leadership attributes to increase motivation and engagement in innovation and performance improvement and exhibit transactional leadership qualities to recognize and reward excellent performance and enforce rules and regulations when necessary (Avolio & Bass, 2004). Further, in a just culture, a leader needs to have the flexibility and ability to execute the appropriate actions to manage errors, including consoling, coaching, and taking disciplinary actions based on the situation (Marx, 2001). The findings of this study were congruent with the literature that showed that nurse managers who practice transformational and transactional leadership styles could positively influence nursing practice, empowerment, satisfaction, engagement, and safety. Both transformational and transactional leadership styles are necessary for leaders to maintain a positive unit level, just culture, and quality patient outcomes.

In contrast, laissez-faire leadership behaviors lead to inadequate guidance and supervision of staff (Antonakis et al., 2003) and failure to proactively manage risks (Bass, 1999). Laissez-faire leadership style has had a negative correlation with safety climate ($p = .05$; Merrill, 2015). Additionally, information sharing ($p < .001$) and speaking up culture is negatively correlated with surgeons who display a laissez-faire leadership style (Hu et al., 2016). Laissez-faire leadership has also been negatively correlated with structural empowerment ($p < .001$; Khan et al., 2018) and has had the least impact in deterring bullying behaviors (Mills et al., 2019). The results of my study support these

findings, and nurse managers should avoid laissez-faire leadership styles, which could negatively affect the nurses' work environment and perceptions of a just culture.

Differences Between Nurse Manager and Staff Nurse Perceptions

The demographics data between the nurse manager and the staff nurses were comparable except for hours worked per week and the highest degree earned. More nurse managers than staff nurses reported working more than 40 hours, and also a higher number of nurse managers held masters and doctoral degrees than the staff nurses. The nurse manager and the staff nurse groups were comparable in age, years at current job, type of unit worked, and years of experience as a registered nurse. The results indicated that there were statistically significant differences between staff nurses' and nurse managers' perceptions of leadership styles. Investigating the differences between the nurse managers' and the nursing staff ratings of leadership styles and just culture was essential, as researchers have indicated that the nurse managers' expectations, priorities, and responses to problems influence the staff's perceptions of the unit-level safety culture (Willmott & Mould, 2018).

Furthermore, the differences between leadership and staff perceptions of safety may impact implementation efforts of safety initiatives and contribute to an increase in errors leading to patient harm (Kristen et al., 2015). Researchers have reported incongruencies between staff nurses' and nurse managers' perceptions of transformation and transactional leadership styles (McGuire & Kennerly, 2006). In support of this claim, my study showed a statistically significant difference between the groups of nurse

managers and the staff nurses on the variables of transformational, transactional, laissez-faire leadership style ($p < .001$).

The differences between the nurse manager and the staff nurses just culture perceptions were not statistically significant; however, it was worth exploring due to the significant impact the research findings have on patient safety. For example, Kristensen et al. (2015) found that a higher number of clinical nurse leaders than bedside nurses indicated a positive patient safety climate, including implementation of patient safety systems, adequate management support, and teamwork ($p < .001$). Likewise, Turunen et al. (2013) identified that more nurse managers (65%) than staff nurses (47%) reported that patient safety is never compromised to accomplish more work ($p = .011$). A higher percentage of staff nurses (25%) felt responses to errors are often punitive against the individual compared to only 8% of nurse managers ($p < .001$). The gaps in perceptions of safety between managers and staff lead to an increase in error rates, which compromises patient safety (Kristensen et al., 2015). Therefore, it was essential to explore whether there were inconsistencies in the perceptions of just culture between nurse managers and staff nurses. However, in my study did not support previous findings as there was not a statistically significant difference in the perceptions of just culture between the nurse managers and the staff nurses.

In contrast, there was a statistically significant difference between the nurse managers and the staff nurses' perceptions of the nurse manager's leadership style, although the magnitude of the differences between nurse manager and staff nurse perceptions of leadership styles was small. A limited number of studies compared nurse

manager self-assessment of leadership styles and the staff nurses' assessment of the manager in terms of transformational, transactional, and laissez-faire leadership styles. McGuire and Kennerly (2006) identified that nurse managers perceive themselves as more transformational than the direct care registered nurses who report to them ($p <$ .001). However, Albagawi et al. (2017) found no significant differences in the perceptions of the nurse managers and the staff nurses regarding managers' leadership transformational leadership style. The findings from my study are consistent with McGuire and Kennerly (2006) that showed that nurse managers often rate their leadership styles higher as transformational followed by transactional as compared to staff nurses ratings of their nurse managers leadership styles d ($p < .001$). The perceptions of the transactional leadership style were higher in nurse managers than staff nurses ($p = .002$), and the perceptions of the laissez-faire leadership style were higher in staff nurses as compared to nurse managers ($p < .001$). Studying the differences between the nurse managers and staff nurses' perceptions of leadership styles was necessary, as the alignment between nurse managers and staff nurses is critical to assist staff nurses in navigating through an increasingly complex healthcare system and governing policies (Albagawi et al., 2017).

Theoretical Findings

Avolio and Bass's (2004) FRLT and Marx's (2001) JCM guided my study, which facilitated the discovery of the established relationships between the concepts in this study. The FRLT and JCM theoretical frameworks limited the scope of the study to guide the discovery of the relationships between the critical variables of transformational,

transactional, and laissez-faire leadership and just culture. The FRLT and JCM also helped emphasize the role of effective leadership in creating a just culture. FRLT indicated that a leader's success is based on the ability to recognize situations that can be best resolved by using either transformational or transactional leadership styles and the efforts to avoid laissez-faire leadership behaviors. The results of my study supported the FRLT and JCM theoretical framework that endorses the management use of transformational and transactional leadership styles (Avolio & Bass, 2004) to coach and support employees, promote accountability and establish a healthy perception of just culture at the unit level (Marx, 2001).

The intention of using the FRLT and JCM as a theoretical model was to show the influence of the nurse manager's transformational, transactional, and laissez-faire leadership styles on perceptions of a unit level just culture. Consistent with FRLT, transformational, and transactional leadership styles accounted for higher mean just culture perception scores. The predictor variables of the transformational and transactional leadership styles of FRLT were found to be significantly positively correlated with unit-level just culture. Whereas, laissez-faire leadership style had a significant correlation with low just culture scores. Therefore, my research supports the application of FRLT for the successful implementation of the JCM. The FRLT and JCM offered an explanatory framework to advance research related to nurse managers leadership styles and behaviors that promote a just culture at their unit level.

Limitations of the Study

I identified the limitation presented during the execution of the study that may have influenced the interpretation of the findings. The first limitation was identified during the participant recruitment phase. The data collection and research methodology utilized also added to the limitations of the study.

The recruitment methodology included the use of convenience sampling to identify potential participants of registered nurses working in a hospital setting in the United States. The sampling methodology can lead to under-representation or over-representation of specific groups within the population. Contrary to the 2017 national workforce survey that showed the average age of registered nurses as 51 and 14% of nurses over the age of 60, most of my study participants were younger registered nurses between ages 30 and 39 with no participants over 60. Additionally, I limited my study population to registered nurses working in a hospital setting. Excluding the registered nurses working outside the hospital setting will affect the generalizability of the study to other work settings that employee registered nurses. Overall, the use of convenient sampling limited to the hospital setting increased the likelihood that the study participant may not be representative of the registered nurse population; therefore, affecting the generalizability of the study.

Additionally, the study was cross-sectional, where the data were gathered at a single point in time, restricting the variables from being measured over time. A data set gathered at a single point in time could be influenced by incidents such as changes in organizational leadership or structure that may cause the relationships investigated to vary over time. Furthermore, the study design did not allow for analysis of the behaviors

of leadership styles and just culture over time, which could have provided insight into whether there is an actual cause and effect relationship (Bowen & Wiersema, 1999). Therefore, due to the cross-sectional nature of the study, the findings cannot support the causal conclusion between leadership style and just culture.

The data were collected in a self-reported online survey. Due to the self-reported nature of the survey, the nurse's responses may not have reflected their accurate perceptions of the leadership behaviors and just culture. The study included the appropriate participants and target sample size; however, the analysis did not account for those participants who drop out of the study. Statistical controls were not used to address the non-responders, limiting the ability to generalize the results to the nurses working in U.S. hospitals who chose not to participate in the study.

Recommendations

My study was designed to test the FRLT theory of transformational, transactional, and laissez-faire leadership styles and the JCM unit level just culture perceptions of nurse managers and staff nurses working in a hospital setting across the United States. Conceptually, transformational leaders inspiring and motivating behaviors; and transactional leaders coaching and rewarding behaviors may positively influence staff's perceptions of a just culture in their work environment. The results of my study supported the FRLT theory by showing a positive correlation between transformational and transactional leadership and just culture.

Expanding this research study to include patient outcome variables would add to the understanding of the nurse managers' influence on patient safety and quality of care,

given the complex nature of hospitals and the continued harm inflicted on patients due to preventable medical errors. Future research should focus on exploring the relationship between nurse-sensitive patient outcomes such as pressure injuries and hospital-acquired infections along with the unit level just culture and nurse manager leadership styles. This study highlighted the importance of nurse managers adopting effective leadership styles such as transformational and transactional leadership and avoiding passive and laissez-faire leadership styles, and future studies should explore its impact on nursing practice and outcomes.

Multiple researchers have established a positive correlation between transformational and transactional leadership and a negative correlation between laissez-faire leadership and various nurse work environment and job-related outcomes, such as safety climate (Merrill, 2015); satisfaction (Negussie & Demissie, 2013); engagement (Manning, 2017); and with this study, just culture. My results showed a higher number of managers identified as being more laissez-faire than the norm as compared to transformational and transactional leadership styles. Future studies should explore nurse managers' perceptions to identify what may be the antecedents, preparedness, individual attitudes, and barriers related to practicing transformational and transactional leadership. Further investigation of nurse manager's perceptions may provide an in-depth understanding of the factors that could prove challenging in adopting transformational and transactional leadership styles and drivers behind the discrepancies in nurse manager performances as related to their leadership styles. Additional research may also assist in

identifying the skill set, resources, support required for nurse managers to function using transformational and transactional leadership styles.

The result of my study found low just culture scores among nurses and nurse managers, indicating the continued prevalence of low just culture perceptions among nurses. This finding is significant as there has been a focus on patient safety culture for more than two decades and recommendations from national organizations, such as TJC (2017a), ANA, and IOM (2010), to adopt a JCM for patient safety (Kohn et al., 2000). Future research focused on exploring variables that may influence staff nurses' perceptions of just culture should continue to create significant progress toward a just culture. A better understanding of the variables that may positively or negatively influence just culture will provide additional insight into why hospital units are struggling to adopt just culture principals.

The theoretical frameworks for this study were FRLT and JCM. I identified a feasible theoretical framework for future studies as no previous researchers examined the relationship between staff nurses' and nurse manager's perceptions of transformational or transactional leadership behaviors and unit-level just culture. The study provided a better understanding of the concepts of transformational and transactional leadership styles and the relationship with unit-level just culture perceptions. The theoretical framework constructed from FRLT and JCM should be utilized in other studies to analyze the relationship between the synergistic use of transformational and transactional leadership and perceptions of a just culture at the unit level.

Future studies exploring the relationships between nurse manager leadership style and just culture should include the perceptions of both nurse managers and staff nurses. Furthermore, exploring the differences between the nurse manager and staff nurses' perceptions is essential as leadership behaviors may play a crucial role in maintaining a just culture at the unit level. The alignment of perceived leadership styles between nurse managers and staff nurses is critical as nurse leaders are vital to assist staff nurses in successfully navigating through an increasingly complex healthcare system and governing policies (Albagawi et al., 2017). Therefore, understanding the differences in perceptions between nurse managers and staff nurses may be critical for studies focused on implementing improvements in leadership or just culture practices at the unit level.

Implications

This study explored two research questions and hypotheses aimed to discover the relationship between nurse manager leadership style and unit-level just culture. The literature indicated that transformational and transaction leaders create an atmosphere of safety, empowerment, and support for staff nurses (Manning, 2017; Merrill 2015; Mills, 2019; Negussie & Demissie, 2013). Therefore, nursing leadership must consider the impact of leadership styles among nurse managers who are assigned to provide direct supervision over nurses. My study contributes to positive social change adding to the scientific inquiries of nursing researchers highlighting the significance of effective leadership on the performance and physical and mental health of the direct care registered nurses.

The results of my study provided essential information that can be used to address the research problem of limited knowledge regarding the type of nurse leadership styles, which could positively influence just culture perceptions at the unit level. These results are particularly important as hospital leaders need to establish a positive patient safety culture at the unit level; particularly lead by the JCM (ANA, 2016; Battard, 2017; Marx, 2001; Reason, 2016; Rogers et al., 2017,), which could reduce preventable deaths related to medical errors (James, 2013). This research addressed nurse manager as they have tremendous leadership responsibilities to balance administrative duties with nursing practice and outcomes; and as a result, play a significant role as a leader that influences their unit-level patient safety culture (Turunen et al., 2013).

Transformational and transactional leadership styles promote the nursing practice. Previous researchers, including Manning (2017) and Merrill (2015), showed a positive relationship between transformational and transactional leadership and nurse work environment and job-related outcomes. In my study, a higher just culture perception of hospital nurses was associated with managers with a more transformational leadership style followed by those managers with a transactional leadership style. Lower just culture perceptions were associated with nurses who were reported as having more of a laissez-faire leadership style. Therefore, the use of transformational and transactional leadership styles by the nurse manager has a significant role in creating a just culture at the unit level, which may lead to better patient outcomes. This study may be used as a guide for hospitals working towards developing programs that enhance the nurse managers' leadership skills and behaviors necessary to sustain a just culture at the unit level.

Additionally, a weak but significant difference between nurse manager perceptions and nursing staff perceptions of leadership styles of transformational, transaction, and laissez-faire leadership styles was discovered. If the staff nurses do not perceive nurse managers as effective leaders despite the nurse manager's intentions and perceptions, there could be a negative impact on the nurses' work environment. Gaps in perceptions of safety between managers and staff need to be accounted for as it creates adverse patient outcomes (Kristensen et al., 2015); and a laissez-faire or ineffective leadership can lead to negative emotional and physical impact on nurses (Merrill, 2015; Mills et al., 2019). Therefore, nurse managers should monitor and have an awareness of their staff's perceptions of their leadership style and unit-level just culture.

Conclusion

This study adds new knowledge about the relationship between transformational, transactional, and laissez-faire leadership and just culture. I addressed the primary purpose of the study through a quantitative descriptive correlational study that determined the relationship between the perceptions of nurse managers' transformational, transactional and laissez-faire leadership styles and their units' just culture; and the differences between staff nurses' and nurse managers' perceptions of leadership styles and just culture. The investigation of the relationship among the above variables was essential as patient safety culture is highly correlated with error reduction and positive patient outcomes. The study included staff nurses and nurse managers with formal supervisory responsibilities working in hospital settings where patients are known to be prone to hospital-acquired adverse events. The study limitations included convenience sampling,

limitation to nurses working in a hospital setting, the cross-sectional method, and the self-reported nature of data collection.

The results of my study showed statistically significant higher levels of a unit level just culture perceptions were associated with transformational and transactional leadership styles, and lower perceptions of just culture were associated with laissez-faire leadership style. Additionally, there were statistically significant differences between nurse managers' and staff nurses' perceptions of transformational, transactional, and laissez-faire leadership styles. Researchers showed similar findings of a statistically significant positive correlation between transformational and transactional leadership and nursing job-related outcomes such as satisfaction, safety, empowerment and engagement, and negative correlations with laissez-faire leadership styles. Previous research highlighted the importance of addressing the differences in perceptions between nurse managers and staff nurses in terms of leadership styles as the variability could affect safety outcomes.

The results of my study contribute to positive social change for nurse managers by providing critical information on the positive relationship between nurse manager transformational and transactional leadership and nursing staff perception of just culture. Specific leadership skills and behaviors are necessary to sustain a just culture at the unit level. This study highlighted the importance of supporting the role of nurse managers in patient safety and strengthening nurse managers' knowledge and practice of transformational and transactional leadership styles to positively affect unit level just culture, the nurses' clinical practice, and patient outcomes.

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Appendix A: Email Invitation Flyer for Research Study

Dear Prospective Survey Participant,

I am a doctoral student from Walden University, and I am conducting a research study as part of my doctoral degree requirements. My study is entitled, The Nurse Manager's Role in Just Culture. This is an email invitation to participate in the research study which includes a survey that takes approximately 15 to 20 minutes to complete. Participants who fully complete the survey will receive a small incentive.

If interested in participating, please click the link below for further information about the research study.

(link)

Thank you,

Aida Solomon

Appendix B. Demographic Questionnaire

Question	**Responses**
1. What is your gender?	Female Male
2. What is your age?	19-29 30-39 40-49 50-59 60+
3. How long have you worked in your current hospital setting?	1-5 years 6-10 years 11-15 years >16 years
4. How long have you worked in the hospital setting as a registered nurse?	1-5 years 6-10 years 11-15 years >16 years
5. On average, how many hours do you work in your present position?	>16 hours 16-30 hours 31-40 hours >40 hours
6. What type of nurse specialty unit do you currently work in?	Medical/Surgical Unit Telemetry, Cardiac or Step Down Specialty Unit (such as Spinal Cord Injury) Intensive or Critical Care Unit Perioperative Unit Maternal/Infant Care Unit Pediatric Unit Acute Psychiatry Unit Oncology/Bone Marrow Unit
7. What is the highest educational degree you have obtained in nursing?	Diploma Associate Baccalaureate Master's Degree Doctoral Degree

Appendix C: MLQ Form 5X Short Permission to Use

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To Whom It May Concern,

The above-named person has made a license purchase from Mind Garden, Inc. and has permission to administer the following copyrighted instrument up to that quantity purchased:

Multifactor Leadership Questionnaire

The three sample items only from this instrument as specified below may be included in your thesis or dissertation. Any other use must receive prior written permission from Mind Garden. The entire instrument may not be included or reproduced at any time in any other published material. Please understand that disclosing more than we have authorized will compromise the integrity and value of the test.

Citation of the instrument must include the applicable copyright statement listed below.
Sample Items:

As a leader ....
- I talk optimistically about the future.
- I spend time teaching and coaching.
- I avoid making decisions.

The person I am rating....
- Talks optimistically about the future.
- Spends time teaching and coaching.
- Avoids making decisions

Sincerely,

Robert Most
Mind Garden, Inc.
www.mindgarden.com

Appendix D: JCA Tool Permission to Use

From: [redacted] ORG>
Sent: Sunday, March 10, 2019 11:23 PM
To: Aida Solomon
Cc: [redacted]
Subject: RE: Permission to Use Just Culture Assessment Tool

Hello Aida

Thanks so much for the interest in our work and being in touch.

We are always very happy to hear work on this topic, and yes you are very welcome to use the JCAT in your research. The only thing we ask is to reference our JPS paper in any presentations or publications.

It is great you are studying the connection between just culture and nursing leadership. I find sometimes that leaders can think they understand just culture but when you start to dig deeper they really don't understand the deep nuances that exist (and I certainly don't say this from a place of understanding all there is to know about the topic – I continue to learn about it constantly). I also find some leaders can see Just culture as a means for sanctioning blame/punishment of employees which of course is not the intent. It is also important to keep in mind other aspects of safety culture – I find that for some reason "just culture" has gotten more attention than other aspects of safety culture but one needs to look at the entire safety culture...

All the best to you in your research and do be in touch again if I can be of help. James

[redacted]
Chief Patient Safety Officer
St. Jude Children's Research Hospital
Office: (901) 595-2767

Appendix E: MLQ 5X Short Form

MLQ Multifactor Leadership Questionnaire Rater Form (5x-Short)

The following are three sample questions for the appendix as authorized by Mind Garden Inc.

This questionnaire is to describe the leadership style of the above-mentioned individual as you perceive it. Please answer all items on this answer sheet. If an item is irrelevant, of if you are unsure or do not know the answer, leave the answer blank. Please answer this questionnaire anonymously.

Thirty-Six descriptive statements are listed on the following pages. Judge how frequently each statement fits the person you are describing. Use the following rating scale:

0= Not at all, 1 = Once in a while, 2 = Sometimes, 3 = Fairly often, 4 = Frequently, if not always

As a Leader:

1. I talk optimistically about the future……..... 0 1 2 3 4

2. I spend time teaching and coaching…….... 0 1 2 3 4

3. I avoid making decisions…….....0 1 2 3 4

The Person I am rating:

1. Talks optimistically about the future 0 1 2 3 4

2. Spends time teaching and coaching……..…….... 0 1 2 3 4

3. Avoids making decisions.…….....0 1 2 3 4

Appendix F: Just Culture Assessment Tool

INSTRUCTIONS: Please answer each statement below by selecting the appropriate number that best reflects your degree of agreement or disagreement with that statement. There are no right or wrong answers. There are seven possible responses to each statement ranging from 1 = "Strongly Disagree" to 7 = "Strongly Agree"

Questionnaire	Rating Scale						
Domain - Feedback and Communication	**1**	**2**	**3**	**4**	**5**	**6**	**7**
The management does a good job of sharing information about events.							
We don't know about events that happen in our unit.							
I often hear about event conclusions and outcomes.							
Domain - Openness of Communication							
Staff feel uncomfortable discussing events with supervisors.							
Supervisors respect suggestions from staff members							
Staff can easily approach supervisors with ideas and concerns.							
If I had a good idea for making an improvement, I believe my suggestion would be carefully evaluated and taken seriously.							
I trust supervisors to do the right thing.							
Domain – Balance	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Staff members are usually blamed when involved in an event.							
Staff members fear disciplinary action when involved in an event.							
When an event occurs, the follow up team looks at each step in the process to determine how the event happened.							
I feel comfortable entering reports about events in which I was involved.							
Staff members use event reporting to "tattle" on each other.							
Domain - Quality of event reporting process	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Coworkers discourage each other from reporting events.							
The event reporting system is easy to use.							
Reports are being evaluated and reviewed after they're entered.							
I'm given time to enter event reports during work hours.							
My supervisors encourage me to report.							
Domain - Continuous Improvement	**1**	**2**	**3**	**4**	**5**	**6**	**7**
There are improvements because of event reporting.							
The hospital devotes (time/energy/resources) toward making patient safety improvements.							
By entering reports, I'm making the hospital a safer place for the patients.							
The hospital sees events as opportunities for improvement.							