A DESCRIPTIVE STUDY EXAMINING THE CORRELATION OF EMOTIONAL INTELLIGENCE AND LEADERSHIP STYLES TO CONFLICT MANAGEMENT STYLES OF NURSING SCHOOL ADMINISTRATORS

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Abstract

The study aimed to identify whether a correlation existed among academic nurse administrators emotional intelligence, leadership styles, and conflict management styles. There has been extensive research on emotional intelligence and leadership style in business. However, little research has been conducted about academic nurse leaders. This quantitative, nonexperimental, correlational design utilized convenience sampling. One hundred and twenty-two academic nurse administrators at colleges and universities throughout the United States completed an online survey, made up of the Trait Emotional Intelligence Questionnaire (TEIQue-SF), the Multifactor Leadership Questionnaire (MLQ-5x Short), and the Rahim Organizational Conflict Inventory-II (ROCI-II). Discriminant analysis was used to analyze the correlation among the four independent variables of emotional intelligence and the three independent variables of leadership styles to the five dependent variables of conflict management. Stepwise discriminant analysis isolated each conflict management style dependent variable to determine if a correlation existed among the individual independent variables of emotional intelligence and leadership styles. The results showed a significant correlation among the emotional intelligence variables of emotionality and sociability to leadership and conflict management styles. There was a correlation among the conflict management variables and leadership styles. Multiple leadership constructs correlated to each of the three conflict management styles. The results supported the research that leadership and conflict management styles are situational. The findings supported a correlation among emotional intelligence, leadership styles, and conflict management. However, the correlations are neither definitive nor clear-cut. Therefore, there are opportunities for additional research. The results also supported the situational outcomes of leadership and conflict management's superior, subordinate, and peer relationships.

Dedication

First, I must thank my Lord and Savior, Jesus Christ for his teachings, atonement, and spirit guiding my mortal journey. Following Him is central to everything I do.

This dissertation is dedicated to my mother, Gail Wilhelmsen, PhD, who, after taking this journey once for herself, took it with me. She has been there for me every step of the way. She loved having conversations with me about what I was learning, thereby giving me a chance to reinforce my knowledge by discussing it. She provided needed encouragement to keep me going during rough times. Finally, she cheered me on to the finish line. Not only has this amazing woman supported me through the PhD, but she has also been an extraordinary mother throughout my life. I have been very blessed.

I want to thank my children and my husband for their support. I appreciate how they each provided support in their way, and it was just what I needed when I needed it. Also, thank you to all the family and friends who have supported me and given me words of encouragement and prayers.

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CHAPTER 1. INTRODUCTION

Nursing is a profession fraught with incivility and bullying (Anthony & Brett, 2020; Darbyshire et al., 2019; Johnson, 2018; Karatuna et al., 2020). Incivility and bullying are not unique to nursing. Complaints of bullying and incivility have inundated schools and communities. In response to bullying, schools have developed education and anti-bullying programs but with minimal success (Alshawush et al., 2020; Gillespie et al., 2017). Bullying programs that teach the victim assertive ways to respond to bullying may help the victim but do little to stop the bully from victimizing others. Nursing administrators are in an ideal position to decrease the practice of incivility and bullying in the nursing profession.

Numerous researchers have demonstrated that the practice of high emotional intelligence (Meires, 2018b), transformational leadership (TFL) skills (Kaiser, 2017; Mills et al., 2019), and appropriate conflict management strategies can lead to a decreased need for bullying behavior. A relation-oriented culture (Choi & Park, 2019) is needed to shift nurses away from the long history of *nurses eating their young,* which often commences in nursing schools (Aebersold & Schoville, 2020; Aul, 2017; Bellack, 2018; O'Flynn–Magee et al., 2021).

Research has found that incivility and bullying occur at a 10%–15% higher rate in nursing than in non-nursing employment (Kaiser, 2017) and is rising (Aul, 2017). Alarmingly, Thompson (2019) and Anthony and Brett (2020) reported that experienced nurses bullied 90% of novice nurses. Casale (2017) found that 80% of nurse faculty witnessed bullying in their department. Finding a solution to incivility and bullying is critical to all stakeholders.

Nursing education administrators, used hereafter to mean all nurse education leaders in an administrative position because each nursing school has different titles to identify their administrative team, are strategically located to transform nursing education culture.

The nursing program administrator can use intentional conflict management styles to model and resolve conflict appropriately through emotional intelligence and leadership styles. Managing conflict eliminates the need to use incivility, bullying, and other forms of subtle aggression to achieve superiority, dominance, control, or authority (Anusiewicz et al., 2020). Nurses are known for their compassion and care toward patients. Gallup polls have ranked nursing as the most honest and ethical profession for 20 consecutive years, beginning in 2001 (Saad, 2022). Nevertheless, nurses have a century-long history of treating their own with incivility and bullying (Meires, 2018a).

In 2008 and updated in 2016, a sentinel alert was issued by The Joint Commission connecting bullying behaviors in health care to increased personnel turnover, poor patient satisfaction scores, increased care costs, increased errors, and preventable adverse events (The Joint Commission, 2016). Overall, incivility and bullying adversely affect patient and staff safety (Anusiewicz et al., 2020; Arnetz et al., 2020; Karatuna et al., 2020; Meires, 2018a). Research continues to identify bullying behavior in practice (Johnson, 2018; Nel, 2019) and education (Aul, 2017; Berquist et al., 2017), including faculty to students, students to faculty, and faculty to faculty bullying behaviors. Incivility and bullying can occur laterally or horizontally (Anthony & Brett, 2020). The research defined incivility (Aul, 2017; Thompson, 2019) and identified its deleterious impact (Berquist et al., 2017). In an attempt to curtail bullying, many programs address the problem at the victim level (Armstrong, 2017; Merkel et al., 2020; O'Flynn–Magee et al., 2021; Olsen et al., 2020).

The present-day approach to incivility and bullying management is like placing an ambulance at the bottom of the cliff to treat the victim after the incident has occurred. An effective and less damaging approach is to build a fence at the cliff's edge to prevent the fall

in the first place. All individuals realize the benefits of civility when incivility and bullying are interrupted and deflected at the beginning. A new caring culture can commence when nursing administrators model high emotional intelligence, appropriate leadership skills, and deliberate conflict management skills. This study investigated whether nurse education administrators possess the emotional intelligence, leadership skills, and conflict management strategies the literature indicated are necessary to manage incivility (Anthony & Brett, 2020; Casale, 2017).

Chapter 1 provides an overview of the research problem and the purpose of the research study. A brief overview of the theory of emotional intelligence, full range leadership, and conflict management prepares the reader for more in-depth coverage in chapter 2. Chapter 1 includes a definition of terms to clarify the meanings of the variables used in this paper since countless interpretations are found in the literature. A brief overview of the research design prepares the reader for a more detailed description in chapter 3. Finally, the assumptions and limitations found within this study were addressed.

Background of the Problem

Anthony and Brett (2020) and Casale (2017) proposed that academic nurse administrators lead the culture of change in reducing incivility and bullying. To facilitate this new culture, scholars need more research to understand the relationship among emotional intelligence and leadership styles in the full range leadership model (Giddens, 2018). Additionally, more research provides greater insight into the correlation among academic nurse administrators' emotional intelligence, leadership styles, and conflict management styles. Transformational leadership and conflict management are essential skills for any leader. However, an academic nurse leader must be at the forefront of motivating change as healthcare practices rapidly evolve.

The positive aspects of improving civility occur at every level of human interaction. Especially by increasing civility at the administrative level, the culture of nurse academia improves. Berquist et al. (2017) posited that civility and caring are at the heart of nursing. Therefore, civility is central to changing the culture from eating their young to caring for their young. In environments where faculty are supported, faculty provide a better teaching/learning environment for the students, who in turn carry that positivity into practice. As incivility and bullying decrease, work environments improve for nurse faculty and hospital staff (Anthony & Brett, 2020). An improved working culture will increase intent-to-stay, positively affecting the nurse faculty and nursing shortage. When nurse faculty and nurses are not dealing with incivility and bullying, they can focus on improving patient care and contributing to the profession.

Incivility fosters adverse outcomes for the student and future employees. Victims of incivility and bullying experience low self-esteem, poor mental health, increased absenteeism, decreased productivity, hypersensitivity, nervousness, social isolation, decreased cognitive abilities, chronic fatigue, suicide, sleeplessness, and post-traumatic stress disorder (Einarsen et al., 2018; Mills et al., 2019). With incivility patient outcomes of continuity and quality of care are impaired, increased medical errors occur, patient satisfaction score decreases, increased medical costs ensue, and potential adverse events transpire (Abdollahzadeh et al., 2017; Arnetz et al., 2020; Mills et al., 2019).

The approach to leadership and the handling of conflict impact the work environment. Nurse educator administrators are essential to effect a change in the nursing culture and history of incivility and bullying (Aul, 2017; Mills et al., 2019). Using emotional intelligence in their leadership skills, nurse educators utilize effective conflict management styles to create a culture of job satisfaction, employee creativity, and organizational commitment (Görgens–Ekermans &

Roux, 2021), improved teamwork, improved decision-making, and decision quality (Flores et al., 2018). As nursing education administrators model high emotional intelligence, applicable leadership, and appropriate conflict management styles, the faculty and students manifest the positive effects. The positive effect is decreased incivility and bullying in education and the practice of nurses.

Goleman (2014) posited that emotional intelligence was critical when exploring who are the company's most productive or outstanding leaders. The transformational leadership style can motivate others, foster relationships, and generate change by underscoring values (Giddens, 2018). Because leaders frequently encounter conflict resolution opportunities, those with high emotional intelligence have leadership styles that promote effective conflict resolution (Hassanian et al., 2019; Katz & Sosa, 2015). The following sections explore what is known and what is not known about emotional intelligence, leadership, and conflict management.

Emotional Intelligence

Emotional intelligence is the ability to recognize and handle one's emotions and the emotions of others which influences academic performance. Emotionally intelligent leaders encourage the development of emotionally intelligent nursing students through experiential educational strategies (Utley, 2011). Because healthcare is constantly changing, nursing schools must keep up with the innovations and advances to produce practice-ready students upon graduation. In their role as educational leaders, emotional intelligence is essential to academic nurse administrators (Drakulevski et al., 2017; Lawlor et al., 2015).

Emotional intelligence research occurs predominantly in business, psychology, and education. A considerable amount of the emotional intelligence research related to nursing has focused on the nursing employee/nursing student role (Culha & Acaroglu, 2019; Goodwin, 2016;

Hasanpour et al., 2018; Lu & Shorey, 2021). Some research has focused on the impact of nurse faculty emotional intelligence on student emotional intelligence (Galler, 2015; Isensee, 2017; Omid et al., 2018). Limited research has focused on the impact of nurse faculty emotional intelligence on student emotional intelligence (Galler, 2015; Isensee, 2017; Omid et al., 2018). A new emphasis on researching emotional intelligence includes the relationship to critical thinking (Christianson, 2020), the patient experience (Childs, 2020), positive affect and virtues (Ros–Morente et al., 2018), and resilience in nurses (Cleary et al., 2018; Cuartero & Tur, 2021) which can have an impact on nurses' response to incivility and conflict in the workplace.

Academic performance is improved when students possess high emotional intelligence (Davis & Leslie, 2015; Mohamad & Hanafi, 2018; Orak et al., 2016). High emotional intelligence in educators results in higher classroom performance and improves student academic outcomes (Leonard, 2017; Omid et al., 2018). High emotional intelligence correlates to improved job performance, productivity, and satisfaction (Gainer, 2018; Relojo et al., 2015). Also, high emotional intelligence promotes dealing with conflict in an environment fraught with lateral bullying (Berquist et al., 2017; Kaiser, 2017; Meires, 2018b).

Though emotional intelligence research is extensive, Gainer (2018), Lu et al. (2021), and Relojo et al. (2015) identified a need for further research on the construct of trait emotional intelligence related to occupations burdened with emotional labor. Emotional labor is when service workers are responsible for helping individuals live their "fullest possible lives in environments of safety, health and security" (Lu et al., 2021, p. 359); thus, the worker takes on the responsibility for another's happiness. High emotional intelligence promotes dealing with conflict in an environment fraught with lateral bullying (Berquist et al., 2017; Kaiser, 2017; Meires, 2018b). Another recommendation was how trait emotional intelligence affects job

performance (Petrides et al., 2018). According to Saxena et al. (2017), there is a need for further studies of emotional intelligence and its impact on leadership effectiveness.

Full Range Leadership Model

In 1991, Avolio and Bass proposed the full range leadership theory (FRLM) that identified three classifications of leadership styles: transformational, transactional, and passive-avoidant. Transformational leadership's four constructs are idealized influence (attributes and behaviors), inspirational motivation, intellectual stimulation, and individualized consideration (Avolio & Bass, 2002). Transactional leadership includes the constructs of contingent reward leadership and management-by-exception active (Avolio & Bass, 2002). The third classification is passive-avoidant which includes management-by-exception passive and laissez-faire.

The full range leadership model incorporates leadership behaviors across a spectrum from least effective to most effective in leading others (Fischer, 2016). Transformational leadership has stood out as inclusive of value-based and positive leadership theories such as ethical leadership, servant leadership, authentic leadership (Hoch et al., 2018; Yasir & Mohamad, 2016), and spiritual leadership (Anderson & Sun, 2017). Vision-focused leadership styles also included in transformational leadership are charismatic and ideological leadership theories (Anderson & Sun, 2017).

The American Organization of Nurse Executives has identified transformational leadership as the preferred leadership type for all nursing leaders (Giddens, 2018). Transformational leadership requires emotional intelligence to realize its full potential as a disruptor of the present hostile climate in nursing (Thompson & Miller, 2018). A transformational leader provides civil leadership and encourages behaviors of dignity, caring, respect, kindness, and tolerance towards everyone (Thompson & Miller, 2018). A leader who

applies and models these characteristics will disrupt the climate of incivility (Darbyshire et al., 2020; Thompson & Miller, 2018). The nursing education administrator *transforms* the nursing education environment through the four constructs of transformational leadership: influencing, motivating, stimulating, and considering (Vaismoradi et al., 2016). Transformational leadership describes a leader who aligns their own and other individuals' goals for the good of the group or organization (Boamah & Tremblay, 2019). According to Bureau et al. (2017), the transformational leadership style decreased incivility in the workplace. In contrast, the laissez-faire leadership style facilitated bullying (Kaiser, 2017). Also, transformational leadership reduced conflict triggers leading to a more productive workforce (Kammerhoff et al., 2019).

Leadership styles have been studied extensively in business (Al–Hamdan et al., 2018; Dappa et al., 2019; Khalili, 2017; Kim & Kim, 2017) and politics (Brouer et al., 2016). Transformational leadership, combined with clinical practice leadership, has been studied extensively. Unfortunately, the study of transformational leadership combined with academic nurse leaders has received "scant representation" (Giddens, 2018, p. 117) and needs further study (Bouws et al., 2016). Giddens (2018) reported that, following a search using the keywords *academic*, *nursing*, and *transformational leadership*, only two articles were published in the 15 years preceding her article. Due to the paucity of research on transformational leadership combined with academic nurse leaders, Giddens (2018) identified multiple areas for further inquiry:

- Additional research related to transformational leadership and academic nursing leaders is needed.
- Current research should expand to include the perceptions of the faculty.
- What is the effect of leadership style on faculty management.

- The use of transformational leadership by multiple levels of academic nursing administrators.

Conflict Management

Conflict is a negative social interaction resulting from incompatibility or disagreement (Erdenk & Altuntaş, 2017; Jeong, 2010; Martins et al., 2019). High emotional intelligence was associated with the choice of positive conflict strategies used by nurses (Başoğul & Özgür, 2016; Erdenk & Altuntaş, 2017; Meires, 2018b). Conflict management is a frequent occurrence for academic nurse administrators as faculty and students turn to them for help and support (Katz & Sosa, 2015). Blake and Mouton (1964) proposed the two-dimensional model of conflict management, later adapted by Thomas and Kilmann (1978) and further adapted by Rahim in 1979 (Rahim, 1983). Rahim's meta-model uses two dimensions: concern for others and concern for self. Within these dimensions, Rahim (1983) identified five conflict management approaches: compromising, avoiding, dominating, integrating, and obliging. Each identifies a different approach to managing conflict.

The choice of which conflict management style to use is influenced by emotional intelligence (Abdullah, 2017; Al–Hamdan et al., 2018). Conflict is often emotional, and a person with emotional intelligence manages conflict by discerning the emotions behind the conflict (Martins et al., 2019). Al-Hamdan et al. (2018) studied the relationship between nurse managers' emotional intelligence and conflict management. Nurse managers applied the integrating style most often, and the dominating style to a lesser extent. Erdenk and Altuntaş (2017) noted that nurses employed integrating, compromising, and avoiding most frequently and dominating and obliging the least. Başoğul and Özgür (2016) noted that compromising, obliging, dominating, and integrating positively correlate to emotional intelligence, and avoiding was negatively

correlated. Gunkel et al. (2016) explored how culture affects emotional intelligence, impacting the conflict management style applied.

Leadership styles also influence the conflict management style used in organizations. Transformational leadership style has the most significant impact on the choice of conflict management style leading to positive outcomes for both parties. Bakhtawari et al. (2016) studied the correlation of leadership styles and conflict management modes in the service sector and found that competing was used the most, with collaborating second, and avoiding was used the least by leaders self-identified as transformational. Saeed et al. (2014) studied the relationship of the leadership styles, from the full range leadership model, with the five conflict management styles. Transformational leadership positively correlated with obliging and integrating, transactional leadership style correlated with compromising, and passive-avoidant leadership style correlated with the avoiding conflict management style. Although conflict management has been studied extensively within business and workplace settings (Gunkel et al., 2016; Hopkins & Yonker, 2015; Messarra et al., 2016; Zhang et al., 2015), further research to understand the conflict management styles of nurse leaders is needed (Erdenk & Altuntaş, 2017). Additionally, the relationship of emotional intelligence to effective conflict management (Başoğul, & Özgür, 2016; Meires, 2018b) needs further investigation.

Theoretical Frameworks

Three theories comprise the foundation of this research study. Emotional intelligence is the first to be discussed. Although identified as an independent theory, emotional intelligence is also a learning theory (Utley, 2011) found within Gardner's multiple intelligence theory (Gardner, 2011; Nozaki & Koyasu, 2016; Sanchez–Martin et al., 2017). The second theory presented is leadership styles. As the list of leadership styles grows, the full range leadership

model remains inclusive of all leadership styles within the three main models of transformation, transactional, and passive-avoidant (Anderson & Sun, 2017). The final theory is Rahim's meta-model of conflict management (Rahim, 1983, 2002) and incorporates the full range of conflict management approaches.

Emotional intelligence has two factions, ability and trait. Ability emotional intelligence is viewed as a cognitive–emotional ability measured through performance-based tests (Costa & Faria, 2020). Trait emotional intelligence is viewed as an extension of personality and measured through self-report. This research study used trait emotional intelligence which is viewed as an extension of personality and measured through self-report. There are four variables within trait emotional intelligence: well-being, sociability, emotionality, and self-control.

Statement of the Problem

Nursing is burdened with incivility and bullying in academia among faculty (Berquist et al., 2017), between faculty and student (Aul, 2017; O'Flynn–Magee et al., 2021), and in practice (Arnetz et al., 2020; Johnson, 2018; Karatuna et al., 2020). Nurses not trained in leadership or management skills often become educators and educational administrators to carry on the traditions from their education and practice (Bouws et al., 2020; Branden & Sharts–Hopko, 2017; Crowne et al., 2017). Understanding the relationship between emotional intelligence and leadership style and their correlation to conflict management style of nursing administrators can contribute new information to the knowledge gap of nurses and the future care of patients.

In addition to the gap in the literature related to nursing education administrators, there is little research on the correlation among the variables of emotional intelligence, the three leadership styles of the full range leadership model, and the five conflict management styles. Research has associated emotional intelligence with leadership styles (Kim & Kim, 2017;

Maamari & Majdalani, 2017) and conflict management styles (Chen et al., 2019; Tanveer et al., 2018). Leaders have studied emotional intelligence and conflict management styles, but there is a paucity of research on the interaction of leadership styles, emotional intelligence, and conflict management styles.

Although researchers have studied nurse emotional intelligence and faculty emotional intelligence and the direct impact of emotional intelligence on incivility and bullying, a gap remains related to the study of nursing education administrators (Fischer, 2017; Giddens, 2018). Nursing education administrators are middle managers. They are responsible for leading and managing the conflict of the program's faculty, which includes tenured, full-time, part-time, and adjunct faculty. These individuals possess varying levels of commitment, experience, and education related to teaching. Conversely, nursing education administrators report to several superiors across the academic environment. Each interaction requires different leadership styles and conflict management styles. Individuals with higher emotional intelligence will effectively utilize appropriate leadership and conflict management styles (Bellack, 2018; Jelavić et al., 2021).

As middle managers, academic nurse administrators frequently encounter conflict resolution opportunities (Giddens & Morton, 2018). The need to productively and rationally address the conflict is needed. Although an extensive study of emotional intelligence exists, Gainer (2018), Kanwal et al. (2018), and Newton et al. (2016) identified a need for further research on trait emotional intelligence as it relates to occupations burdened with emotional labor. Abdullah (2017) suggested that emotional intelligence was associated with a preferred conflict management ability but suggested further studies to elaborate on emotional intelligence and the specific attributes of conflict management ability.

Purpose of the Study

The study aimed to determine the correlation among trait emotional intelligence, leadership styles, and conflict management styles of academic nurse administrators. Identifying a relationship among the variables of emotional intelligence, leadership style, and conflict management style provides the nursing school administrator with the knowledge to guide their leadership style to decrease incivility and bullying in nursing education and student nurses' future practice (Bouws et al., 2020). Another benefit to knowing if a correlation exists is determining where to focus leadership development and succession planning to prepare faculty to fulfill academic administrative roles (Branden & Sharts–Hopko, 2017). The results of this study may help leaders and administrators emphasize leadership development in specific areas. Areas such as emotional intelligence, select leadership styles, and conflict management styles

Emotional intelligence has a positive correlation with conflict resolution skills (Abdullah, 2017; Hopkins & Yonker, 2015; Katz & Sosa, 2015; Martins et al., 2019; Zhang et al., 2015). Studies have shown that emotional intelligence correlates with the choice of conflict management style (Al–Hamdan et al., 2018; Başoğul & Özgür, 2016; Gunkel et al., 2016). However, there were conflicting opinions regarding the most frequently used style. Al–Hamdan et al. (2018) noted that the integrating style was the preferred conflict management style utilized by nurse managers from Jordan, and the dominating style was utilized the least. Hassanian et al. (2019) posited that the democratic style was the most common style used by nurses. Schlaerth et al. (2013) found that high emotional intelligence leads to constructive conflict management. This study is intended to inform the research by focusing on trait emotional intelligence, leadership styles, and the five styles of conflict management.

Significance of the Study

The significance of the study extends beyond knowing and understanding the correlation of emotional intelligence, leadership styles, and conflict management styles. The results of this study offer benefits to the stakeholders. The primary stakeholders are the nurse education administrators. Through the information gained from this study, academic nurse administrators can reflect on their strengths and weaknesses in emotional intelligence, leadership, and conflict management abilities. Following the reflection, the administrators can develop their emotional intelligence and leadership skills to appropriately manage conflict to decrease incivility and bullying in the academic environment. As civility increases at the administrative level, the benefits impact additional stakeholders.

The stakeholders include the larger academic community. The academic community includes the university or college administration, the nursing faculty, and the nursing students. Each group is positively impacted through the increased ability to have civil discourse. A culture of civility and caring supersedes the culture of competition, criticism, and conflict. Following the administrator's example, the faculty will model a culture of caring for the students. This culture of caring will then be directed toward not only patients but each other.

The final group of stakeholders includes the population served by the nurses. Everyone at some stage in their lives might be a patient (Graystone, 2018), now that nursing practice is no longer focused only on acute and chronic disease care. The Essentials (AACN, 2021) recognized nurse practice as disease prevention, health promotion, restorative care, and supportive or palliative care. With this expanded vision, the services of a nurse are available to everyone.

Nurse education administrators are in an excellent position to become disruptive innovators in changing the culture of nursing (Casale, 2017; Thompson & Miller, 2018). Starting

with the academic environment, faculty and student performance will improve. As nurses bring the culture of civility and caring into clinical practice, the benefits have a ripple effect. Nurses and patients reap the benefits, and other healthcare team members are also affected.

The research on nursing school administrators and leadership styles is limited (Bouws, 2017; Fang & Mainous, 2019; Worthy et al., 2020). The research emphasis is on nursing leaders in the clinical setting (Lumbers, 2018) and deans across all programs (Harris, 2020; Hassan et al., 2018). This study adds to the research on the leadership styles of nursing school administrators. This study provides further clarification of the types of leadership styles used by nursing school administrators. This study provides insight into the leadership styles that support constructive conflict management which can guide future leadership development programs for nursing administrators. Understanding the correlation of the research variables provides findings that support the traits a nurse education administrator possesses and how they correlate to effective conflict management in a profession fraught with incivility and bullying.

Research Questions

Three research questions were used to guide this study.

Research Question 1, Does a correlation exist among the variables of trait emotional intelligence, leadership styles, and conflict management styles of academic nursing administrators?

Research Question 2, Does a correlation exist among the variables of trait emotional intelligence and conflict management styles?

Research Question 3, Does a correlation exist among the variables of leadership styles and conflict management styles?

Definition of Terms

The following definitions clarify the meaning of the terms related to the research study. Figures are provided to display the relationships of the elements.

Academic Nurse Administrator

Academic nurse administrator refers to the nursing school dean, assistant dean, department chair, department head, or other titles designated by their school responsible for the nursing program.

Bullying

Bullying is “associated with power differentials and negative relationships in which those targeted find it difficult to defend themselves" (Kaiser, 2017, p. 112). The behavior is repeated and includes rudeness, hostility, violence and harassing, belittling, verbal abuse, ignoring, criticizing, and sabotaging (Meires, 2018a, 2018b).

Conflict

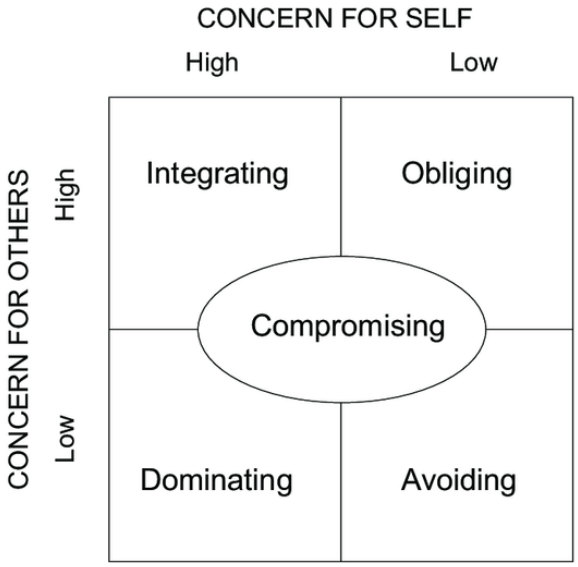
Conflict results when there is a misunderstanding between two people. It consists of recognized opposing interests, believed to be thwarted within or between oneself or others (Koesnell et al., 2019).

Conflict Management

Conflict management minimizes the negative impact resulting from misunderstanding or conflict (Chan et al., 2014). Conflict management variables contain five levels: avoiding, compromising, dominating, integrating, and obliging. Figure 1 presents the dual concern matrix for Rahim’s (2017) conflict management styles. The conflict management matrix ranges from high to low concern for self and high to low concern for others.

Figure 1

The Dual Concern Model of the Style of Handling Interpersonal Conflict



Note: Adapted from "Managing Organizational Conflict: A Model Diagnosis and Intervention," by M. A. Rahim, & T. V. Bonoma, 1979, *Psychological Reports, 44*(3_suppl), p. 1327 http://dx.doi.org/10.2466/pr0.1979.44.3c.1323 Used with permission from the (C) Center for Advanced Studies in Management. Further reproduction of the figure is not permitted.

- *Avoiding* is ignoring the conflict (lose–lose). Avoiding demonstrates a low concern for self and a low concern for others. The person refuses to acknowledge there is a problem or conflict. They avoid the problem at all costs.

- *Compromising* is achieved when both parties give up something (no win–no lose; Gunkel et al., 2016). Compromising reflects intermediate concern for self and others. It involves give-and-take to reach a mutually agreeable decision (Rahim, 2017).

- *Dominating* is satisfying personal interest (winning) at the cost of the other (losing). Dominating shows a high concern for themself and low concern for others. The individual wants to win sometimes through the power of their position, assertiveness to defend one's position, or through deceit.

- *Integrating* seeks to problem-solve and results in a win-win for both parties. Integrating demonstrates concern for self and others and involves collaboration.

- *Obliging* emphasizes the commonalities and reduces the differences; one party yields the win to the other. Obliging shows a low concern for self through self-sacrifice and high concern for others. Obliging is sometimes called a *conflict absorber* (Rahim, 2017) and is also known as accommodating.

Emotional Intelligence

Emotional intelligence is "the ability to identify, understand, express, manage, and use emotions" (Kotsou et al., 2019, p. 151).

- *Ability emotional intelligence* is the ability to discern, comprehend, facilitate, and manage the emotions of oneself and others (Waglay et al., 2020; Wirawan et al., 2019). Ability emotional intelligence measures theoretical understanding of emotions similar to IQ tests (Kaliská & Kaliský, 2016; O'Connor et al., 2019). Supporters of ability emotional intelligence report that improvement occurs with time, practice, and maturity (Drigas & Papoutsi, 2018; Nafukho et al., 2016).

- *Trait emotional intelligence* is a person's ability to perceive their own emotions, including awareness, understanding, and controlling one's emotions and others' emotions (Petrides, 2016). Trait emotional intelligence is a collection of emotional perceptions identified as sociability, well-being, emotionality, self-control, adaptability, and self-motivation (Chirumbolo et al., 2019). Trait emotional intelligence overlaps with personality (Alegre et al., 2019; Petrides et al., 2016; van der Linden et al., 2018). As shown in Figure 2 trait emotional intelligence has 15 facets positioned within four factors and the global trait score. The four factors were used to measure the relationship of trait emotional intelligence on leadership style and conflict management style. Petrides and Mavroveli (2018) defined the facets based on how the participants viewed themselves.

- *Emotionality* is the ability to perceive emotion in oneself and others, the expression of emotion, relationships, and trait empathy.

    - *Emotion expression* is the ability to communicate one's feelings to others.

    - *Emotion perception* is having a clear understanding of personal and others feelings.

    - *Relationships* indicate the person is capable of having satisfying personal relationships.

    - *Trait empathy* indicates the person's ability to take another's perspective.

- In addition to the other 13 facets the *Global trait score* includes adaptability and self-motivation.

    - *Adaptability* is demonstrating flexibility and a willingness to adapt to new situations.

    - *Self-motivation* is a person who is driven and unlikely to capitulate when faced with difficulties.

Figure 2

The Four Factors and 15 Facets of Trait Emotional Intelligence

Note: "The 15 facets of the TEIQue are positioned with reference to their corresponding factor. The facets 'self-motivation' and 'adaptability' are not keyed to any factor, but feed directly into the global trait EI score." From "Psychometric Properties of the Trait Emotional Intelligence Questionnaire (TEIQue)" by K. V. Petrides, 2009, *Advances in the Assessment of Emotional Intelligence*, (http://dx.doi.org/10.1007/978-0-387-88370-0_5). Figure reprinted with permission from London Psychometric Laboratory - www.psychometriclab.com by K. V. Petrides. © Copyright K. V. Petrides 1998 – . All rights reserved. "

- *Self-control* includes emotional regulation and impulse control as well as stress management.
    - *Emotion regulation* is controlling one's emotions.
    - *Impulse control* occurs with introspection making it less likely to surrender to one's impulses.
    - *Stress management* is the ability to cope with difficulties and regulate stress.
- *Sociability* is assessed through social awareness, managing others' emotions, and assertiveness.
    - *Assertiveness* is being candid and ready to stand up for one's rights.

- *Emotion management* is the ability to affect others' feelings.
- *Social awareness* is the person who is talented in networking and possesses exceptional social skills.

- *Well-being* includes trait happiness, trait optimism, and self-esteem.
  - *Self-esteem* is perceiving oneself as successful and self-confident.
  - *Trait happiness* is cheerfulness and being satisfied with one's life.
  - *Trait optimism* is having confidence and a positive attitude. (Barreiro & Treglown, 2020; Petrides & Mavroveli, 2018; Siegling, Vesely et al., 2015)

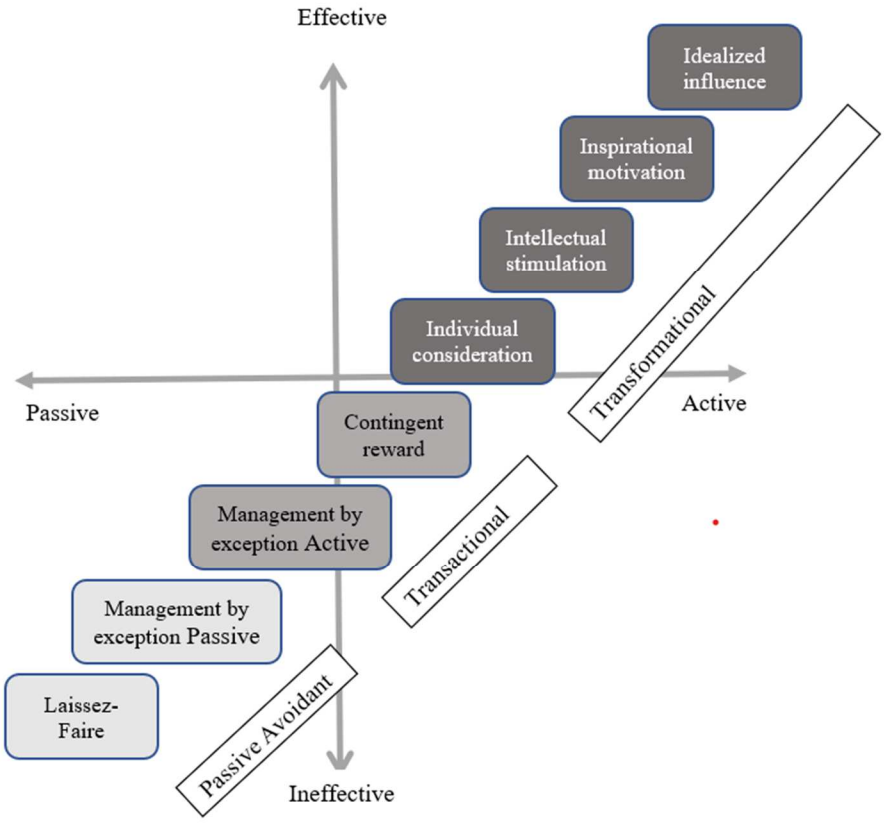
Full Range Leadership Model

Leadership style is the values, beliefs, attitudes, and behaviors used to motivate others (Solá et al., 2016). Three leadership styles have been studied extensively in business: transformational, transactional, and passive-avoidant. These three styles are the variables that are part of the full range leadership model. Figure 3 displays the full range leadership model in hierarchical order from the most ineffective style to the most effective style and passive to active leader involvement.

- *Passive-avoidant leadership* is passive and reactive. The leader does not clarify expectations and does not establish goals or standards for the followers. Passive-avoidant leadership includes two constructs:
  - *Laissez-faire* is non-leadership or minimal involvement from the leader (Kaiser, 2017).
  - *Management by exception passive* is when the corrective action occurs after the deviation from the expected outcome.
- *Transactional leadership* (TAL) uses rewards and punishment with clearly defined roles and structures to meet the company's goals (Anderson & Sun, 2017). TAL includes two constructs:
  - *Contingent reward*: The individual receives a reward in exchange for a service.
  - *Management by exception active:* The leader corrects current actions while monitoring for deviations from the expected outcome.

Figure 3

Full Range Leadership Model



Note: Adapted from "Multifactor Leadership Questionnaire: Manual and Sample Set (3rd ed.)," by B. J. Avolio and B. M. Bass, 2004. www.mindgarden.com

- *Transformational leadership* (TFL) is the ability of a leader to inspire, motivate, and encourage employees to meet the goals of the larger entity (Anderson & Sun, 2017; Boamah & Tremblay, 2019). The leader motivates followers to achieve superior results and includes four constructs (Avolio & Bass, 2002).
    - *Idealized influence*: This is considered an ideal role model with high moral and ethical standards of conduct. Followers respect, trust, admire, and want to emulate and follow the leader. Idealized influence is further divided into attributes and behaviors.
    - *Individualized consideration:* Each person is viewed individually, not as a collective whole. Individual differences are recognized and appreciated. Individual strengths are developed and supported. The leader listens intentionally.

- *Inspirational motivation:* This style provides inspiration and motivation through meaningful and challenging work. The leader is enthusiastic and optimistic while communicating a shared vision and commitment to achieving goals.
- *Intellectual stimulation:* Using this style encourages innovation and creativity in followers and encourages them to think in new ways. New ideas and contributions are not criticized.

Incivility

Rude, discourteous, or impolite behavior that shows disrespect for others. Incivility includes rudeness, condescending language, impatience, reluctance or refusal to answer questions or help another staff member, disrespect, and undermining (Kaiser, 2017).

Research Design

A quantitative research methodology was selected because this methodology can measure the characteristics of a population and explain relationships using measurable data (Salkind, 2010). The research questions guided the investigation of the statistical correlation and the predictive value of the independent variables of trait emotional intelligence and leadership styles on the dependent variable of conflict management. The research questions asked whether there are correlations and discrimination.

I decided to use a quantitative methodology to quantify and measure the data gathered from online surveys. Convenience sampling was utilized to identify participants from public academic institutions' nursing school websites. The surveys were sent to nursing school administrators across the U.S. and its territories. A convenience sample is a nonprobability sample. These results are not generalizable beyond those individuals who responded to the survey and whose names were publicly available on the web. To extend rigor to descriptive statistics, I chose a non-experimental correlational design. Correlation designs allow for comparisons among variables and furnish data preceding more rigorous studies (Siedlecki,

2020). Correlational design can identify a relationship but does not describe why the relationship exists (Siedlecki, 2020). The survey was located on Qualtrics XM. The data were analyzed using discriminant analysis with IBM SPSS statistics software. The results of this study allowed for speculating on whether conflict management skills are related to leadership and emotional intelligence.

Assumptions and Limitations

It is essential to ascertain assumptions and limitations that could influence the research results. According to Rupp (2019), "Sound logical reasoning requires a critical examination of all available evidence and the willingness and ability to challenge key assumptions implicit in the conclusions we reach and the informed decisions we make" (p. 727). Methodological assumptions are found in most research.

Assumptions

The following list identifies the assumptions found in this study:

- The participants answered the questions honestly and without bias.
- The participants understood the questions asked.
- Though the surveys test emotional intelligence, leadership as independent variables, and conflict management as dependent variables, there was no way to isolate each variable from outside influences such as previous experience and education. These life experiences and education also impacted the results' axiology and value-freedom.
- Those that responded to the surveys may value contributing to research, or they may have more time to give to responding. Those who do not respond may not feel they have the time, they may not care to contribute, or planned to return and forgot.
- All participants followed standard administration protocols.
- The participants scores resemble the national norms identified by the instruments.
- The survey instruments generate reliable data.

The results of this study cannot be generalized because it was a convenience sample. The sampling strategy was convenience sampling using publicly available email addresses on the web. After receiving the email invitation, the individuals opted to respond or not to respond to the survey. Discriminant analysis determines a correlation, but the reader cannot infer causality. Additional research is needed to establish causality.

Further assumptions include the belief that surveys can measure emotional intelligence, leadership, and conflict management.

Assumptions specific to the measured variables are

- Emotional intelligence is related to personality. Therefore, trait emotional intelligence was the variable selected for this study.
- Conflict management is situational. Nurses use specific conflict management strategies over others.
- Transformational leadership correlates with specific conflict management styles.
- Nurse administrators lack leadership training.
- Transformational leadership is the best leadership style supported by high emotional intelligence.

Limitations

Several limitations are identified in this study:

- The results are not generalizable when a convenience sample is utilized.
- The participants responded to an online survey that leads to questioning if only a particular type of person responds to online surveys.
- The time it took to complete the survey may have limited participation.
- Participation in the survey may have been influenced by the timing of when the surveys were sent out during the academic school year.
- This study is correlational; therefore, causation cannot be inferred from emotional intelligence, leadership styles, or conflict management styles.

- Additional contributing factors not addressed in this study can cause an academic nurse leader to use a particular leadership or conflict management style.
- The surveys relied on self-reports which can impact reliability due to biases such as social desirability or inaccurate introspection.

Delimitations

A comprehensive understanding of incivility and bullying is too large to cover in this study. Though the research problem originated because of incidents of incivility and bullying, this study does not directly address the problem. The scope of the study does not attempt to understand the driving forces that led to the development of emotional intelligence or leadership styles of nursing education administrators. With the number of types of emotional intelligence, leadership styles, and conflict management styles, the scope of the study focused on trait emotional intelligence, the full range leadership model, and Rahim's conflict management styles.

Organization of the Remainder of the Study

Chapter 1 includes a description of the problem and the need for the current study to identify a correlation among emotional intelligence, leadership styles, and conflict management styles. Chapter 2 contains a thorough literature review and describes the theoretical orientation of emotional intelligence, leadership styles, and conflict management styles. Chapter 2 concludes with a synthesis of the literature review findings and a critique of the research procedures used in the literature review. Chapter 3 comprises the research methodology, including the research design, target population and sample, and procedures. Chapter 4 covers the data collection, hypothesis testing, assumptions, and analysis results. Chapter 5 concludes with a summary and discussion of the results, limitations, implications for practice, and recommendations for future research.

CHAPTER 2. LITERATURE REVIEW

Chapter 2 is a comprehensive review of the literature pertaining to the constructs of emotional intelligence, the full range leadership model, and conflict management. Section one begins with a summary of the literature search. The subsequent section presents Petrides and Furnham's 2001 trait emotional intelligence theory, which provides the theoretical foundation for this research. The third section presents the literature review and includes research from the constructs of emotional intelligence, leadership styles, and conflict management styles. This section also contains a description of nursing school administrators and a review of the methodology used in the research. The final section is a critique of previous research methods. This section offers an objective evaluation of prior research and acquaints the reader with conflicting views of the constructs.

Methods of Searching

Emotional intelligence is a broad topic found in every aspect of research related to people. Peer reviewed articles were accessed through the databases of CINAHL complete, ProQuest Central, PsycINFO, PubMed Central, and Sage Journals Online. Additionally, seminal research was retrieved through ProQuest eBook Central. Identifying currently published peer reviewed articles refined the search.

The search started with the keyword *emotional intelligence* and additional search terms included *nurse, nursing, nurse educator, dean*, and *nurse administrator*. The search terms combined emotional intelligence with other keywords related to *leadership, leadership style, full range leadership model*, and *transformational leadership*. A third combination included emotional intelligence with *conflict, conflict management*, and *conflict resolution*. Following the preliminary search of emotional intelligence, it became necessary to define emotional

intelligence and delineate the two schools of thought, *ability-emotional intelligence* and *trait-emotional intelligence*. The construct of trait-emotional intelligence as a function of personality became this study's primary emotional intelligence focus. Trait-emotional intelligence was added to the search terms above to narrow the search to articles specific to trait-emotional intelligence.

Leadership styles were the next topics searched. Peer reviewed articles less than six years old in EBSCOHost, Sage Journals, ProQuest, and Wiley Online Library were accessed using the Capella online library. The search accessed seminal research to round out the history of leadership studies. The search for leadership theories included the search terms *leadership*, *leadership styles*, *leadership emotional intelligence*, *academic leadership*, *transformational*, *transformational leadership*, transformational leadership emotional intelligence, and *full range leadership model*. *Nursing*, *deans*, and *academic nurse leaders* were added to narrow the search further. Also, the search included seminal works of transformational and *transactional theories* (Bass & Avolio, 1994). Transformational leadership is a highly researched topic with little representation of academic nurse leaders (Bouws et al., 2016; Delgado & Mitchell, 2016; Giddens, 2018; Wilkes et al., 2015; Worthy et al., 2020).

The third search conducted was on conflict management styles. Using the Capella Library, the literature search accessed ProQuest Central, SAGE Publications, Wiley Online Library, EBSCO host databases, and journals in business, psychology, and conflict management. Key terms included: conflict, conflict management, conflict resolution, conflict styles, nurse, nursing, deans, education administrators, and conflict management combined with emotional intelligence and leadership. The literature search was further refined using current published peer

reviewed articles. An additional search to identify seminal research by conflict management theorists found original research dating back to 1915.

Theoretical Orientation for the Study

Trait emotional intelligence serves as the theoretical framework for the dissertation topic, understanding the correlation of emotional intelligence and leadership styles on the choice of conflict management styles in academic nurse leaders (Gunkel et al., 2016; Hopkins & Yonker, 2015; Zhang et al., 2015). Assessing trait emotional intelligence theory occurs through emotion-related perceptions within the personality factor space rather than the intellection space (Jokić & Purić, 2019; Petrides & Mavroveli, 2018). Additionally, Petrides and Mavroveli (2018) noted that emotional intelligence and its relationship to personality support the construct's discriminant validity.

As a personality construct, trait emotional intelligence theory provides one of the foundations for identifying leadership and conflict management skills. Emotional intelligence positively correlates to transformational and transactional leadership styles (Baba et al., 2019; Milhem et al., 2019; Zhang et al., 2018). Ma and Liu (2019) and Khosravi et al. (2020) found that emotional intelligence moderates workplace conflict. Additionally, emotional intelligence strongly predicts leadership success (Beckles, 2018).

Savel and Munro (2016) succinctly stated,

> Terms such as *leadership, conflict management*, and *emotional intelligence* can be vague and confusing, but the concepts are all interrelated. As a point of clarity, leaders often must have high-level conflict management skills, and one vital set of tools in the armamentarium of a quality leader is well-honed emotional intelligence. (p. 105)

When the situation involves conflict, a leader must determine the end goal and how they will reach it. A leader with high emotional intelligence has the ability to moderate their

emotions. They are thereby perceiving, understanding, regulating, and expressing themselves and handling others' emotions in a way that facilitates positive conflict management and achieves the desired outcome. An emotional leadership style emphasizing trust, loyalty, morality, and relationships is a component of transformational leadership style (Maamari & Majdalani, 2017). The emotional component of transformational leadership results in higher employee trust, commitment, and job satisfaction.

However, high emotional intelligence and leadership style are insufficient to promote a positive organizational climate. Leaders frequently encounter conflict, and their ability to manage the conflict can impact the employee, the organization, and patient care (Codier & Codier, 2017; Dimitrov & Vazova, 2020). Emotional intelligence and conflict management rather than conflict avoidance result in an improved workplace environment (Patton, 2020). Conflict is emotional and results from individuals having different opinions, goals, and ways of acting. Unresolved or poorly handled conflict can affect morale, productivity, trust, organizational commitment, turnover, and job satisfaction (Chen et al., 2019; Khosravi et al., 2020; Ma & Liu, 2019; Patton, 2020). Leaders with high emotional intelligence are more skilled at implementing an appropriate conflict management style for the situation (Chen et al., 2019). Khosravi et al. (2020) found that leaders who utilized emotional intelligence produced increased performance, trust, and team unity. Using emotional intelligence decreased counterproductive behaviors leading to increased productivity and decreased theft, bullying, and public shaming in the workplace (Ma & Liu, 2019).

The application of emotional intelligence directs the selection of leadership styles and conflict management styles used by leaders. Leaders with high emotional intelligence have leadership styles that promote effective conflict resolution (Chen et al., 2019; Katz & Sosa,

2015). In order to confirm or discount this premise, I investigated whether there are correlations among trait emotional intelligence, leadership styles, and conflict management styles used by nursing school administrators. Research has shown that emotional intelligence individually influences leadership styles and conflict management styles (Ikpesu, 2017). This study further elucidated trait emotional intelligence's interrelationship with leadership and conflict management styles.

Review of the Literature

The three areas of emphasis for this research topic, emotional intelligence, leadership styles, and conflict management, are addressed individually. Historically, the development and study of each construct occurred independently. As the study of each construct progressed, researchers developed various subcategories beyond the three that are the focus of this study (Poenicke, 2016; Ros–Morente et al., 2018). The first section of the literature review examines the relatively short history of emotional intelligence research. Further examination provided information about the three primary theoretical subcategories, ability emotional intelligence, mixed-model emotional intelligence, and trait emotional intelligence. Further scrutiny of the three subcategories of emotional intelligence led to selecting trait emotional intelligence as the construct for this study.

The second section of the literature review continues with a synthesis of the history of leadership theory and the time eras in which these leadership studies occurred. Following the history of leadership styles, the literature review defines leadership styles, specifically transformational, transactional, and passive-avoidant leadership and their constructs. These three styles are part of the full range leadership model and provide three independent variables for the approved research project's leadership focus.

Conflict management is not a new theoretical finding. Because people have differing opinions, conflict and managing conflict have always existed. The third construct of conflict management includes an overview of the history of conflict management and the ongoing theoretical debate as the variables are arranged, rearranged, and relabeled in an attempt to understand conflict management.

The final section identifies the research pertaining to nursing academic administrators. Although there is substantial research on practicing nurses and nursing students, there is limited research on nurse leaders and less on nursing education administrators (Bouws et al., 2016; Delgado & Mitchell, 2016; Wilkes et al., 2015; Worthy et al., 2020). These findings revealed a paucity of research, thus confirming gaps in the literature. The final section of chapter 2 concludes with a critique of previous research and research methods related to emotional intelligence, the full range leadership model, and conflict management by presenting strengths and weaknesses to provide perspective.

History of Emotional Intelligence

All people have emotions; therefore, it is necessary to recognize and manage emotions. Alghamdi et al. (2017) posited that emotions will always be a part of interactions among people. As described in poetry, prose, and scripture, the *soul* refers to the emotional aspect of a person. Plato alluded to emotional intelligence when he referred to the soul as the master of the body, leading to the modern term self-mastery (Reese, 2019). Socrates stated, "know thyself," and Aristotle reminded his followers that "knowing yourself is the beginning of all wisdom" (Drigas & Papoutsi, 2018, p. 6).

Piaget categorized the developmental stages of self-awareness of one's emotions (Aslanian, 2018) and brought recognition to the role of emotions throughout life. Philosophers,

theologians, and now psychologists attempt to study and understand emotions. In 1920, Thorndike identified social intelligence as the ability to understand and supervise others while behaving sagely (Dabke, 2016; Thorndike, 1920). David Wechsler (1943) described non-intellective factors, or the factors not measured on IQ tests, as contributing to intelligence and the cause of variance in IQ test scores.

In 1983, Gardner (2011) identified personal intelligences, interpersonal and intrapersonal, in his theory of multiple intelligences. He described intrapersonal intelligence as the ability to self-reflect, look at one's feelings, understand them, and use them to guide personal behavior (Gardner, 2011). Interpersonal intelligence is an awareness of others, specifically a consciousness of their dispositions or natures and what motivates them (Gardner, 2011; González–Treviño et al., 2020). Gardner's multiple intelligences theory does not support the concept that intelligence is measured only by cognitive tests (Bordei, 2017). Gardner (2011) developed assessment tools to measure multiple intelligences' unique traits to appropriately measure intelligences that are not cognitively based.

In 1985, Payne coined the term *emotional intelligence* in his doctoral dissertation. Then in 1990, Salovey and Mayer used the expression “emotional intelligence” in their writing and research. They expanded the definition posited by Gardner and delineated four competencies within emotional intelligence. The four competencies are a) perceiving and expressing one’s emotions, b) evaluating thought using emotions, c) comprehending one’s emotions, and d) managing emotions of self and others (Bozionelos & Singh, 2017; Mayer et al., 2016). The competencies begin at a fundamental level and progress to using higher cognitive abilities of emotional intelligence. Each of the four competencies applies to Gardner's intra- and

interpersonal intelligences, or each competency applies to emotional intelligence as it relates to oneself and others.

In 1995, Goleman published *Emotional Intelligence* which promoted emotional intelligence theory development. Goleman (2014) emphasized the traits of "self-awareness, self-management, self-regulation, empathy, and social skills" (Chapter 1, para. 2) and the traits' contributions to leader success. Self-awareness is having insight into one's strengths, limitations, emotions, desires, and motives. Self-management includes self-regulating impulses and feelings, augments integrity, and decreases impulsivity. Goleman (2014) defines empathy in emotional intelligence as the ability to consider another's feelings. The fifth trait of emotional intelligence is social skills which is the ability to manage relationships.

To understand what made intelligent people highly successful, Bar–On spent 17 years researching and developing his theory of emotional intelligence (Ackley, 2016). Bar–On's theory was presented in 1997 and updated in 2011 by Durek (Ackley, 2016). The updated theory includes 15 skills grouped into five composites, self-perception, self-expression, interpersonal, decision making, and stress management (Ackley, 2016). Bar–On's emotional intelligence model combined social and emotional competencies to determine emotional intelligence (Ain et al., 2021).

Ability Emotional Intelligence

Following Goleman's landmark publication, *Emotional Intelligence*, the study, research, and testing of emotional intelligence increased exponentially. This flood of interest in emotional intelligence led to various constructs that each defined and tested emotional intelligence differently (Miao et al., 2018). Mayer et al. (2016) maintained that emotional intelligence is a cognitive ability tested the same way as verbal and spatial intelligence on IQ tests (Ackley, 2016;

Caruso et al., 2016; Gómez–Leal et al., 2018). In 2001 Petrides and Furnham introduced the term ability emotional intelligence as a theoretical approach to emotional intelligence (O'Connor et al., 2019). Ability emotional intelligence improves over time with practice (Nafukho et al., 2016) and maturity (Drigas & Papoutsi, 2018), but cognitive ability limits overall improvement (Ackley, 2016).

The ability emotional intelligence assessment developed by Mayer, Caruso, and Salovey contains four emotional intelligence facets: discernment, comprehension, facilitation, and management of emotions (Waglay et al., 2020; Wirawan et al., 2019). The assessment method correlates with fluid intelligence rather than personality (Di Fabio & Saklofske, 2014). The cognitive approach measures an individual's theoretical understanding of emotions with right and wrong answers (Kaliská & Kaliský, 2016; O'Connor et al., 2019).

The measurement of ability emotional intelligence requires individuals to demonstrate their emotional intelligence through tasks and exercises similar to case studies. The individual reads a question that elicits emotion and selects the correct response (Miao et al., 2018). The participant selects what they think is the correct way to respond to the emotion-generating question. This type of test assesses an individual's understanding of emotions and how they work. However, it does not provide insight into how individuals use emotions in their work or personal life (O'Connor et al., 2019). Measuring emotional intelligence using the correct response method supports the position of Mayer et al. (2016) that ability emotional intelligence is a cognitive function.

The Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT) demonstrated that high ability emotional intelligence was related to nurses' improved clinical performance and clinical judgment (Christianson, 2020; Codier & Codier, 2017). In organizational environments,

emotional intelligence promotes improved employee productivity (Dean & East, 2019) and leader effectiveness (Edelman & van Knippenberg, 2018). High-ability emotional intelligence protects against depression (Fernández–Berrocal & Extremera, 2016) related explicitly to emotionally laden tasks (Gutiérrez–Cobo et al., 2016).

Mixed Model Emotional Intelligence

Mixed model emotional intelligence is a second theory that has developed and evolved. Initially, as a non-cognitive approach, mixed model emotional intelligence included social, emotional, and personal skills to deal with life's demands (Kaliská & Kaliský, 2016; Miao et al., 2018; Nafukho et al., 2016). Then mixed model emotional intelligence evolved to define the measurement of abilities, traits, and social skills. More recently, mixed model emotional intelligence has been classified within the trait emotional intelligence category because it is measured using self-reports (Drigas & Papoutsi, 2018; O'Connor et al., 2019). Self-reports measure an individual's typical behavior in response to an emotional situation.

Many researchers combine mixed model emotional intelligence with trait emotional intelligence or classify trait emotional intelligence with mixed model emotional intelligence. Goleman's and Bar–On's measurement tools assess mixed model emotional intelligence as defined by Goleman (2014). Goleman combined Salovey and Mayer's ability emotional intelligence with Bar–On's personality aspect of emotional intelligence to define his theoretical construct (Raghubir, 2018; Routray et al., 2017). Goleman's Emotional Competency Inventory (ECI) lacked scientific rigor in the development of the test and is, therefore, weaker in validity and reliability compared to Bar–On's Emotional Quotient Inventory (EQ-I; Ackley, 2016).

Bar–On's model consists of five domains: intrapersonal, interpersonal, adaptability, stress management, and general mood (Bar–On, 2006). Bar–On (2006) expanded his model to include

the social component of emotional intelligence, which he coined as emotional–social intelligence (ESI). Scholars are taking another approach by viewing ability emotional intelligence and mixed model emotional intelligence as complementary rather than conflicting (Nafukho et al., 2016).

Trait Emotional Intelligence

Trait emotional intelligence is the third theory of emotional intelligence advanced by Petrides and Furnham in 2001 (Petrides et al., 2016). The definition of trait emotional intelligence is how individuals perceive their ability to understand, regulate, and express their emotions (Costa & Faria, 2020; Kaliská & Kaliský, 2016; Petrides et al., 2016) or "emotional self-efficacy" (Bozionelos & Singh, 2017, p. 206). Trait emotional intelligence is hierarchical. Both ability emotional intelligence and trait emotional intelligence have overlapping facets related to perceiving, regulating, and using emotions (O'Connor et al., 2019).

Trait emotional intelligence is related to personality rather than cognitive intelligence because of its distinct and compound construct (Petrides et al., 2016). Specifically, the facets of trait emotional intelligence can be isolated and are compound because of the correlation with high-order personality traits. Thus, trait emotional intelligence theory contributes to the general factor of personality theory (Petrides et al., 2016).

Petrides et al. (2016) emphasized the biological connection of trait emotional intelligence to the general factor of personality, including the big five (Alegre et al., 2019; Petrides et al., 2016; van der Linden et al., 2018). The big five describes personality factors of "openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism, or its reverse, emotional stability" (van der Linden et al., 2018, p. 147). This paradigm reinforces the idea that trait emotional intelligence contributes to the personality dataset. In their study of trait emotional intelligence and its relationship to the general factor of personality, Pérez–González and

Sanchez–Ruiz (2014) found that trait emotional intelligence shared 50% variance with the big five personality test. Alegre et al. (2019) repeated the study with a 59.1% variance predictability. The overlap of high trait emotional intelligence and personality were found in individual traits of goal-driven, prosocial behavior, sensitivity to reward, and positive emotions, thus improving physical and mental health and well-being (Bacon & Corr, 2017).

The correlation between trait emotional intelligence and the general factor of personality supports the personality construct of trait emotional intelligence. In Spain, Blanco et al. (2016) compared the Trait Emotional Intelligence Questionnaire (TEIQue) to Zuckerman's personality model (ZKA-PQ) and found a 64% variance, therefore supporting the theory that trait emotional intelligence is related to personality. Kaliská and Kaliský (2016) and Chirumbolo et al. (2019) conducted comparative analyses of the TEIQue in Slovenia and Italy, respectively, showing variances between 45%–65%.

Trait emotional intelligence is positively associated with academic fulfillment as related to career adaptability (Celik & Storme, 2018), self-efficacy, student achievement (Costa & Faria, 2020), decision-making ability (Di Fabio & Saklofske, 2014), subjective well-being, and altruistic behavior (Huang et al., 2018). Rathore (2018) found a relationship between self-regulated learners and emotional intelligence. Rathore (2018) indicated that self-regulated learners with high emotional intelligence were self-directed toward goal attainment, thus leading to better performance in school and success in life. Blizzard and Woods (2020) confirmed that emotionally intelligent leaders promote patient safety and quality of care.

History of Leadership Styles

The awareness of leadership skills has a long history, but the recent emphasis on investigating leadership styles commenced with the industrial revolution (Asrar–ul–Haq &

Anwar, 2018). Leadership styles are a subcategory of leadership theories (Pretorius et al., 2018). Leadership theories highlight situations, behaviors, traits, and practices. The research emphasis that ensued during the eras described below is how the leadership theories are categorized. However, the dates when the eras occurred vary by author. The eras result from literature reviews that analyzed the popularity of leadership studies conducted during a specific time frame (Asrar–ul–Haq & Anwar, 2018; Clark & Harrison, 2018; Lord et al., 2017; J. Zhu et al., 2019). The following is an overview of the history and some contributing theorists in the various eras. It is not an exhaustive list; many others have contributed to the various theories.

The Personality Era

The *great man* theory was the first recognized leadership theory and occurred in the mid-1900s as a personality or trait theory. In 1840, Carlyle provided an exposition on the great man and postulated how leaders were born, not made, and their rise to leadership resulted from their superiority (Clark & Harrison, 2018). Trait theory was further developed between the 1930s and 1950s as researchers sought to identify the ideal traits that made leaders great (Asrar–ul–Haq & Anwar, 2018). Originally the traits were listed as masculinity, dominance, extroversion, and intelligence (Asrar–ul–Haq & Anwar, 2018). The leading theorists of trait theory included Stogdill (1948) and Mann (1959), who identified great leaders' traits.

The Behavior Era

The behavior era (1940s to 1960s) emerged following the trait theories and the belief that great leaders were born. The behavior theory focused on the leaders' behaviors or what they did. The theory emphasized how leaders acted with their followers rather than defining a leader—male, tall, self-confident, and intelligent (Lord et al., 2017). The psychodynamic and psychoanalytic theories also focused on behaviors resulting from experiences related to

childhood and family relationship (Asrar–ul–Haq & Anwar, 2018). Two-factor leadership was another behavioral theory suggested by McGregor (1960) that emphasized tasks and relationship behaviors contributing to a leader's success. The behavioral theories underlying emphasis was that leadership could be learned (Asrar–ul–Haq & Anwar, 2018). The researchers from Ohio State University (Stogdill, Coons, Halpin, Winer, and Fleishman, 1957), the University of Michigan (Katz and Khan, 1966), and Likert (1960s) were considered the leading theorists during the behavior era (Asrar–ul–Haq & Anwar, 2018).

The Situational and Contingency Eras

Situational and contingency theories occurred from the 1950s to 1970s. The focus was on behaviors specific to situations connecting leader actions with follower attitudes (Lord et al., 2017). The contingency and situational theories emphasize that there is no one best leadership theory to use in all situations (Asrar–ul–Haq & Anwar, 2018) and no one best leader. The situational and contingency theories acknowledged outside factors contributing to a leader's success (Clark & Harrison, 2018). The situational theory incorporates time, location, circumstance, and personal traits to a leader's emergence. Fiedler's (mid-1960s) contingency theory considered the situation but noted that the leader acts from a task-oriented or relations-oriented approach to leadership. House (1971) built the path–goal leadership theory on Fiedler's contingency theory.

Transactional Era

Three approaches to transactional leadership emerged during the 1970s. During the transactional era, the emphasis was on the leader–follower relationship. Each model approached the relationship with a unique emphasis. Two of the three approaches were vertical dyad linkage and leader–member exchange by Graen and Uhl–Bien (1995; Clark & Harrison, 2018; J. Zhu et

al., 2019). Transactional leadership theory was the third approach for the transactional era. In transactional leadership, the emphasis is on quid pro quo, whereby the leader and the follower each get something they want. Downton (1973) was the first to use transactional and transformational terms when describing leadership. Later, Burns (1978) defined transactional and transformational leadership based on how the leader motivates followers.

The Transformational Era

In the 1970s, Weber's (1958) writings heavily influenced House's (1976) charismatic leadership theory (Toma et al., 2019). Charismatic leaders influence and motivate followers through their magnetic personalities (Toma et al., 2019). However, charisma does not mean a leader is transformational. In the 1980s, Bass (1995) expanded on Burns and Weber's work and suggested transformational leadership theory. Transformational leadership also focuses on the exchange between the leader and follower but with a positive approach. Charismatic and transformational theories share some behavior traits, such as inspiring vision and motivating followers.

The Culture Era

The culture era emphasized the influence of the organizational culture on the leader and followers (Clark & Harrison, 2018). Theories that emerged during the culture era included theory Z by McGregor in 1960, theories X and Y by Sullivan in 1983, and self-managed teams by Clark & Harrison, 2018. The relationship between leadership and organizational culture became a field of study (Xie, 2019) during the culture era. Clark and Harrison (2018) noted that culture leadership theory did not succeed as a theory but continues with studies on how culture impacts leadership. The study of culture became the study of organizational leadership which continues to be studied extensively (Xie, 2019).

The Post-Heroic Era

The post-heroic era began in the twenty-first century and resulted from a need to move away from the hero leader to the moral leader. The priorities in leadership research during the post-heroic era (Hoch et al., 2018) are ethical leadership (Magalhães et al., 2019; Yasir & Mohamad, 2016), authentic leadership (Gill & Caza, 2018; Hoch et al., 2018), spiritual leadership (Xie, 2019), and servant leadership proposed by Greenleaf (1970; Eva et al., 2019; Kiker et al., 2019). Ethical and authentic leadership resulted from corporate scandals in the 1990s (Hoch et al., 2018; W. Zhu et al., 2019). All four theories have ethical roots to guide the leader's actions.

Other theories based on teams and communities (De Brún & McAuliffe, 2020; Homan et al., 2020) continue to emerge. Additionally, theories accounting for the *dark* side of leadership, such as pseudo–transformational leadership, a term coined by Bass, have emerged (Hoch et al., 2018; Hughes & Harris, 2017; Lin et al., 2017, 2019; O'Reilly & Chatman, 2020). As society changes, the need for different leadership styles continues. Some of the newer leadership theories include contextual leadership (Oc, 2018), shared leadership (Xie, 2019; Zhu et al., 2018), implicit theory of leadership (Scott et al., 2018), distributive leadership (Günzel–Jensen et al., 2016; Thien, 2019), empowering leadership (Mishra & Pandey, 2019) and others (Keskes et al., 2018).

Definitions of Leadership Styles

This review describes the leadership styles from the full range leadership model which are the leadership styles under investigation. The full range leadership model has been researched, applied, and debated for over 30 years due to its comprehensive incorporation of many aspects of leadership (Kanat–Maymon et al., 2020). Andersen (2016a) noted, that the

definition of leadership is not so much about what leadership is but more about defining good leadership. (p. 115). Transformational leadership meets the criteria of exemplary leadership because it includes promoting tasks to reach the company goals (competence) and interest in the individuals whose job is to reach those goals (ethics). Jensen et al. (2019) posited that the intent, not the outcome, determines leadership style. The leader attempts to create a vision, share it with others, and sustain it to reach the desired goals.

The Full Range Leadership Model

Bass and Avolio (1994) developed the full range leadership model that provided leaders with a *full range* of leadership behaviors. The model incorporates transformational, transactional, and passive-avoidant leadership styles. There are nine constructs represented within the three styles. The transformational leadership style seeks to motivate and inspire followers with vision, empowerment, and personal support. A transformational leader's five constructs include intellectual stimulation, individual consideration, inspirational motivation, and idealized influence (attributed and behavioral). The two transactional leadership constructs are management by exception active and contingent reward. Passive-avoidant is the absence of leadership or ineffective leadership and includes management by exception passive and laissez-faire (Asrar–ul–Haq & Anwar, 2018; Bass & Avolio, 1994; Yasir & Mohamad, 2016).

Transformational Leadership

Bass and Avolio (1994) characterized transformational leadership as it applies to individuals who develop trust while challenging employees to support the vision of the organization's future through intrinsic motivation that is not self-serving (Hoch et al., 2018; Khalili, 2017). According to Bass and Steidlmeier (1999), authentic transformational leadership, as compared to pseudo-transformational leadership, is founded on the leader’s moral character

and ethical values. Transformational leaders inspire trust and pride through communicating vision and motivating followers (Curtis, 2018; Hoch et al., 2018). Transformational leaders are role models. They foster collaboration while providing individualized support and challenge their employees with high-performance expectations (Asrar–ul–Haq & Anwar, 2018; Kelemen et al., 2020).

Transformational leadership characterizes a leader as someone who aligns their own and other individuals' goals for the good of the group or organization (Boamah & Tremblay, 2019). Drakulevski et al. (2017) stated that transformational leadership includes extraversion, emotional intelligence, higher intelligence, agreeableness, openness, self-confidence, empathy, self-awareness, and charisma. Prochazka et al. (2018) noted the lack of correlation of transformational leadership to extraversion, neuroticism, and openness to experience. Also, transformational leaders promote change in followers' confidence in and opinions concerning the organization. Transformational leaders tap into the intrinsic motivation of followers through a shared vision that transcends self-interest (Bass & Steidlmeier, 1999; Jensen et al., 2019; Kroon et al., 2017).

Bass and Steidlmeier (1999) wrote,

> Authentic transformational leaders, as moral agents, expand the domain of effective freedom, the horizon of conscience, and the scope for altruistic intention. Their actions aim toward noble ends, legitimate means, and fair consequences. Engaged as they are in the moral uplifting of their followers, in the sharing of mutually rewarding visions of success, and in enabling and empowering them to convert the visions into realities, they should be applauded, not chastised. (p. 211)

Idealized Influence. Idealized influence is doing the right thing (Gilbert & Kelloway, 2018) as guided by their values, ideals, and beliefs (van der Veen, 2019) and building employee trust (Günzel–Jensen et al., 2016; Valeriu, 2017). Through idealized influence, the leader

emphasizes the mission and vision (Anderson, 2017) and helps the followers capture the vision to guide their achievement of organizational and personal goals (Bush, 2018). Through idealized influence, leaders serve as role models (Liukka et al., 2018). Leaders cultivate an ethical culture with high moral standards to reach the idealized influence of a transformational leader (Bass & Steidlmeier, 1999).

Intellectual Stimulation. This construct emphasizes a leader's role in providing intellectual stimulation through openness to new ideas, questioning assumptions, and finding creative solutions (Bass & Steidlmeier, 1999). Additionally, the leader demonstrates tolerance for mistakes (Anderson, 2017). New ideas include employees changing their old ways to new ways of doing things (Gilbert & Kelloway, 2018), creative thinking, and taking risks (van der Veen, 2019). In the nursing profession, intellectual stimulation supports critical thinking and clinical judgment as nurses learn to think for themselves, apply evidence-based practice, and improve patient care and safety (Liukka et al., 2018; Wang et al., 2017).

Inspirational Motivation. Leaders exhibit inspirational motivation by communicating high expectations enthusiastically and encouragingly (Anderson, 2017). Leaders also exhibit inspirational motivation by helping the employees perform at a higher level, beyond their expectations (Gilbert & Kelloway, 2018), and believing in their integrity and abilities (Wang et al., 2017). Followers accomplish excellence when they understand the vision and goals (Liukka et al., 2018). The leader emphasizes the best in people by encouraging benevolence, good works, harmony, and empowerment (Bass & Steidlmeier, 1999).

Individualized Consideration. Individualized consideration is when a leader is sensitive to the individual's needs and provides personal feedback, coaching, and mentoring (Anderson, 2017; Gilbert & Kelloway, 2018). Followers are empowered, treated fairly, and regarded as

individuals (Liukka et al., 2018; Wang et al., 2017). Individual regard is accomplished by showing appreciation, recognition, and celebrating the successes of the follower (Valeriu, 2017). Individualized consideration extends to developing future leaders through authentic, selfless acts to promote follower success (Bass & Steidlmeier, 1999).

Transactional Leadership

Transactional leadership emphasizes contingent reinforcement based on an exchange or transactional relationship and self-interest (Hoch et al., 2018), also known as quid pro quo. An example is the transaction of a salary for work completed. The exchange of rewards, incentives, or punishments becomes a way for the leader to motivate the follower (Asrar–ul–Haq & Anwar, 2018). The transactional leader works within the system, avoids risk, and works to achieve the defined organizational goals, preferably short-term goals. Transactional leaders promote change in behavior to accomplish a goal (Drakulevski et al., 2017) and use extrinsic motivation to manage at a micro-level, including daily tasks (Bass & Steidlmeier, 1999; Günzel–Jensen et al., 2016). Transactional leadership is episodic, where relationships are temporary and lack the longevity necessary for team building and trust (Pishgooie et al., 2019).

Contingent Reward. Contingent reward leadership includes using rewards and punishments to achieve organizational goals (Gilbert & Kelloway, 2018). The rewards and punishments can be economical or emotional (Nielsen et al., 2019; van der Veen, 2019). According to Bass et al. (2003), this transactional method can be reasonably effective in motivating employees. Yahaya and Ebrahim (2016) posited that leaders base rewards or punishments on established goals and expectations. The employee knows why they are receiving a reward or punishment. It is a directive leadership style and discourages behaviors outside of the established goals and expectations (Yahaya & Ebrahim, 2016).

Active Management by Exception. Active management by exception occurs when leaders actively monitor for errors, deviances, or mistakes and then seek to correct them before they happen (Bass et al., 2003; van der Veen, 2019). Like contingent reward, after establishing clear goals and expectations, the leader actively watches for nonperformance and then works to correct the problem and enforce the rules (Yahaya & Ebrahim, 2016). These leaders become actively involved when there is an exception to the established rules.

Passive-Avoidant

Passive-avoidant leadership is disengagement from leadership's responsibility where needed action rarely occurs except when a crisis demands a response (Breevaart & Zacher, 2019; Curtis, 2018). The theory postulates that leaders avoid responsibility and do not care. They delay decision-making and are not interested in the followers' needs. Passive-avoidant leadership adversely affects followers' attitudes and work performance (Asrar–ul–Haq & Anwar, 2018; Wellman et al., 2018). Both passive management by exception and laissez-faire use passive-avoidant behavior when leading.

Passive Management by Exception. Passive management by exception occurs in response to negative behaviors (Gilbert & Kelloway, 2018). The leader responds to negative behaviors after the mistake has occurred (van der Veen, 2019). Passive management by exception is considered similar to laissez-faire (van der Veen, 2019). The similarity of passive management by exception to laissez-faire leadership is due to the passive or reluctant approach the leader takes to correcting the problem (Yahaya & Ebrahim, 2016).

Laissez-faire. Laissez-faire leadership defines leaders who avoid leadership or when leadership is absent or inactive (Batista–Foguet et al., 2021). Laissez-faire leadership is often referred to as a lack of leadership and uses externally motivated controlled regulation to deal

with a negative situation (Gilbert & Kelloway, 2018). Leaders who use the laissez-faire style take a hands-off approach (Baba et al., 2019). Avolio and Bass (1991) described laissez-faire leaders as one who avoids getting involved, is absent when needed, avoids decision-making, and is slow to respond to urgent issues.

History of Conflict Management Styles

Conflict has existed since the beginning of time. The Bible tells the story of two brothers, Cain and Abel, who experienced conflict over their jobs; one was a shepherd, the other a farmer (King James Bible, 1769/2013). Conflict has continued between individuals, families, communities, and countries. There will be conflict as long as there is a "perceived divergence of interest" (Pruitt & Kim, 2004, pp. 7–8). As long as there are two people, there will be something about which they disagree. Aristotle said, "Anyone can become angry—that is easy. But to be angry with the right person, to the right degree, at the right time, for the right purpose, and in the right way—this is not easy" (From The Nicomachean Ethics, as cited by Goleman, 1995, p. ix).

The attempt to understand and mitigate conflict continues to evolve. The study of conflict management started with the social and biological sciences and continues in the context of social and organizational psychology (Rahim, 2017). The view of conflict has evolved over the last century, beginning as something inherently bad to the current understanding that conflict is neither good nor bad.

Classical Era

Following the pattern that had existed since the late nineteenth century, Taylor (1915), Weber (1947), and Fayol (1949) wanted to eliminate conflict entirely (McKibben, 2017). The classical approach that all conflict is bad, was better suited to the bureaucratic system of their era. To maintain the elimination or prevention of conflict, establishing clear lines of authority,

strict rules and regulations, hierarchical authority, and impersonal work relationships occurred (Rahim, 2017). Many believed the classical approach improved organizational effectiveness and promoted higher productivity. Later, Deutsch (1949) presented the cooperative-competitive model that resulted in an all-or-nothing solution still used by some managers, leaders, and in game theory (Pruitt, 2018; Rahim, 2017). Cooperation results when two groups can attain their goals concurrently. Competition results when one group's objectives supersede the others (Mukherjee & Upadhyay, 2019).

Human Relations Era

The human relations or behaviorist view of conflict was introduced in the late 1940s and continued until the mid-1970s (Hill, 2012). This view posited that conflict is normal and unavoidable, and individuals need to accept it. During this time, the term "conflict management" was introduced (Rahim, 2017). Guetzkow (1957) introduced the theory of intergroup relations. The intergroup relations theory consists of two dimensions for managing relationships between groups. The scale went from isolation, where the individual will try to solve the problem independent of others, to collaboration, where the group tries to resolve the conflict (Guetzkow, 1957). Though not explicitly set up to address conflict, the theory sets the groundwork for future theories modeled after a dimensional approach to relationships that emphasize how relationships occur on a continuum.

Blake and Mouton (1964) developed the Managerial Leadership Grid that conceptualized leadership on two dimensions, concern for people and concern for production (Cai et al., 2017; Thomas, 1988). The dimensions progress from low to high. The Managerial Leadership Grid contained the domains of team management, country club, impoverished, task, and middle of the road. In 1970, Blake and Mouton applied the managerial grid to conflict and created the Conflict

Grid (Tanveer et al., 2018). The conflict grid kept the two-dimensional labels of concern for people and concern for production. The five domain labels were also maintained. Later, Blake and Mouton described how the domain labels related to conflict (Cai et al., 2017; Tanveer et al., 2018; Uzun & Ayik, 2017). The Blake and Mouton grid led to additional conflict grid development by future researchers.

Tuckman's (1965) team development model addressed conflict by recognizing where the teams or small groups are in their development. According to McKibben (2017) and Natvig and Stark (2016), this is a popular model used in healthcare. It consists of forming, storming, norming, performing, and adjourning stages. The Tuckman model explained the occurrence of conflict during team development, specifically during the storming phase (McKibben, 2017).

Hall (1969 as cited in Shockley–Zalabak, 1988) defined the dimensions of the conflict grid as "concern for the relationship" and "concern for personal goals" (p. 2). Hall's five domains included win-lose, lose-leave, compromise, synergistic, and yield-lose. Hall emphasized the relationship of communication to conflict and successful conflict management. According to Shockley–Zalabak (1988), the conflict management survey developed by Hall had poor reliability and validity with limited use as a test of conflict management styles. Therefore, Hall's five domains lacked extensive research.

Interactionist Era

The mid-1970s saw the introduction of the interactionist approach to organizational conflict. This approach saw conflict as good and bad. Conflict handled well can improve organizational performance, and all conflict is manageable through different conflict management styles (Hill, 2012). Building on Blake and Mouton, and Hall's conflict management grids, Kilmann and Thomas (1974) refined and renamed the conflict management styles the

Thomas–Kilmann Conflict Management-of-Differences or MODE Instrument (Thomas & Kilmann, 1978). The two-dimensional grid ranged from low to high and was labeled assertiveness (satisfy concern for self) and cooperation (satisfy concern for others). The five areas are competing, compromising, accommodating, collaborating, and avoiding (McKibben, 2017). Later in 1988, Thomas noted that the domains were behavioral intentions rather than behaviors. The intention meant the intended outcome for those in conflict was acted out through behavior. This confusion about what was tested, along with the low validity and reliability of the MODE, encouraged continued research to find a valid and reliable test of conflict management traits (Konovsky et al., 1989; Womack, 1988a).

Employing the two-dimensional conceptualization of conflict management, Rahim and Bonoma (1979) suggested *concern for others* and *concern for self* (Thomas, 1988; Uzun & Ayik, 2017). Rahim advanced the dimension as distributive or integrative (Rahim, 2002). The distributive dimension referred to one individual having their needs fulfilled, which included obliging and dominating. The integrative dimension indicated that both parties' needs were met or not met and included avoidant or integrative conflict management styles (Bruk–Lee, 2017; Rahim, 2002). Rahim's conflict management model contains five levels, avoiding, compromising, dominating, integrating, and obliging. Compromising, as the fifth level, is located in the center of the grid because it involves give and take from both parties.

Avoiding. Avoiding is ignoring the conflict (lose-lose), also recognized as a low concern for self and low concern for others. The person refuses to acknowledge there is a problem or conflict. The individual avoids the problem at all costs. This style may be applicable when violence may erupt (Bruk–Lee, 2017) or when the individuals need a cooling-off period before confronting the conflict with a different conflict management style (Rahim, 2002).

Compromising. Compromising is achieved when both parties give up something—no win-no lose (Gunkel et al., 2016). This style indicates an intermediate concern for self and others. It involves give and take to reach a mutually agreeable decision (Rahim, 2017). The compromising style happens when neither party needs to meet all their interests (Bruk–Lee, 2017). Compromising can also be used when a consensus cannot happen, or a temporary solution is needed (Rahim, 2002).

Dominating. Dominating is satisfying personal interest (winning) at the cost of the other (losing). This person has a high concern for themself and low concern for others. The individual wants to "win" through the power of their position, assertiveness to defend their position, or through deceit. The dominating style is appropriate when a decision must be immediate (Bruk-Lee, 2017), a poor decision by the other party may be harmful, or the decision is significant to the individual (Rahim, 2002).

Integrating. Integrating seeks to problem-solve and results in a win-win for both parties. Integrating demonstrates concern for self and others and involves collaboration. This style requires exchanging information, openness, identifying alternative solutions, and examining differences to reach a consensus agreeable to both parties (Rahim, 2002). This style is suitable for complex problems and incorporates available knowledge, skills, and resources (Rahim, 2002). The integrating style is most appropriate when both parties desire an equally beneficial solution and there is time to find a solution (Bruk–Lee, 2017).

Obliging. Obliging emphasizes the commonalities and reduces the differences; one party yields the win to the other. The individual has low concern for self, demonstrated through self-sacrifice and high concern for others. The person is sometimes called a *conflict absorber* (Rahim, 2017). Another term for obliging is accommodating. Obliging occurs when the outcome is

unimportant to the obliger, the opposing party believes they are correct, or the obliger believes they are wrong. Obliging also occurs when the results will not fulfill one's interests, or they are in a weak position (forced obliging), or seek to preserve the relationship (Bruk–Lee, 2017; Rahim, 2002). Sometimes obliging occurs when an individual gives up something now in the hopes of getting something later (Rahim, 2002).

Academic Leaders

Hourani et al. (2021) posited the need for public school leaders to have emotional intelligence to meet the challenges of stress and conflict caused by change and promote professional and group success. Li et al. (2018) found that job satisfaction and performance positively correlated to emotional intelligence. In a study about emotional intelligence, incivility, and higher education faculty, the authors found that emotional intelligence was linked with prosocial behaviors, and incivility was linked to deviant behaviors (Itzkovich & Dolev, 2017). In a different study with secondary school teachers, Kanwal et al. (2018) found a positive relationship between emotional intelligence and emotional labor. Emotional labor occurs in jobs that require managing emotions during interactions, such as nurses, teachers, and retail salespersons. Another study found a positive correlation between emotional intelligence and emotional labor of college teachers (Lanlv & Ming–Tsung, 2021).

The study results by Baba et al. (2019) found a significant positive correlation between emotional intelligence and transformational leadership of academic leaders. Baba et al. (2019) noted that academic leaders with high emotional intelligence are more likely to adopt a transformational leadership style. The ability to manage conflict with diplomacy and tact is improved when the academic leader has high emotional intelligence. Subordinates' rated their leaders as having emotional intelligence and transformational leadership skills. The results

validated previous research supporting the role of emotional intelligence in the use of transformational leadership (Baba et al., 2019).

Anthony and Antony (2017) added to the discussion of general leadership as it applies to academic institutions. The authors noted that although academic leadership research is limited, some unique challenges that academic leaders face are not found in the business sector. The motivating factors for academics differ from the business sector, where salary and promotion are the primary driving factors. Leader effectiveness in academia is measured differently, with research, education, and administration used as the measuring stick.

Leonard (2017) addressed the need for nurse educators to develop their emotional intelligence to enhance their ability to prepare nursing students to develop emotional intelligence and prepare them for the expanded role of nursing practice. Nursing care is no longer limited to clinical skills and theoretical knowledge but includes interpersonal and interprofessional relationships where understanding and attending to emotions is necessary for improved patient care (Leonard, 2017; Mangubat, 2017). Clinical nurse educators must have high emotional intelligence to manage their hidden and informal curriculum. Also, high emotional intelligence positively impacts student success in the clinical setting (Omid et al., 2018).

Wilkes et al. (2015) conducted a qualitative study on leadership traits in nursing school deans. The traits included vision and foresight, passion for nursing, effective communicator, decision-maker, and a developer of others' potential. In a similar study, Delgado and Mitchell (2016) identified communication, integrity, and problem-solving as essential traits of a leader. Many of these traits align with the description of a transformational leader. Wilkes et al. (2015) and Delgado and Mitchell (2016) concluded that these attributes are needed to meet the demands

of the current nursing education needs and to meet the future demands of educating nurses and preparing future nurse education leaders.

A recent study by Bouws et al. (2020) noted that "few others have the potential to bring about change within the academic setting or hold such a strong influence on the future of nursing" as academic nurse leaders (p. 469). Tucker (2020) noted that academic nurse leaders are instrumental in transforming healthcare. The qualitative study by Bouws et al. (2020) identified attributes of professional value, self-awareness, and the necessary interpersonal skills needed to be a leader. The respondents felt a sense of calling, and their desires aligned with their nursing departments' or colleges' vision and mission. Other driving forces for nursing school deans were relationships, creative freedom, positive change agents, and professional growth.

Methodology

Research methodology provides an accurate, dependable, and complete process to research, making it possible for other researchers to replicate (Disman & Barliana, 2017). The research methodology includes the research methods, research design, participants, data collection, and data analysis (Abutabenjeh & Jaradat, 2018; Disman & Barliana, 2017). The following section includes definitions of each procedure in the research methodology. Analyzing each research method identified its strengths and weaknesses, ethics, bias, validity, and reliability. A synthesis of the research methods confirmed the selected application as it applies to the approved research project and its ability to answer the research questions.

Quantitative Versus Qualitative

Before deciding which research method to use, qualitative and quantitative strengths and weaknesses were compared and contrasted. The question was asked which method would facilitate answers to the research questions. Quantitative methodology is quantifiable, focusing

on predicting, explaining, or controlling data. Quantitative research was used to justify the results through empirical testing, validating results, or testing a research hypothesis (Park & Park, 2016). Quantitative research is considered objective due to the utilization of measurement tools and statistical analysis.

Zaltman et al. (1973) posited five assertions within the context of justification for using quantitative analysis. The assertions were using a validation process to evaluate the results, distributing research information, affording predictions and explanations, and providing controls for valid and reliable results. Statistical analysis is central to quantitative research and is used to validate, predict, and control research (Halcomb, 2018; Tominc et al., 2018). Quantitative research requires a large population to study, making the results generalizable to a larger population. Using interventions in quantitative studies provides strong internal validity (Park & Chase, 2017).

Researchers view qualitative research as the discovery phase of investigation (Park & Park, 2016). According to Zaltman et al. (1973), discovery includes studying and analyzing preliminary information and research, advancing new theories, data collection from various sources, and thoroughly scrutinizing the results. Qualitative research is conducted in real-time to understand the participants' meanings, views, and experiences (Indu & Vidhukumar, 2020). The data are gathered through in-depth interviews, observation, or focus group discussions making the data more subjective and exploratory.

An advantage to qualitative methods is that the interviews and observations of participants occur in natural settings. The natural environment allows participants to express themselves freely. This freedom may lead to new insights and questions not previously considered (Park & Park, 2016). An in-depth comparison or analysis of individual differences

provides a new understanding of the event. In qualitative research, the participant pool is small, the interviews conclude when the responses have reached saturation, and there are no new insights.

Either quantitative or qualitative research methodologies could be used for the dissertation topic. Using qualitative methods could increase an understanding of the experiences influencing a nursing education administrator's leadership style and conflict management choice. The study would explore the meaning of emotional intelligence, leadership styles, and conflict management of nursing education administrators. The researcher would seek to understand the dean's lived experience and role as an academic leader. This study method could enhance the understanding of when and why a dean chooses to respond to conflict in a particular manner. However, the qualitative research method will not generate the answers required to answer the research questions.

The quantitative research method was selected to answer the research questions. The quantitative method provided statistical data quantifying the results to test a research hypothesis. This method provided the first step toward finding answers to the research questions; the discrimination between the multiple variables of emotional intelligence, leadership styles, and conflict management styles. The decision to use quantitative research led to the next step in the research design, the choice between experimental and nonexperimental research methods.

Experimental Versus Nonexperimental

Experimental research design functions in a controlled environment. There is a deliberate manipulation of the treatment variable to identify the independent variable's influence (Leatherdale, 2019). This approach is key to understanding the effectiveness of interventions.

Understanding cause and effect is a strength of experimental research, yet it is limited to its generalizability and weak in context (Reio, 2016).

Bleske–Rechek et al. (2015) identified a weakness in experimental research following their study to assess the inferences people make about experimental research. They found that people inferred a positive causality whether one existed or not. Krause (2018) mentioned that the cost of experimental research, specifically randomized control trials, is higher than nonexperimental research. Krause (2018) listed a second weakness: randomized control trials are not methods used to discover new information but to validate previous evidential experiences. Reio (2016) posited that experimental research is expensive, time-consuming, and challenging to accomplish in a natural setting.

Internal validity is high for experimental studies due to the researcher's control when randomizing participant assignments (Reio, 2016). Reio (2016) also noted how well-designed experimental research minimizes external validity threats, that is, reactive effects related to testing and experimental arrangements, interaction effects of the experimental variable and selection biases, and interference resulting from multiple treatments. Experimental studies can be randomized or non-randomized —quasi-experimental or natural (Indu & Vidhukumar, 2020). Moving to a non-randomized study lowers the internal validity making nonexperimental design a less desirable choice when seeking to identify causality.

Randomized control trials, as the “gold standard” of experimental research, only substantiate whether the intervention worked, but they do not answer the question of 'why' (Reio, 2016). Even as the highly prized method of evidence-based research, only five percent of published research is experimental (Reinhart et al., 2013). One reason for this low number is ethics. According to Yanow and Schwartz–Shea (2018), experimental research has a more

significant ethical impact because of the researcher's control over the outcome. Ethical concerns associated with experimental research methods, particularly randomized control trials, have made it necessary to seek alternative experimental research methods while maintaining high internal validity. Two alternatives to experimental research ensue below.

Fives et al. (2017) identified an ongoing controversy between experimental and nonexperimental research that study social interventions. The authors noted more support for nonexperimental research. Fives et al. (2017) noted it was ethical because it lacked a control group that did not receive the interventions. However, in the debate between experimental and nonexperimental research methods, Fives et al. (2017) encouraged researchers to consider using experimental and nonexperimental research methods together when carrying out their research.

Leatherdale (2019) presented the natural experiment as an alternative to experimental randomized control trials. A natural experiment is when an intervention occurs naturally and without external control by the researcher. Leatherdale (2019) posited that randomized control trials are overly controlled and do not represent a real-world population. Also, randomized control trials, though the most robust experimental research method, are subject to external validity biases. Leatherdale (2019) also noted how randomized control trials are not generalizable to other contexts due to the stringent criteria used to select participants.

In nonexperimental research, the research does not introduce interventions to the participants, and manipulating the variables does not occur. The researcher observes the participant in a natural or spontaneous setting without direct interference (Hansson, 2016). Nonexperimental research seeks to find associations or relationships between variables (Reio, 2016). Hansson (2016) identified three weaknesses of experimental and nonexperimental research. The first is variability. Individuals often respond differently to their environment. A

second weakness is confounders, including underlying factors that the researcher is unaware of or does not consider in their observations. Third, is evaluator bias where the researcher sees what they want to see.

The benefits of nonexperimental design include its low cost, especially when using surveys. Surveys provide valuable information on attitudes, behaviors, and perceptions to establish correlations and provide direction for future experimental research (Reio, 2016). Nonexperimental studies can lead to experimental studies by providing information illuminating where interventions may be needed or are most effective (Reio, 2016).

Bleske–Rechek et al. (2015) found that participants falsely inferred causality from a nonexperimental article. Researchers must be transparent in their interpretation of research findings. Some researchers question the internal validity of nonexperimental research because it is not as high as experimental research (Reio, 2016). With any research design, there are tradeoffs. Nonexperimental research is weak on causality since its design does not allow for inferences of causality. Nonexperimental research is moderate for context and generalizability (Reio, 2016).

Nonexperimental studies generally have fewer ethical issues than experimental studies, nevertheless, concerns exist and require attention. The main concern of all research is confidentiality or the exposure of private, personally identifiable data (Lobzhanidze et al., 2016). Minimizing the risk to confidentiality occurs through a conscientious, careful, and clear explanation of the researcher's steps to protect participants' personal information. Approval by the Institutional Review Board (IRB) provides an additional layer of protection against ethical violations.

A second ethical concern located in the Belmont Report regards obtaining informed consent. The participant must indicate they have been informed of their rights and therefore 'opt in' to participate. The researcher provides information about themself, the research's intent, the expectations of participation, collection, use, and reporting of the data, and potential consequences and risks (beneficence). The process of informed consent increases trust and results in higher data quality (Fleming & Zegwaard, 2018; Sobottka, 2016; Yanow & Schwartz–Shea, 2018). Through informed consent, the participant has the right to withdraw at any time, the confidentiality of all personal information, rights of ownership and access to data, and the complaint process (Fleming & Zegwaard, 2018). After being informed, the participant must consent. A consent form is a contract between the participant and the researcher (Fleming & Zegwaard, 2018).

The research study used the nonexperimental method of research. The nonexperimental research method allowed me to answer the research questions by understanding the relationship between the variables. Interventions and a controlled environment are not necessary to answer the research questions. The next step in the research plan was to determine which nonexperimental design would best inform the research to answer the research questions.

Six Nonexperimental Designs

Nonexperimental research has multiple designs and many more descriptions. Lobmeier (2012) identified six designs. The first design is the comparative design where participants are put into groups and then compared. The second is the differential, causal-comparative, or ex post facto. The group is assigned based on the independent variable, but the comparison is with the dependent variable. The third or correlational design uses non-manipulated variables to identify if a relationship exists. The fourth is developmental design, a longitudinal study or selecting

subjects along a continuum by age or years of experience. The fifth is the one-group pretest-posttest design. The emphasis of a pretest-posttest design is to study differences over time. The sixth or final is the posttest-only nonequivalent control group design. Comparison between the groups occurs after the intervention without a control group or randomization.

The design that best satisfies the requirements of this study is the correlational design. This design allows the study of the relationship between the independent variables of emotional intelligence and leadership styles and the dependent variables of conflict management styles. The comparative, causal-comparative, and posttest-only intervention designs differentiate groups of participants. The participants were not divided into groups or compared to each other or another standard for the approved research project. The proposed research project was not looking at participants on a continuum; therefore, the developmental and one-group pretest and posttest designs were not good fits.

Correlational Research Designs

Correlational nonexperimental research seeks to identify a relationship among two or more variables (Halcomb, 2018). The identified relationships can facilitate predictions and explanations (Seeram, 2019), detect prevalence, and predict events (Curtis et al., 2016). There are three types of correlational research designs. First, descriptive or explanatory describes the relationship among the variables (Seeram, 2019). Descriptive studies also provide data to develop hypotheses (Curtis et al., 2016; Indu & Vidhukumar, 2020). Second, predictive designs attempt to predict the impact of the independent variable on the dependent variable. Third, model testing examines “theoretically proposed relationships" (Seeram, 2019, p. 176).

There are many advantages to using correlational research methods. They are uncomplicated, quick to complete, inexpensive, and can provide a starting point for further

investigation of new phenomena (Curtis et al., 2016; Reio, 2016). The results from correlational research are often generalizable because the research was conducted on real people in the real world without manipulation or intervention which strengthens ecological validity (Lobmeier, 2012). Replication of the study improves the reliability.

The primary critique for correlational research is that correlation does not mean causation (Curtis et al., 2016). It is essential to report the results accurately and explicitly and avoid words that can lead to causality interpretations (Reio, 2016). Correlational research methods have low internal validity resulting from self-selection by the participants (Lobmeier, 2012). In the proposed research, self-selection may occur because only those who like to lead are in the role of academic nursing administrators. Another bias is that the majority of participants are women because, historically, women selected nursing as a career. Another challenge for researchers is making inferences about the general population that do not exist (Curtis et al., 2016).

The research question examined the statistical correlation or the predictive value of the independent variables of emotional intelligence and leadership styles on conflict management's dependent variables. The questions asked, are there correlations and predictions? The choice of a nonexperimental correlational design is to extend rigor to a descriptive design. The results of this study will identify if emotional intelligence and leadership styles can predict conflict management styles.

Measures/Instruments

There were three instruments used to collect data for this study. The Trait Emotional Intelligence Questionnaire-short form, the Multi-factor Leadership Questionnaire, and the Rahim Organizational Conflict Inventory-II. Each survey is explained and their psychometric properties are described.

Trait Emotional Intelligence

The Trait Emotional Intelligence Questionnaire-short form (TEIQue-SF) was obtained from Psychometric Lab (n.d.). An SPSS file was made available with the TEIQue manual's purchase, and the data was entered online into the SPSS template. All responses range from 1–7. Once the data was correctly entered, the SPSS file created a fully scored report, including Cronbach alphas for all TEIQue variables (psychometriclab.com). Then the three survey's data were combined before the discriminant analysis was conducted.

The Trait Emotional Intelligence Questionnaire-short form (TEIQue-SF) by K. V. Petrides was published and copyrighted in 2009 when he published the technical manual for administering and analyzing the TEIQue (Petrides, 2009). The constructs or variables measured by the instrument include 30 items, four factors of emotionality, sociability, well-being, and self-control, 15 facets, and the composite global trait emotional intelligence score. For the research study (dissertation), the discriminant analysis will only use the four emotional intelligence factors. Completion time is 5 minutes. The TEIQue-SF is normed for adults ages18 and up, children ages 8–12, and adolescents ages 12–17 (Petrides, 2009).

According to Andrei et al. (2016), following the authors' and others' meta-analyses, the TEIQue is shown to have incremental validity and superior psychometric properties, with a 95% confidence interval (CI) and a standard error (SE) = .0116. The reliability and validity for the four factors (variables for this research study) and the 15 facets are 95% CI and SE = .116 (Andrei et al., 2016). The TEIQue has been compared to other self-report measures of emotional intelligence and has been found superior (Petrides, 2009). Testing the TEIQue is ongoing, and Siegling, Petrides et al. (2015) posited that construct validity improves by applying a new

psychometric method, such as measurement techniques. Reliability for the TEIQue varies between .71 and .91 for facets with internal consistency at α=.90 (Mikolajczak et al., 2007).

Leadership Styles

The subjects completed the following instrument to investigate the leadership variables: The Multifactor Leadership Questionnaire self-report (MLQ-5x Short) developed by Bernard M. Bass and Bruce J. Avolio. The publisher is Mind Garden, and the test copyright was in 1995.

The MLQ was normed for adults in management or leadership positions (Pittenger, 2014). The manual is available for purchase and contains the details of reliability and validity (Mindgarden, n.d.). According to Jensen et al. (2019), the four-factor correlation is between .589 and .135, well below the Cronbach's alpha threshold of .7. In the review by Bessai (2016), the Alpha reliability coefficient is .60 to .92. Bass and Avolio (1994) have acknowledged that self-ratings tend to be higher but also more consistent. A separate review by Kirnan and Snyder (n.d.) noted that the alpha reliability coefficients were .77 to .95, and the criterion-related validity was high.

For leadership styles, the constructs or variables measured by the instrument include 36 items, three leadership styles of transformational, transactional, and passive-avoidant, nine constructs, and the composite global trait emotional intelligence score. For the research study, the discriminant analysis examined the nine leadership constructs. The MLQ (5x-Short) takes 15 minutes on average to complete.

Conflict Management Styles

The survey to investigate conflict management variables was the Rahim Organizational Conflict Inventory-II (ROCI-II), published in 1983 by M. Afzalur Rahim through the Center for Advanced Studies in Management. The conflict management instrument is "designed to measure

three independent dimensions of organizational conflict: intrapersonal, intragroup, intergroup" (ROCI-II) and "designed to measure five independent dimensions that represent styles of handling interpersonal conflict: integrating, obliging, dominating, avoiding, and compromising (ROCI-II)" (marketplace.unl.edu). The publisher is the Center for Advanced Studies in Management.

The ROCI-II is a 28-item survey. The ROCI-II is normed for adults in a work environment such as managers, employees, and supervisors. The internal consistency reliability is at .72 to .77 which is better than many other instruments that test conflict management (Thornton, 2014). Demographic variables and response bias do not contaminate the ROCI-II. The instrument's validity is through the consistency of conflict style usage with different referent individuals (bosses, coworkers, subordinates). The ROCI-II takes eight minutes to complete.

Discriminant Analysis

Researchers use discriminant analysis when there are multiple independent and dependent variables, and the researcher wants to classify them into mutually exclusive categories (Ji et al., 2018; Kahiya, 2017; Rock et al., 2016). The strength of discriminant analysis is in classifying individuals into groups using multiple variables simultaneously (Kahiya, 2017). Through multiple functions, discriminant analysis detects the independent variables responsible for differences in the population (Kahiya, 2017) and provides a foundation for classification accuracy (Kahiya, 2017).

Researchers use predictive discriminant analysis to predict group membership or classifications (Kahiya, 2017; Rock et al., 2016). Descriptive discriminant analysis classifies or separates the groups (Kahiya, 2017). Linear discriminant analysis is when the distance between

two groups is equal (Ji et al., 2018). A researcher uses nonlinear discriminant analysis when there are unequal covariance structures in the population (Ji et al., 2018).

The weakness of linear discriminant analysis is its sensitivity to noise, outliers, and data variations (Lai et al., 2019). Kahiya (2017) posited two weaknesses. First, linear discriminant analysis cannot describe the variables' moderating effects. The second weakness is that discriminant analysis cannot account for simultaneous changes to the dependent and independent variables (Kahiya, 2017). In linear discriminant analysis, a small sample size prevents the data matrix from identifying the lower-dimensional space (Tharwat et al., 2017). The solution to the linear discriminant analysis measuring nonlinear data is to use nonlinear discriminant analysis. The recommended sample size is ten to 20 times the number of variables. However, if the sample size is too large, the test results will be significant for minor differences (Kim & Sherry, 2012).

Advantages of discriminant analysis include the differentiating unique features not found in other variables. Discriminant analysis is flexible yet robust enough for exploratory and confirmatory analysis. Lastly, it helps isolate the slightest predictor variable combinations (Kahiya, 2017). Discriminant analysis validity is established when the statistical results are accurate and not due to statistical discrepancies (Carter, 2016). Cross-loading and poor factor loading can lead to validity problems (Carter, 2016). After careful consideration, I used nonlinear discriminant analysis.

An online database gathered the data from the online survey. Qualtrics provided resources to conduct the academic survey. The data was automatically loaded to SPSS (dsuutah.qualtrics.com). The data was loaded into IBM SPSS software to run the analysis using discriminant analysis.

Findings

The literature review included a thorough investigation of emotional intelligence, leadership styles, and conflict management styles. The principle findings of the three themes are provided. These findings revealed a paucity of research, thus confirming gaps in the literature. Identifying the gaps in the literature provided direction to the research study.

Emotions are not new to humankind, but the in-depth study of emotions has accelerated in the last four decades. The development of constructs and models has resulted in three categories of emotional intelligence theories. Ability emotional intelligence is a cognitive ability tested similarly to verbal and spatial intelligence and fits within the IQ spectrum. Recognizing emotions in self and others is the defining characteristic of trait emotional intelligence theory and shares constructs with the Big Five Personality factors. Mixed model emotional intelligence is a combination of ability emotional intelligence and trait emotional intelligence. More recently, due to its testing method of self-reports, it has been classified with trait emotional intelligence.

Each approach to the study of emotional intelligence provides a unique perspective on the impact of emotional intelligence on leadership styles and conflict management styles. Trait emotional intelligence theory answered the research question for the approved research project. Trait emotional intelligence test results provide information on how an individual responds in an emotional situation, thereby providing the desired data to correlate with leadership styles and conflict management choices. The study's results will expand trait emotional intelligence theory to academic nurse administrators. The implications can have far-reaching effects on the leaders, nurse faculty, and nursing students by decreasing incivility and bullying among nurses in the workplace (Bureau et al., 2017; Kaiser, 2017).

The study of emotional intelligence and leadership styles has focused on business leaders (Jain & Duggal, 2018; McClellan & DiClementi, 2017) and higher education leaders (Fischer, 2017; Valeriu, 2017). Emotional intelligence impacts the leadership style used by business leaders (Joshi et al., 2016; Tyczkowski et al., 2015; Vann et al., 2017). The literature also shows that emotional intelligence affects the conflict management styles used by business leaders (Beckles, 2018; Hopkins & Yonker, 2015; Saxena et al., 2017; Thompson & Miller, 2018). The literature has shown that leadership style influences the conflict management style used by leaders (Bakhtawari et al., 2016; Kammerhoff et al., 2019; Tanveer et al., 2018). However, nurses are unique because they are known for their kindness to their patients and incivility to their peers. Little research has been conducted to ascertain if nurse administrators are going to follow the pattern of business leaders or if they are going to perform differently. For the future of the nursing profession, it is crucial to ascertain if nursing education administrators will present results unique to nurses and educational administrators in nursing programs.

High emotional intelligence is essential to nurse academic administrators' role as leaders (Drakulevski et al., 2017; Lawlor et al., 2015). Nursing leaders unknowingly convey their emotional intelligence to their faculty which passes to the nursing students (Mansel & Einion, 2019). Poor emotional intelligence can promote an ineffective leadership style and poor conflict management skills. Without appropriate leadership and conflict management of the academic nurse leaders, nursing schools get stuck in tradition, fail to produce practice-ready students, and incorporate active learning and newer educational strategies. It is crucial for nursing schools to keep up with the innovations and advances to produce practice-ready students upon graduation.

Leadership theory is still evolving. The search continues for a leadership theory that identifies the characteristics of a good leader. The current emphasis is on moral and ethical

leaders with the emotional intelligence to meet the employees' needs and the organization's goals. There is a significant relationship between high emotional intelligence and transformational leadership (Baba et al., 2019). Transformational leadership continues to provide the most inclusive definition of a good leader.

Business and psychology have thoroughly studied emotional intelligence, leadership styles, and conflict management emphasizing business leaders (Gunkel et al., 2016; Maamari & Majdalani, 2017). There is a paucity of research about nursing school administrators and leadership traits. (Bouws et al., 2016; Branden & Sharts–Hopko, 2017; Delgado & Mitchell, 2016; Tucker, 2020; Wilkes et al., 2015; Worthy et al., 2020). Mansel and Einion (2019) confirmed the research gap related to emotional intelligence and nursing leadership from the leader standpoint. There is also a dearth of research on conflict management and nursing school administrators (Giddens, 2018). Nurse educators and academic nurse leaders often come to their position with solid clinical skills but lack leader training (Kuraoka, 2018; Loos, 2019; Pesut & Thompson, 2018).

Emotional intelligence presents three— trait, mixed, and ability— approaches that can impact how emotional intelligence influences leadership styles and conflict management (Issah, 2018; Petrides et al., 2016). There are a variety of tests to measure emotional intelligence, leadership styles, and conflict management styles. Each test assesses for unique traits of emotional intelligence, leadership styles, and conflict management styles. Depending on the tests selected, understanding the specific approach to emotional intelligence, leadership styles, and conflict management styles will be strengthened or dismissed.

Nurses are minimally educated in management or leadership and come from a strong service background. Awareness of nurse educator administrators' leadership and conflict styles

can steer leadership development programs to fit this particular population's needs. Also, the continued incivility found in nursing can be addressed as academic administrators model and teach beneficial conflict management styles.

Conflict management is a frequent occurrence for academic nurse administrators as faculty and students turn to them for help and support. Research findings suggested a strong correlation between emotional intelligence and conflict management (Al–Hamdan et al., 2018). The strength of the correlations varies, depending on the specific emotional intelligence areas assessed and the conflict management strategy used (Chen et al., 2019; Marembo & Chinyamurindi, 2018; Zhang et al., 2015).

Critique of Previous Research Methods

This section analyses the strengths and weaknesses of the research used in the literature review. Each theoretical approach is examined separately. This critique of the methodology provides a holistic lens to view the literature review. According to Hughes and Evans (2018), lacking a single theoretical framework is a weakness for emotional intelligence. They argue that the different theoretical views of ability, mixed model, and trait emotional intelligence are confusing. Though all three are called emotional intelligence, ability emotional intelligence and trait emotional intelligence lack any correlation, and mixed-models are too all-inclusive to be useful (Hughes & Evans, 2018).

Identifying some fundamental weaknesses with ability emotional intelligence testing has led researchers to question its usefulness. First, its strong correlation to IQ leads some to conclude that ability emotional intelligence is the same as or a sub-factor of IQ (Hughes & Evans, 2018). Second, the psychometric properties are inadequate in terms of validity and reliability and do not predict the outcomes they report to predict. Third, there are problems with

the ability emotional intelligence construct scoring and reliability (Farnia & Nafukho, 2016; Legree et al., 2016; Mestre et al., 2016; O'Connor et al., 2019). Following the literature review, the weakness in ability emotional intelligence testing led to using trait emotional intelligence theory for this research project.

According to O'Connor et al. (2019), the strengths of self-report measures provide a global self-evaluation incorporating self-knowledge and experiences across various settings. An identified weakness is that self-reports measure perceived abilities which may not accurately represent actual abilities (O'Connor et al., 2019). Because trait emotional intelligence is related to personality constructs, the individual's current mood or desire for self-promotion can influence the results (O'Connor et al., 2019). Faking has been noted to occur when the test is high-stakes, such as determining the individual's employability or promotion (O'Connor et al., 2019; Pelt et al., 2018).

Some individuals have expressed concern about the different definitions of emotional intelligence and the various measurement methods. Those who support the ability model maintain that the study of emotional intelligence as an ability is objectively measured based on performance, the same as other IQ measurements (Caruso et al., 2016; Farnia & Nafukho, 2016). Those who support the mixed and trait emotional intelligence models support the notion that emotional intelligence is related to personality and is not a cognitive ability (Farnia & Nafukho, 2016; Hughes & Evans, 2018; Peña–Sarrionandia et al., 2015). Cherniss et al. (2006) noted that as emotional intelligence is a young concept, the development of multiple emotional intelligence theories demonstrates vitality in the field of research. Caruso et al. (2016) noted that healthy skepticism and caution are needed when identifying the relationship of emotional intelligence to other constructs.

Transformational leadership is one of the most frequently studied leadership styles (Meuser et al., 2016; Xie, 2019; J. Zhu et al., 2019). As a result of its popularity, transformational leadership is often compared and contrasted to other leadership styles. The most frequent comparison of transformational leadership is with transactional leadership. Additional leadership styles frequently compared or contrasted are charismatic leadership (Clarkson et al., 2020; Meuser et al., 2016), servant leadership, and ethical leadership (Allen et al., 2016; Bedi et al., 2016; McBath, 2018; Yasir & Mohamad, 2016).

As research continued on the full range leadership model, it became apparent that transformational leadership was not the panacea for all leader–follower interactions. Jon Aarum Andersen (2016a) has written extensively on transformational leadership's weaknesses related to organizational effectiveness. He has addressed the concept of leadership behavior and called them "symbolic theories," where the theory emphasizes how the leader is perceived (Andersen, 2016b, p. 72). Andersen (2016b) stated that leader traits and behaviors define leadership, and the achievement of tasks defines management, similar to transactional leadership. In an earlier article, Andersen (2014) contended that transformational leadership theory does not work because it has to be on an organizational, religious, social, or political basis but cannot apply to more than one environment.

Alvesson and Kärreman (2016) provided their critique from an ideological perspective rooted in critical social justice theory. The authors critiqued the measurement of transformational leadership and noted the inadequate attention to the context and the use of charisma as a synonym for inspirational motivation. The critique continued arguing that transformational leadership has a hierarchical foundation and is a return to hero worship from the leadership styles of the Personality Era when leaders were born, not made.

Leadership is not without its dark side (J. Zhu et al., 2019). As research on transformational leadership moved forward, it became apparent that transformational leadership's outward presentation does not always equate with authentic transformational leadership theory's good intentions. Bass acknowledged the dark side and termed it pseudo–transformational leadership (Bass & Steidlmeier, 1999). The new knowledge of *fake* forms of transformational leadership led to authentic and ethical leadership and increased servant leadership research.

The challenge of leadership's dark side is its many similar traits to authentic transformational leadership. According to Busse and Czekala (2018), the mere existence of transformational leadership traits does not guarantee the positive outcomes postulated in the literature. How the transformational leadership traits are applied and the authentic motivation behind the application determines whether transformational leadership's dark or light side manifests (Busse & Czekala, 2018). Busse and Czekala (2018) encouraged leaders to become aware of both sides of transformational leadership so that they may make a conscientious choice to adopt the positive traits of a transformational leader. A survey of leadership styles cannot identify if the participant is using transformational or pseudo-transformational leadership because they do not have the ability to recognize authentic motivation.

The assorted theories of conflict management styles and the research that followed provided a plethora of views on conflict and conflict management. Rahim redefined and expanded the conflict management models and previous theories. Not everyone agrees with Rahim's conflict management grid and definitions; others are rewriting and relabeling the model. Following Rahim's research, Pruitt and Rubin (1986) introduced the dual-concerns model and defined the dimensions as concern about other person's outcomes and concern about own outcomes (McCarter et al., 2020; Thomas, 1988). Pruitt and Rubin did not include compromise

in their model of conflict management. According to McCarter et al. (2020), the strength of the dual-concerns model is in predicting negotiation strategies rather than in predicting the outcomes. Tjosvold (1998) combined the five conflict management domains into three domains cooperative, avoidant, and competitive. Tjosvold's (1991, 2008) research emphasizes the positives and benefits of conflict. Giacomantonio et al. (2011) grouped Rahim's five styles into three: (a) solution-focused (integrating and compromising), (b) control (dominating), (c) non-confrontational (obliging and avoiding). Giacomantonio et al. (2011) focused on the influences of the choice of conflict management style.

This abundance of conflict management theories created a challenge when selecting a theoretical framework. Many studies focused on conflict management in the business sector, with limited research on the academic or healthcare environment. With the available research on conflict management in the nursing population, there were conflicting views on the most frequently used conflict management styles and the best method to measure those styles.

The research supported the use of emotional intelligence and, specifically the leadership style of transformational as essential elements in conflict management. Another weakness in the research was the general overarching use of emotional intelligence and the three leadership styles of the full range leadership model in connection with conflict management. The lack of specificity as to the factors of emotional intelligence and the constructs of leadership styles gives rise to a panacea view of the problem of conflict and the solution of conflict management.

Summary

Chapter 2 was comprised of a literature review of emotional intelligence, leadership styles, and conflict management styles. I reviewed the literature that researched correlations among the three topics. Additionally, I pursued research regarding academic nurse leaders. A

great deal of research has contributed to the study of emotional intelligence, leadership styles, and conflict management styles. This research has produced both support and a critique of the theory and methodology. A gap was identified, and it was determined that additional research was needed to identify if a correlation exists among the three topics. Chapter 3 presents the methodology used to study the correlation of emotional intelligence, leadership styles, and conflict management styles in academic nurse leaders.

CHAPTER 3. METHODOLOGY

Chapter 3 is comprised of the research methodology for this quantitative research study on the correlation of emotional intelligence, leadership styles, and conflict management styles of academic nurse leaders. I used a nonexperimental research methodology with a correlational design using discriminant analysis to identify if a relationship existed among the research study variables. This chapter reviews the purpose of the study, research questions and hypotheses, and research design. The narrative continues with a detailed description of how the target population of nursing education administrators and the resulting sample were selected and surveyed. Following the data collection, a descriptive statistics report was generated that provides an analysis of the central tendency and dispersion of the survey's results. A description of three questionnaires used for this study and their validity and reliability ensue. Lastly, the importance of ethical considerations outlined by the Capella Institutional Review Board and the Belmont Report is addressed.

Purpose of the Study

Incivility and bullying in nursing continue to plague the nursing profession (Berquist et al., 2017). Nurses are known for their empathy (Ain et al., 2021; Blizzard & Woods, 2020) towards their patients but are known to exhibit incivility and bullying towards their colleagues (Karatuna et al., 2020; O'Flynn–Magee et al., 2021). Academic nurse leaders are in an advantageous position to facilitate change toward a more civil future for nurses.

Emotional intelligence, leadership styles, and conflict management styles have been studied independently (Bouws et al., 2020; Delak & Širok, 2022; Patton, 2020; Petrides & Mavroveli, 2018) and as pairs (Bali & Raj, 2019; Chen et al., 2019; Kohlhoffer–Mizser, 2020). However, there is a gap in the literature when the three concepts are considered together. The

study aimed to determine if there was a correlation among emotional intelligence, leadership styles, and conflict management styles of academic nurse leaders.

Research Questions and Hypotheses

This research study investigated the correlation among emotional intelligence, leadership styles, and conflict management styles. There were three research questions. The research questions and their hypotheses that guided the study were as follow:

Research Question 1

Does a correlation exist among the variables of trait emotional intelligence, leadership styles, and conflict management styles of academic nursing administrators?

H_0: Trait emotional intelligence and leadership style do not correlate among conflict management styles.

H_1: Trait emotional intelligence and leadership style do correlate among conflict management styles.

Research Question 2

Does a correlation exist among the variables of trait emotional intelligence and conflict management styles?

H_0 Emotional intelligence does not correlate with conflict management styles in nursing school deans, assistant deans, and department chairs.

H_1 Emotional intelligence does correlate with conflict management styles in nursing school deans, assistant deans, and department chairs.

Research Question 3

Does a correlation exist among the variables of leadership styles and conflict management styles?

H_0: Leadership style does not correlate with the type of conflict management style used.

H_1: Leadership style correlates with the type of conflict management style used.

Research Design

This study used a quantitative, nonexperimental, correlational design using correlational discriminant analysis. The nonexperimental design was used to demonstrate correlation but not causation. Discriminant analysis was used because there were multiple independent and dependent variables. Discriminant analysis allowed for simultaneous classification of individuals into groups using multiple variables. The study examined the statistical correlation of four independent variables of trait emotional intelligence and three independent variables of leadership styles, tested on nine scales, to the five dependent variables of conflict management. The independent variable of emotional intelligence includes well-being, self-control, emotionality, and sociability. The independent variables of leadership style include transformational leadership, transactional leadership, and passive-avoidant. The dependent variables of conflict management style include integrating, obliging, dominating, avoiding, and compromising. The choice of a nonexperimental correlational design extends rigor to a descriptive design (Siedlecki, 2020).

Target Population and Sample

The population comprised all nursing school administrators. The target population was refined to include administrators at schools with publicly available contact information. The target population was identified using convenience sampling by accessing information found on university faculty pages. The sample was comprised of nursing education administrators who responded to the survey. Demographic data had no bearing on who could participate in the

survey. The demographic data were collected to identify if a varied sample of administrators participated in the study.

Population

The population was comprised of nursing school administrators who were currently serving in administrative positions in baccalaureate and graduate programs. Nursing school administrators included deans, assistant deans, department chairs, department heads, and any other administrative titles. The population was identified by using an internet search of nursing schools in the United States and its territories. The list included all nursing schools: associate degree nursing (ADN), baccalaureate (BSN), and graduate programs. There were over 800 schools identified. This list of nursing schools was not exhaustive; however, every state and U.S. territory was represented. Five hundred and seventy-eight schools remained after removing all the ADN, practical nurse, nursing assistant programs, those that were closed, and those that did not have an online faculty listing. Nursing administrators were then identified through a comprehensive internet search of each nursing school. A target population of 643 potential participants was identified in the 578 nursing schools. The target population was nursing education administrators whose email addresses were publicly available on their university faculty web pages. Individual site permission was unnecessary because of the public nature of the contact information available through the internet and school websites.

Sample

The sample was made up of those nurse educators who responded to the email request. If the nurse educator who received the survey did not indicate that they qualified as a nursing education administrator, they were exited from the survey. The exclusion criteria were limited to not currently acting in an administrative role at the nursing school and not being in a BSN or

graduate nursing program. The inclusion and exclusion criteria were necessary as academic positions are time-limited with faculty moving in and out of administrative positions throughout their academic career.

Power Analysis

The recommended sample size was determined using G*Power 3.1. G*Power is a statistical power analysis tool used to determine sample size for several statistical tests (Faul et al., 2009). I entered the following information into G*Power 3.1 to run the power analysis. I used G*Power 3.1 with a Power (1-**β** err prob) 0.95 and α err prob 0.05. The test family was F-tests, and the statistical test was a MANOVA: Global effects. The power analysis was a priori. I entered five groups for the dependent variables of conflict management. There were seven response variables for the independent variables of emotional intelligence (four) and leadership styles (three). The effect size was set at 0.1111.

G*Power 3.1 calculations indicated that this study needed a minimal sample size of 85. An underlying assumption of discriminant analysis is that group sizes should be at least five times the number of predictors or independent variables (Kelly & Morrow, 2018). Kim and Sherry (2012) suggested that the sample size should be between 10 and 20 times greater than the number of dependent variables. AlKubaisi et al. (2019) also noted that the sample size should include five times as many samples as independent variables.

Procedures

Data collection was done through an online survey. Qualtrics XM provided the resources to create and manage the academic survey. The demographic information and three questionnaires, TEIQue-SF (Petrides, 2009), MLQ (5x-Short; Avolio & Bass, 2004), and ROCI-II (Rahim, 2021), were transcribed into the survey platform. Following approval from the

Institutional Review Board (IRB) of Capella University, the email invitation was sent to the identified participants. After the survey closed, the data was loaded to IBM-SPSS 24 software to complete the data analysis. The individual analysis of each survey used discriminant analysis to test the hypotheses. The strengths of an email survey design include researcher bias removal, minimal cost, convenient accessibility to potential participants, adequate time for participants to complete the survey, and access to a large sample size. The data was collected electronically making analysis convenient and efficient (QualtricsXM.com).

Participant Selection

The selection of participants was straightforward. Participant selection occurred through convenience sampling. The participants were identified through access to a school of nursing faculty list. I ascertained whether the school had baccalaureate or graduate programs in nursing. After identifying the eligible schools, I accessed the university's nursing faculty home page. I scrolled through the faculty list to identify the administrators. The name of the administrators, their role, and their email addresses were added to the research study's database. Email addresses of the administrators were obtained through the internet and were publicly available from university and college websites. The faculty administrators were sent an email invitation to participate in the survey. The recipients then chose to complete or not complete the survey. The responses of those who completed the survey were included in the data analysis.

Protection of Participants

To protect the participants from harm the survey platform did not collect identifying information that could be linked to the participants. After the respondent entered Qualtrics XM, their responses were deidentified, and the survey was set not to collect traceable data, including IP addresses. Once at the Qualtrics XM survey site, the participant was taken to the informed

consent form. After reading the informed consent form, the participant was directed to either to agree or not agree to participate. Participants could also exit the survey at any time, and any incomplete data were not used in the analysis.

The Qualtrics XM survey was set up by generating a public key private key pair to encrypt participant data to ensure confidentiality to protect the participants and their data. Qualtrics XM used the public key to encrypt the data in transit and stores it on the Qualtrics XM servers. Aside from what was collected in the demographic data questions, Qualtrics XM did not log any personally identifying information, including IPE addresses. Qualtrics was set to isolate the demographic data from the survey data in order to separate identifying information from the survey data to protect the participants.

Data Collection

The prospective participant received the email with a brief letter of introduction and an invitation to participate in a PhD dissertation project. In the introduction, the recipients were invited to participate in the research if they were currently serving in an academic nurse administrator position. My contact information, including email and phone, was included in the invitation. If the participant wished to proceed, they clicked on a URL link at the bottom of the page which took them to the Qualtrics XM survey.

Upon entering the Qualtrics XM survey portal and reading the consent letter, the participant responded to the two inclusion criteria questions. The questions were: is the participant's program a BSN or graduate nursing program, and is the respondent currently acting in an administrative capacity. If the inclusion criteria were met, the participant continued to the demographic questions, Trait Emotional Intelligence Questionnaire-Short Form (TEIQue-SF), Multifactor Leadership Questionnaire-Short form (MLQ 5x-Short), and Rahim Organizational

Conflict Inventory-II (ROCI-II) questionnaires. The complete survey, which included the three questionnaires, was estimated to take about 30 minutes to complete. After the survey was completed, the participant was thanked for their participation and was automatically exited from the survey.

Qualtrics XM housed the surveys and collected the responses. The participant met the inclusion criteria and then entered the survey. The survey collected demographic information to confirm variety in the sample population. After completing the demographic portion of the survey, the participant proceeded to the TEIQue-SF, the MLQ (5x-Short), and the ROCI-II. The survey results are maintained in the Qualtrics XM database. The data were then accessed with a download from Qualtrics into my SPSS data file.

Data Analysis

Multiple decisions were made before running a discriminant analysis. The first was to have the dependent variable meet the assumptions for discriminant analysis. The dependent variable needed to be categorical; therefore, the ROCI-II scores were converted from ordinal to categorical using dummy variable coding. The dummy variables were based on the national normed mean using the reference group norms provided by the ROCI Professional Manual (Rahim, 2021) The raw scores are based on the frequency of usage. According to Rahim (2021), below the 55th percentile of the national normed mean, was low usage of the conflict management style. The results below the 55th percentile were given a dummy variable of 0. The results between the 55th and 75th percentile of the national normed mean were considered average usage of the conflict management style and were assigned a 1. Results above the 75th percentile of the national normed mean were classified as frequent use of the conflict management style

and were assigned a 2. The range of 0 to 2 was used in the grouping variable for discriminant analysis.

The second question was to identify if there was any prior information related to the variable classes. There was no prior information related to the study variables; therefore, equal prior probability was selected as one of the discriminant functions. Third, within-group correlation was used because the homogeneity assumption was met. Fourth, stepwise discriminant analysis was executed, using the default F value of 1.15 entry and 1.0 removal, variables outside of the tolerance criterion were removed. In stepwise discriminant analysis, SPSS enters each independent variable in the discriminant equation, one at a time based on the entry and removal numbers selected. The variable is dropped from analysis if it does not meet the inclusion criteria (George & Mallery, 2019). Fifth, the discriminant analysis was completed when the usable variables were identified.

Descriptive Statistics

The descriptive statistics for this study describe the mean score, standard deviation, skewness, and kurtosis for the variables of emotional intelligence, leadership styles, and conflict management styles. Discriminant analysis requires categorical data for the independent variable and ordinal data for the dependent variable to run the analysis (Kothari, 2004). Therefore, the dependent variables of the ROCI-II were converted to dummy scores to make them into ordinal data. The mean statistic column contains the mean scores for the raw data and the dummy scores of the ROCI-II. There are two scores for each ROCI-II variable; the first score is the raw data score, and the second score is the converted dummy variable score identified by the superscript *a*. The raw data scores below the national mean score of $<55^{th}$ percentile were given a dummy

variable of 0. The raw data scores between the 55th and 75th percentile were given a dummy variable of 1. The raw data scores >75th percentile were given a dummy variable of 2.

Instruments

The instruments used in this research included the use of a computer and a survey . The survey included demographic data, the TEIQue-SF, MLQ (5x-Short), and ROCI-II instruments. The demographic data were collected to ascertain if an assorted population of administrators responded to the survey. Detailed descriptions of the TEIQue, MLQ (5x-Short), and ROCI-II instruments and their validities and reliabilities are outlined in this section.

Trait Emotional Intelligence Questionnaire-Short Form

Emotional intelligence is tested using the Trait Emotional Intelligence Questionnaire-short-form. (TEIQue-SF)[1]. The constructs or variables measured by the TEIQue-SF include 30 items used to measure the 15 facets which are included in the four factors, well-being, self-control, sociability, and emotionality, of trait emotional intelligence. Responses are rated using a Likert scale (1 = *disagree completely* to 7 = *agree completely*). Completion time is 5 minutes for the TEIQue-SF. The TEIQue is normed for adults ages18 and up, children ages 8 to 12, and adolescents ages 12 to 17 (Petrides, 2009). The adult version of the TEIQue-SF was used for this study. The TEIQue-SF is available without cost for academic research purposes. The Trait Emotional Intelligence Questionnaire-Short Form by Petrides was published and copyrighted in 2009 when they published the technical manual for administering and analyzing the TEIQue (Petrides, 2009). The TEIQue-SF manual and instrument was obtained from Psychometric Lab.

[1] All TEIQUE forms, versions, and translations are available free of charge for academic research purposes only. Provided there is no commercial usage, TEIQue instruments can be used for research purposes without permission (Petrides, 2009).

The selection of the TEIQue-SF for use in this study followed a thorough literature review of the three emphases of emotional intelligence models: ability, mixed-model, and trait (Di Fabio & Saklofske, 2014). The decision to use a trait emotional intelligence questionnaire resulted because ability emotional intelligence assesses the knowledge of emotional intelligence, whereas trait emotional intelligence questionnaires assess the behavior of emotional intelligence (Prajapati et al., 2021). The TEIQue-SF was selected because it had a long history of use and refinement. It is also recognized around the world. No special qualifications are needed to administer the test or run the data. The information needed to run the data is contained in the manual.

Validity

The TEIQue is shown to have incremental validity and superior psychometric properties, with a 95% CI and SE = .0116 (Andrei et al., 2016). A study by Petrides (2009) found that the internal consistency measured by Cronbach's alpha ranged from 0.67 to 0.92 for the four factors. Validity was tested by comparing the TEIQue-SF to other constructs. TEIQue-SF had incremental validity compared to the Big Five or Five Factor Model of Personality outcomes. The construct validity of the TEIQue-SF was also compared to the Big Five, and the analysis suggested good psychometric properties (Sambol et al., 2022). These comparisons demonstrate that trait emotional intelligence is related to personality through integrated constructs (Petrides & Mavroveli, 2018).

Reliability

Reliability for the four factors, self-control, well-being, emotionality, and sociability, ranged from 0.59 to 0.86 (Petrides, 2009). Mikolajczak et al. (2007) found that Cronbach's alpha internal consistency was 0.87. Celik and Storme (2018) reported overall reliability for

Cronbach's alpha at 0.85. Siegling, Vesely et al. (2015) noted the Cronbach's alpha values for each factor, global trait 0.87 to 0.88, well-being 0.86, self-control 0.67 to 0.77, emotionality 0.68 to 0.69, and sociability 0.72 to 0.73. Reliability for the TEIQue varies between .71 and .91 for facets with internal consistency at α=.90). Cooper and Petrides (2010) found internal consistency at 0.89 for men and 0.88 for women.

Multifactor Leadership Questionnaire-Short Form

The Multifactor Leadership Questionnaire self-report short form (MLQ 5x-Short)[2], developed by Avolio and Bass in 1991, was used to investigate the variables of transformational, transactional, and passive-avoidant leadership. The manual (Avolio & Bass, 2004) described the MLQ (5x-Short) as a 45-item validated questionnaire it quantifies leadership and leader effectiveness behaviors associated with individual and organizational achievement. Responses range from 0 = *not at all* to 4 = *frequently*, if not always as measured on a Likert scale. The MLQ was normed for adults in management or leadership positions (Pittenger, 2014). The completion time for the MLQ (5x-Short) is 15 minutes.

The decision to use the MLQ (5x-Short) came after an extensive review of available leadership assessment instruments. The MLQ provided the most comprehensive assessment of leadership styles. A request was made through Mind Garden, Inc. for permission to use the test. The license for use cost $883.20, and permission for use was granted for three years. No special qualifications were needed to administer the test, and the manual contained the necessary information to run the data analysis.

[2] Permission for use received from Mind Garden, Inc. on April 20, 2021.

Validity

Avolio and Bass (2004) acknowledged that self-ratings tend to be higher but also more consistent than other leadership surveys where another individual rates the leader. Avolio and Bass (2004) also noted that the MLQ demonstrated good fit-testing results and convergent validity. Imam et al. (2017) observed that the convergent validity for the three leadership styles was transformational 0.727, transactional 0.651, and passive-avoidant 0.605. Imam et al. (2017) found discriminant validity for transformational 0.852, transactional 0.806, and passive-avoidant 0.778. Kirnan and Snyder (n.d.) stated that the criterion-related validity of the MLQ was high due to a strong correlation between the data sets.

Reliability

The MLQ's Alpha reliability coefficient was 0.60 to 0.92 (Bessai, 2016). A separate review by Kirnan and Snyder (n.d.) noted that the alpha reliability coefficients were 0.77 to 0.95. Avolio and Bass (2004) noted item-reliabilities ranged from 0.74 to 0.94. Batista–Foguet et al. (2021), Boamah and Tremblay (2019), Braathu et al. (2022), and Dimitrov and Darova (2016) provided a factor analysis of the MLQ (5x-Short). Cronbach's alpha was described as reliable (Boamah & Tremblay, 2019) with acceptable internal consistency ranging from .84 to 0.96 (Braathu et al., 2022). Dimitrov and Darova (2016) found that the Cronbach alpha ranged from 0.63 to 0.87. Xu et al. (2016) reported less favorable outcomes with reliability from 0.499 to 0.777. Internal reliability ranged from 0.901 to 0.979 (Imam et al., 2017).

Rahim Organizational Conflict Inventory-II

The Rahim Organizational Conflict Inventory-II (ROCI-II)[3] was used to investigate the conflict management variables obliging, dominating, avoiding, compromising, and integrating. The ROCI-II was initially published in 1983 by Rahim through the Center for Advanced Studies in Management. The fourth edition was published in 2021 (Rahim, 2021). The ROCI-II measures how interpersonal conflict is handled by the individual within the organization. The response to the statements is scored on a 5-point Likert scale. Responses range from 1 = *strongly disagree* to 5 = *strongly agree*. The higher total score indicates more frequent use of that conflict management style. The ROCI-II is normed for adults in a work environment such as managers, employees, and supervisors. The completion time is 8 minutes.

Though there are multiple instruments to assess the 5-factor conflict management styles, the ROCI-II was the instrument of choice. The ROCI-II had the most attention and experimental backing among the conflict management instruments (Bruk–Lee, 2017; Caputo et al., 2019). The use of the ROCI-II instrument was obtained through the Center for Advanced Studies in Management for a cost of $3168.75. . No specific qualifications were needed to administer the test or run the data.

Validity

The ROCI-II's inter-item correlation demonstrated discriminant validity (Rahim, 2021). The instrument's validity is demonstrated through the consistency of conflict style usage with different referent individuals (bosses, coworkers, subordinates). The results of a laboratory study

[3] Rahim Organizational Conflict Inventory-II, Form A, B, C: Used with permission from the ©Center for Advanced Studies in Management. Further use or reproduction of the instrument without written permission is prohibited.

demonstrated moderate convergent and discriminant validity (Rahim, 2021) . Womack (1988b) listed Cronbach's alpha average across the five styles at 0.74. Following their study Chakrabarty et al. (2002) posited that the ROCI-II results supported the results obtained by Rahim and Magner (1995).

Reliability

The internal consistency reliabilities were at 0.65 to 0.80 which was better than many other instruments that test conflict management (Thornton, 2014). Demographic variables and response bias do not contaminate the ROCI-II. Cronbach alpha was 0.72 to 0.83. Kristoff's reliability also ranged from 0.72 to 0.83 (Rahim, 2021). King and Miles (1990) noted the Cronbach alpha for each conflict management style, avoiding (0.86), dominating (0.78 to 0.79), obliging (0.68 to 0.76), compromising (0.67 to 0.73), and integrating (0.83 to 0.87). A literature review by Weider–Hatfield (1988) a summary of the Cronbach's alpha of eight studies. The Cronbach's alpha were from avoiding (0.61 to 0.86), dominating (0.66 to 0.81), obliging (0.68 to 0.87), compromising (0.50 to 0.74), and integrating (0.69 to 0.95). Frederickson's (1997) results demonstrated similar outcomes with coefficiencies ranging from 0.70 to 0.85 for each of the five scales.

There are many variables and multiple instruments used in the collection of data for this study. Table 1 provides a summary of the variables and the instruments that were used to assess the variable. The MLQ leadership constructs are included to clarify how they fit into the leadership style variables identified for this study.

Ethical Considerations

Approval for the research study was obtained from Capella University's Institutional Review Board (IRB). The study met the ethical guidelines of respect for persons, beneficence,

and justice (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). Respect for persons was maintained. First, no vulnerable populations were included in this study. Second, the participants were autonomous persons and maintained the ability to choose whether or not to participate in the study.

Table 1

Instruments Used to Test the Variables

Variables	Constructs	Instrument
Emotional Intelligence		
Well-being		TEIQue-SF
Sociability		TEIQue-SF
Emotionality		TEIQue-SF
Self-control		TEIQue-SF
Leadership Style		
Transformational		MLQ-Short
	Idealized Attributes	
	Idealized Behaviors	
	Inspirational Motivation	
	Intellectual Stimulation	
	Individual Consideration	
Transactional		MLQ-Short
	Contingent Reward	
	Management by Exception (Active)	
Passive Avoidant		MLQ-Short
	Management by Exception (Passive)	
	LS-Laissez-Faire	
Characteristic: Outcomes of Leadership[a]		MLQ-Short
	Extra Effort	
	Effectiveness	
	Satisfaction	
Conflict Management Style		
Integrating		ROCI-II
Obliging		ROCI-II
Dominating		ROCI-II
Avoiding		ROCI-II
Compromising		ROCI-II

[a]Not leadership styles but outcomes as a result of leadership behavior

The ethical guideline of beneficence was achieved by following the rules of do no harm and maximizing the possible benefits (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). Participant risk was minimized through strict confidentiality. The survey invitations were sent to each person in the target population inviting them to participate in the research project. If the subjects entered the survey, they were allowed to exit at any time, without consequences, if they chose to discontinue participation. To maintain participant anonymity the survey was programed to not collect computer IP addresses. There was minimal participant risk; therefore, risk-management measures were not utilized. Maximizing the benefits was accomplished as the study results were available to all interested parties. The ethical guideline of justice was achieved as the survey was sent to academic nurse administrators whose email addresses were available on their college or university websites. The principle of justice was realized by equality and fairness for all the participants (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979).

Summary

Chapter 3 included a review of the methodology used in the study on the correlation of emotional intelligence and leadership styles on the choice of conflict management styles used by academic nurse administrators. The research questions and hypotheses were addressed through a quantitative nonexperimental correlation design using discriminant analysis. The hypothesis testing included a chi-square test to check the inferential statistics. The target population of academic nurse administrators was obtained through publicly available emails, and the data were anonymously collected by random convenience sampling at the Qualtrics XM survey site. Data were analyzed using IBM-SPSS software. Data analysis included descriptive statistics,

hypothesis testing, and discriminant analysis of all dependent and independent variables. The three questionnaires were described, and the reliability and validity of each instrument were explained. Chapter 4 I present the statistical results of the data analysis and the study's findings.

CHAPTER 4. RESULTS

In this study I explored the correlation of emotional intelligence factors of emotionality, sociability, well-being, and self-control and the leadership styles of transformational, transactional, and passive-avoidant to the conflict management styles of avoiding, compromising, dominating, integrating, and obliging used by academic nurse administrators. Chapter 4 is a presentation of the results of this quantitative, non-experimental, correlational study using discriminant analysis. The description of the sample and the discriminant analysis assumptions that apply to all the research questions are presented next. The chapter concludes with the hypothesis testing summary of the three research questions.

Background

The data were collected using the Qualtrics XM platform where the TEIQue-SF (Petrides, 2009), MLQ (5x-Short; Avolio & Bass, 2004), and the ROCI-II (Rahim, 2021) questionnaires were combined into one survey. The TEIQue-SF measured four factors of trait emotional intelligence with 30 items using a Likert scale from 1 (*completely disagree)* to 7 (*completely agree*). The four factors are emotionality, sociability, well-being, and self-control. The MLQ (5x-Short) measured leadership styles using transformational, transactional, and passive-avoidant styles. The MLQ (5x-Short) has 45 items and used a Likert scale measuring responses from 0 (*not at all*) to 5 (*frequently, if not always*). Rahim's (2002) conflict management model contains five areas: avoiding, compromising, dominating, integrating, and obliging. The ROCI-II used forms A, B, and C, with 28 questions each, using a five-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The participants responded to form A based on how they handled conflict with their supervisor. Form B measured the participants'

responses to conflict with their subordinates, and form C measured conflict management with peers.

There are three research questions in this study:

Research Question 1: Does a correlation exist among the variables of trait emotional intelligence, leadership styles, and conflict management styles of academic nursing administrators?

Research Question 2: Does a correlation exist among the variables of trait emotional intelligence and conflict management styles?

Research Question 3: What is the unique contribution of the leadership style variables of transformational, transactional, and passive-avoidant in discriminating among conflict management styles of integrating, obliging, dominating, avoiding, and compromising?

Description of the Sample

The survey was sent via email to 643 nursing education administrators who were identified following an internet search of nursing schools in the United States and U.S. territories. Six hundred and twenty-two survey invitations were delivered. If the nurse educator who received the survey did not indicate that they qualified as a nursing education administrator, they were exited from the survey. The exclusion criteria were limited to not currently acting in an administrative role at the nursing school and not being in a BSN or graduate nursing program. The inclusion and exclusion criteria were necessary as academic positions are time-limited with faculty moving in and out of administrative positions throughout their academic career.

Individual site permission was unnecessary because of the public nature of the contact information available through the internet and school websites. Two universities requested IRB approval before their administrators would complete the survey; therefore, they were not

included in the sample. Sixteen emails were returned for "address not found." Five email addresses were blocked. A total of 175 academic nurse leaders responded to the 643 survey invitations resulting in a response rate of 27%. Of the 175 respondents, 161 participants completed the demographic portion of the survey. Thirty-nine surveys were not completed beyond the demographic questions or were missing survey data. One hundred and forty-three individuals responded to the TEIQue. One hundred and thirty-eight individuals responded to the TEIQue-SF and MLQ (5x-Short). As the survey progressed through the ROCI-II, 18 participants did not finish the survey, resulting in 120 useable surveys for a 19% response rate. The study under investigation exceeds the minimum sample size of 85 with 120 participants.

The sample was comprised of academic nurse administrators of a baccalaureate or a graduate nursing program. All respondents had publicly available email addresses from their universities or college faculty home pages and the sample were serving in administrative positions at the time of the survey. The results from the demographics portion of the survey showed a varied sample. The majority of respondents were female (n = 146, 84%) compared to the number of females in nursing in the U.S. which was reported as 86-91% (journalofnursingregulation.com; zippia.com). The age of the respondents ranged from 25–34 (1%), 45–54 (24%), 55–64 (41%), 65–72 (20%) to73 and over (4%). One hundred and twenty-one (76%) academic nursing administrators reported receiving formal leadership training. The type of leadership training was not identified since it did not directly impact this study. Rather than selecting from a predetermined category, the participants wrote in the number of the students in their nursing programs which varied from $\pm$35 to $\pm$3000 students in baccalaureate, master's, and doctoral programs. Faculty in these programs consisted of as few as four to 275

full-time, part-time, and adjunct faculty. A summary of the demographic information is included in Table 2.

Table 2

Demographics

		Frequency (N=161)[a]	Percent
Sex			
	Female	146	91
	Male	14	9
	Prefer not to say	1	1
Age			
	25-34	2	1
	35-44	16	10
	45-54	39	24
	55-64	66	41
	65-72	31	20
	73 and over	7	4
Years as a nursing education administrator			
	0-2	28	17
	3-5	35	22
	10-Jun	42	26
	15-Nov	24	15
	16-20	17	11
	21-25	3	2
	26 or more	12	8
Years as a nursing educator			
	5-Mar	5	3
	10-Jun	14	9
	15-Nov	35	22
	16-20	37	23
	21-30	39	24
	31-40	26	16
	40 or more	5	3
Years as a bedside nurse			
	0-2	8	5
	5-Mar	30	19
	10-May	36	22
	15-Nov	22	14
	16-20	22	14
	21-30	27	17
	31-40	12	7
	41 or more	3	2
Formal training or education in leadership/management			
	Yes	121	76
	No	38	24

[a] Note: the demographics are based on the total number of respondents who completed the demographic portion of the survey.

Table 3

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
Variables	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
TEIQue									
Well-being	143	1.00	3.00	1.7343	0.48460	0.358	0.203	-0.604	0.403
Self-Control	143	1.00	4.00	2.5490	0.62544	0.160	0.203	-0.263	0.403
Emotionality	143	1.13	5.38	2.2238	0.73725	1.473	0.203	3.826	0.403
Sociability	143	1.17	4.33	2.6958	0.70581	0.333	0.203	-0.597	0.403
Global	143	1.10	3.97	2.2434	0.47844	0.575	0.203	0.693	0.403
MLQ									
Idealized Attributes	138	3.00	5.00	4.1178	0.46716	-0.369	0.206	-0.156	0.410
Idealized Behaviors	138	2.50	5.00	4.2790	0.55127	-0.874	0.206	0.529	0.410
Inspirational Motivation	138	3.25	5.00	4.4112	0.48122	-0.517	0.206	-0.583	0.410
Intellectual Stimulation	138	3.00	5.00	4.1775	0.45929	-0.158	0.206	-0.559	0.410
Individual Consideration	138	3.50	5.00	4.5000	0.43668	-0.667	0.206	-0.463	0.410
Transformational	138	3.25	5.00	4.2975	0.37834	-0.501	0.206	-0.360	0.410
Contingent Reward	139	2.25	5.00	4.1589	0.52407	-0.534	0.206	0.571	0.408
Mgmt by Exception Active	138	1.00	4.75	2.5344	0.75527	0.356	0.206	0.031	0.410
Transactional	139	2.13	4.71	3.3558	0.50882	0.096	0.206	-0.234	0.408
Mgmt by Exception Passive	138	1.00	3.50	1.8460	0.58519	0.663	0.206	0.072	0.410
Laissez-Faire	138	1.00	3.00	1.4801	0.48241	0.807	0.206	-0.177	0.410
Passive Avoidant	138	1.00	3.25	1.6630	0.47198	0.632	0.206	-0.025	0.410
Extra Effort	138	2.67	5.00	4.0580	0.53265	-0.071	0.206	-0.169	0.410
Effectiveness	139	3.25	5.00	4.3993	0.43585	-0.427	0.206	-0.499	0.408
Satisfaction	138	3.00	5.00	4.4167	0.49664	-0.474	0.206	-0.227	0.410
ROCI-II A									
Integrating	135	1.00	3.14	1.3831	0.42380	1.376	0.209	2.056	0.414
Integrating[a]	135	0.00	0.00	0.0000	0.00000				
Obliging	135	1.00	4.67	2.3531	0.66200	0.427	0.209	0.371	0.414
Obliging[a]	135	0.00	2.00	0.0593	0.34039	5.611	0.209	29.921	0.414
Dominating	135	1.20	4.60	2.7185	0.78505	0.376	0.209	-0.562	0.414
Dominating[a]	135	0.00	2.00	0.5778	0.86789	0.939	0.209	-1.011	0.414
Avoiding	135	1.40	5.00	3.2931	0.79275	-0.251	0.209	-0.341	0.414
Avoiding[a]	135	0.00	2.00	1.4148	0.86719	-0.918	0.209	-1.038	0.414
Compromising	135	1.00	3.00	1.8833	0.51724	0.152	0.209	-0.559	0.414
Compromise[a]	135	0.00	0.00	0.0000	0.00000				
ROCI-II B									
Integrating	122	1.00	2.29	1.2834	0.33765	1.104	0.219	0.129	0.435
Integrating[a]	122	0.00	0.00	0.0000	0.00000				
Obliging	122	1.50	4.83	2.5205	0.50733	0.902	0.219	2.787	0.435
Obliging [a]	122	0.00	2.00	0.2049	0.54452	2.597	0.219	5.503	0.435
Dominating	122	1.20	5.00	2.9672	0.84906	0.390	0.219	-0.368	0.435
Dominating[a]	122	0.00	2.00	0.9016	0.97413	0.200	0.219	-1.938	0.435
Avoiding	122	1.33	4.83	3.2883	0.75971	-0.400	0.219	-0.333	0.435
Avoiding[a]	122	0.00	2.00	1.4508	0.87294	-1.022	0.219	-0.902	0.435
Compromising	122	1.00	2.75	1.6639	0.43214	-0.038	0.219	-0.822	0.435
Compromise[a]	122	0.00	0.00	0.0000	0.00000				
ROCI-II C									
Integrating	119	1.00	2.14	1.3109	0.35418	0.931	0.222	-0.439	0.440
Integrating[a]	119	0.00	0.00	0.0000	0.00000				
Obliging	119	1.33	4.67	2.6429	0.57338	0.300	0.222	0.742	0.440
Obliging [a]	119	0.00	2.00	0.2353	0.64710	2.404	0.222	3.843	0.440
Dominating	119	1.00	5.00	3.0336	0.89037	0.258	0.222	-0.444	0.440
Dominating [a]	119	0.00	2.00	0.8151	0.93850	0.380	0.222	-1.774	0.440
Avoiding	119	1.00	5.00	3.2199	0.86764	-0.020	0.222	-0.624	0.440
Avoiding [a]	119	0.00	2.00	1.4286	0.86917	-0.958	0.222	-0.986	0.440

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
Variables	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Compromising	119	1.00	3.25	1.6429	0.48338	0.484	0.222	0.135	0.440
Compromising [a]	119	0.00	0.00	0.0000	0.00000				
Valid N (listwise)	118								

[a]Converted to dummy score, 0 = <55th percentile, 1 = 55th-75th percentile, 2 = >75th percentile of the normed ROCI-II

The fundamental features of the data set are summarized in Table 3. The variables column lists the four independent variables and the global score of the TEIQue. The next section includes the independent variables and outcomes of leadership of the MLQ. The third section includes the dependent variables of the ROCI-II.

Table 3 presents the descriptive statistics: *N* equals number of participants and the mean statistic equals research study raw scores. The mean national norms column contains the published norms for the identified variables. The ROCI-II measure how the participant handles conflict with their supervisors, subordinates, and peers (Petrides, 2009). For the ROCI-II A (supervisor), ROCI-II B (subordinates), and ROCI-II C (peers). Additionally, the table contains the descriptive statistics mean for dummy variables of the ROCI-II A (supervisor), ROCI-II B (subordinates), and ROCI-II C (peers), identified with the superscript *a*.

Hypothesis Testing

This section presents a synopsis of the results of the hypotheses testing. The hypotheses were tested employing discriminant analysis using IBM-SPSS v.24.0. In discriminant analysis, hypotheses testing addressed the eight associated assumptions to ensure the data follow a normal distribution (AlKubaisi et al., 2019). When the assumptions are met the possibility of misclassifying cases is minimized (Kahiya, 2017). The assumptions are discussed below. The hypotheses testing used Box's M and Shapiro–Wilk's tests. Box's M tests identified the dependent variables of conflict management that met the homogeneity of the covariance. The

dependent variables that met homogeneity were retained for analysis to determine correlation with the independent variables of emotional intelligence and leadership styles. The Shapiro–Wilk's tests were then used to determine the correlation among the independent and homogeneous dependent variables.

The next step was to identify and remove outliers. Outliers are unusual data found in the data set and typically lie $\pm$ 2SD outside the mean (Verma & Abdel–Salam, 2019). Data were assessed for multivariate outliers using the Mahalanobis Distance Test (George & Mallery, 2019). Two outliers were identified and removed from the data set. A final count of 118 survey responses was used in the data analysis.

For discriminant analysis to be performed, the dependent variables must be categorical. The raw scores from the Likert scale are collected on an ordinal scale, making it necessary to convert the ordinal data to categorical data. The participants' raw scores were converted to dummy variables using the national normed mean (Rahim, 2021) to define the dummy variables. Rahim (2021) noted that a score below the 55^{th} percentile indicates a low usage of that particular conflict management style. Usage below the 55^{th} percentile was assigned the dummy variable of 0. Rahim (2021) noted the usage of a conflict management style between the 55^{th} and 75^{th} percentile was considered average. The results within this range were given a dummy score of 1. Rahim (2021) noted that frequent use of a conflict management style was above the 75^{th} percentile. The results in the frequent use category were assigned a dummy score of 2. The range of 0 to 2 was used in the grouping variable for the discriminant analysis. Table 4 compares the percentiles and means for the raw data and the nationally normed means of the ROCI-II.

Score and the National Normed Mean Score for the ROCI-II

	Mean[a]	National Normed Mean[b] Score	Percentiles[c]						
			5	10	25	50	75	90	95
	1.36	4.14-4.22	1.0000	1.0000	1.0000	1.2857	1.5714	2.0000	2.1429
	2.33	3.55-3.65	1.3333	1.5000	1.8333	2.3333	2.6667	3.1667	3.5000
	2.72	3.20-3.33	1.6000	1.8000	2.2000	2.6000	3.4000	3.8000	4.1800
	3.26	2.81-2.96	1.8333	2.1667	2.6667	3.3333	3.8333	4.1667	4.6667
sing	1.83	3.45-3.57	1.0000	1.0000	1.5000	1.7500	2.1250	2.5000	2.7500
	1.27	4.22-4.30	1.0000	1.0000	1.0000	1.1429	1.4286	1.8571	2.0000
	2.49	3.16-3.26	1.6667	2.0000	2.1667	2.5000	2.8333	3.1667	3.3333
	2.98	2.87-3.01	1.8000	2.0000	2.4000	2.8000	3.6000	4.2000	4.6000
	3.27	2.71-2.85	1.8333	2.0333	2.6667	3.3333	3.8333	4.1667	4.3333
sing	1.65	3.24-3.38	1.0000	1.0000	1.2500	1.7500	2.0000	2.0000	2.2500
	1.31	4.21-4.28	1.0000	1.0000	1.0000	1.1429	1.5714	2.0000	2.0000
	2.64	3.19-3.29	1.6667	1.8667	2.3333	2.6667	3.0000	3.3333	3.6667
	3.02	3.10-3.23	1.6200	2.0000	2.4000	3.0000	3.6000	4.2000	4.7800
	3.20	2.65-2.79	1.8333	2.0000	2.5000	3.1667	3.8333	4.4667	4.6667
sing	1.65	3.52-3.65	1.0000	1.0000	1.2500	1.7500	2.0000	2.2000	2.5000

h participants.

g between the 55th and 75th percentiles with a 95% confidence interval. Below 55th percentile is below average use and above the 75
rage use of the particular conflict management style.

Assumptions

Discriminant analysis requires assumptions to be met before testing any hypotheses. The discriminant analysis assumptions needed to be met to prevent the misclassification of borderline cases (Kahiya, 2017). The eight assumptions of discriminant analysis are

Assumption 1. Proper Specification

The proper specification assumption was met by including all of the independent and dependent variables used in the study. The independent variables of emotional intelligence: emotionality, self-control, sociability, and well-being were used in discriminant analysis. The independent variables of the full range leadership model: transformational, transactional, and passive-avoidant were used in the discriminant analysis. The independent variables of leadership styles were further broken down into the constructs of idealized influence (attributes and behaviors), inspirational motivation, intellectual stimulation, individual consideration, contingent reward, management exception active and passive, and laissez-faire. The dependent variables of conflict management styles included integrating, obliging, dominating, avoiding, and compromising. The five dependent variables were also subdivided based on the participants' responses to the ROCI-II Form A–superiors, Form B–subordinates, and Form C–peers. Figure 4 provides an overview of the independent variables of emotional intelligence and leadership styles and dependent variables of conflict management used in discriminant analysis.

Assumption 2. True Categorical Dependency

The assumption of true categorical dependency was met as the groups were mutually exclusive. Mutual exclusivity was guaranteed using Likert scales that resulted in ordinal and nominal data.

Figure 4

Variables Used in Discriminant Analysis

Variables	Constructs
Emotional Intelligence	
Well-being	
Sociability	
Emotionality	
Self-control	
Leadership Style	
Transformational	
	Idealized Attributes
	Idealized Behaviors
	Inspirational Motivation
	Intellectual Stimulation
	Individual Consideration
Transactional	
	Contingent Reward
	Management by Exception (Active)
Passive Avoidant	
	Management by Exception (Passive)
	LS-Laissez-Faire
Characteristic: Outcomes of Leadership[a]	
	Extra Effort
	Effectiveness
	Satisfaction
Conflict Management Style: A=Superiors, B=Subordinates, C=Peers	
Integrating	
Obliging	
Dominating	
Avoiding	
Compromising	

[a]Not leadership styles but outcomes as a result of leadership behavior

Assumption 3. Adequate Sample Size

The assumption of an adequate sample was met with a sample size of $N = 118$ valid responses which exceeded the minimum requirement of two times the number of dependent variables (Kahiya, 2017) or a minimum of five times the number of independent variables (Kelly & Morrow, 2018).

Assumption 4. Interval Variables

The independent variables were intervals. Verma and Abdel–Salam (2019) posited that interval data were measured on a scale, and each point was equidistant. However, there was no zero on this scale, and the doubling principle was not guaranteed. For example, the participant who responded to a question by selecting 4 on the Likert scale was not twice as likely to use a particular conflict management style as someone who selected a 2.

Assumption 5. Variance

The variance was calculated by squaring the standard deviation (SD^2). A variance of zero means there was no variability in the data set. The greater the spread of the data, the greater the variability in the data set. Discriminant analysis removed the variables with a zero-standard deviation ($SD^2 = 0$). The variance was met as all independent variables used in this study have a standard deviation greater than zero $SD^2 > 0$.

Assumption 6. Homogeneity of variance

The homogeneity of variance ensured that the sample was taken from a population with an equal variance; the sample was approximately the same. The assumption of homogeneity of variance (homoscedasticity) was found in the conflict management style dependent variables of the ROCI-II A (obliging, dominating, avoiding), ROCI-II B (obliging, dominating, avoiding), and ROCI-II C (obliging, dominating, and avoiding). The dependent variables of integrating and compromising were removed from the stepwise discriminant analysis due to heteroscedasticity.

Assumption 7. Homogeneity of Covariances/Correlations

Box's M was used to determine the assumption of homogeneity of covariances/correlations (George & Mallery, 2019; Verma & Abdel–Salam, 2019). Box's M tests the null hypothesis to determine if the groups are homogeneous and can be retained in the

analysis. The partial *F* to enter the analysis was set at 1.15 and removed from the analysis at 1.0. *F* value criteria – *F* > in 1.15 (represents sig. level of .05) and *F* < out 1.0 (represents sig level of .10). Stepwise discriminant analysis removed the two dependent conflict management variables of integrating and compromising for the ROCI-II A, B, and C due to their heterogeneity.

Stepwise discriminant analysis was performed to determine if a correlation existed among the independent variables of trait-emotional intelligence and leadership styles and the dependent variables of conflict management styles. Stepwise discriminant analysis allowed for the retention of the correlated variables that resulted from Box's M tests where the covariance matrices did not differ among groups. Box's M showed similarity among variables or equal population covariance matrices for discriminant analysis as noted from the similar log determinant values in Table 5 for each dependent variable.

The dependent variables of the ROCI-II (obliging, dominating, and avoiding) were retained for having discriminant properties with selected independent variables. The retained dependent variables and the select independent variables met the assumption of homoscedasticity where $p > .001$ (Table 6). Therefore, I failed to reject the null hypothesis for the identified variables following Box's M analysis.

Based on the ROCI-II national managerial norms, participants reported using the conflict management styles of integrating and compromising consistently below the national norms of 55% (Rahim, 2021). This low usage of the conflict management style resulted in removing the integrating and compromising styles from the discriminant analysis after applying dummy variables.

Table 5

Box's Test of Equality of Covariance Matrices Log Determinants

	Rank	Log Determinant
ROCI-II A Obliging		
0	4	-5.710
2	.[a]	.[b]
Pooled within-groups	4	-5.650
ROCI-II A Dominating		
0	9	-14.129
1	9	-20.984
2	9	-14.992
Pooled within-groups	9	-13.892
ROCI-II A Avoiding		
0	9	-15.644
1	9	-20.060
2	9	-14.183
Pooled within-groups	9	-14.174
ROCI-II B Obliging		
0	7	-13.197
1	7	-19.838
2	7	-21.044
Pooled within-groups	7	-13.226
ROCI-II B Dominating		
0	4	-4.885
1	4	-10.085
2	4	-5.165
Pooled within-groups	4	-4.933
ROCI-II B Avoiding		
0	3	-4.225
1	3	-5.315
2	3	-4.212
Pooled within-groups	3	-4.128
ROCI-II C Obliging		
0	4	-6.918
2	4	-7.501
Pooled within-groups	4	-6.877
ROCI-II C Dominating		
0	7	-12.086
1	7	-14.600
2	7	-11.385
Pooled within-groups	7	-11.464
ROCI-II C Avoiding		
0	7	-11.267
1	7	-18.034
2	7	-11.865
Pooled within-groups	7	-11.408

The ranks and natural logarithms of determinants printed are those of the group covariance matrices.

a. Rank < 4

b. Too few cases to be non-singular

Table 6

Tests null hypothesis of equal population covariance matrices

Test Results		
ROCI-II A Obliging		
No test can be performed with fewer than two nonsingular group covariance matrices.		
ROCI-II A Dominating		
Box's M		120.384
F	Approx.	0.972
	df1	90
	df2	2001.257
	Sig.	0.556
ROCI-II A Avoiding		
Box's M		108.195
F	Approx.	0.907
	df1	90
	df2	2521.016
	Sig.	0.722
ROCI-II B Obliging		
Box's M		104.667
F	Approx.	1.155
	df1	56
	df2	1097.460
	Sig.	0.206
ROCI-II B Dominating		
Box's M		34.356
F	Approx.	1.384
	df1	20
	df2	641.187
	Sig.	0.122
ROCI-II B Avoiding		
Box's M		14.679
F	Approx.	1.003
	df1	12
	df2	483.759
	Sig.	0.445
ROCI-II C Obliging		
Box's M		11.706
F	Approx.	1.023
	df1	10
	df2	1911.390
	Sig.	0.421
ROCI-II C Dominating		
Box's M		67.874
F	Approx.	0.990
	df1	56
	df2	2591.487
	Sig.	0.496
ROCI-II C Avoiding		
Box's M		78.432
F	Approx.	1.024
	df1	56
	df2	1210.711
	Sig.	0.429

Assumption 8. Multicollinearity of the Independent Variables

Multicollinearity occurs when multiple independent variables are correlated (Verma & Abdel–Salam, 2019). Multicollinearity is high when one variable is strongly correlated to another; therefore, the variables have a high correlation, leading to unreliable statistical inferences (Kim, 2019). Kim (2019) posited, "$R^2 = 0$ represents the absence of multicollinearity between explanatory variables, whereas $R^2 = \pm 1$ represents the presence of exact multicollinearity between them" (p. 559). The independent variables showed low multicollinearity with the dependent variables, and no multicollinearity was greater than 90% ($R^2 > \pm.90$). If the values of the multicollinearity test are below .8 or .9, the assumption is met (AlKubaisi et al., 2019). The assumption of multicollinearity of the independent variables was determined from the "Pooled Within-Groups Matrices" output (see Appendices A–O). Each table depicts the multicollinearity of the independent variables to each dependent variable of the ROCI-II A, B, and C. Each table portrayed the results for a single conflict management variable, the independent variables of emotional intelligence from the TEIQue questionnaire, and leadership style constructs from the MLQ questionnaire. There are no multicollinearities above .90; therefore, assumption eight of multicollinearity of the independent variables was met as displayed in each table.

Results of the Hypothesis Testing

Three research questions guided this quantitative study. The study examined the correlations among emotional intelligence, leadership styles, and conflict management styles. A summary of the hypothesis testing results is presented below.

Research Question 1

Does a correlation exist among the variables of trait emotional intelligence, leadership styles, and conflict management styles of academic nursing administrators?

H_0 Trait emotional intelligence and leadership style do not correlate with conflict management styles.

H_1 Trait emotional intelligence and leadership style do correlate with conflict management styles.

In stepwise discriminant analysis, the analysis was conducted using Wilks' Lambda (ƛ). Wilks' Lambda denotes the significance of the discriminant function, supporting the rejection of the null hypothesis. The model discriminates among the groups of Lambda which varies from 0 to 1, the closer to 1, the greater the association among groups. For the accepted groups, the Wilks' Lambda significance value indicates the group means differ thereby supporting the rejection of the null hypothesis for the specified variable combinations. Table 7 presents the accepted groups in the discriminant analysis following the Wilks' Lambda test.

The *F*-value indicates the unique contribution of the independent variable to the dependent variable. The *p*-value <.05 necessitates that the null hypothesis was rejected and that the identified independent variable was not correlated to the named dependent variable. Hypothesis testing was completed for each dependent variable. The independent variables of emotional intelligence and leadership styles that resulted in statistical significance are identified in Table 8.

Table 7

Wilks' Lambda Hypothesis Testing of the Group Mean

	Step	Number of Variables	Lambda	*df*1	*df*2	*df*3	Exact F			
							Statistic	*df*1	*df*2	Sig.
ROCI-II A Obliging										
	1	1	0.928	1	1	132	10.171	1	132.000	0.002
	2	2	0.894	2	1	132	7.787	2	131.000	0.001
	3	3	0.877	3	1	132	6.098	3	130.000	0.001
	4	4	0.866	4	1	132	4.975	4	129.000	0.001
ROCI-II A Dominating										
	1	1	0.938	1	2	131	4.336	2	131.000	0.015
	2	2	0.889	2	2	131	3.924	4	260.000	0.004
	3	3	0.858	3	2	131	3.413	6	258.000	0.003
	4	4	0.826	4	2	131	3.209	8	256.000	0.002
	5	5	0.797	5	2	131	3.054	10	254.000	0.001
	6	6	0.750	6	2	131	3.247	12	252.000	0.000
	7	7	0.731	7	2	131	3.023	14	250.000	0.000
	8	8	0.715	8	2	131	2.825	16	248.000	0.000
	9	9	0.695	9	2	131	2.729	18	246.000	0.000
ROCI-II A Avoiding										
	1	1	0.802	1	2	131	16.133	2	131.000	0.000
	2	2	0.724	2	2	131	11.398	4	260.000	0.000
	3	3	0.691	3	2	131	8.717	6	258.000	0.000
	4	4	0.666	4	2	131	7.206	8	256.000	0.000
	5	5	0.644	5	2	131	6.257	10	254.000	0.000
	6	6	0.626	6	2	131	5.552	12	252.000	0.000
	7	7	0.607	7	2	131	5.070	14	250.000	0.000
	8	8	0.592	8	2	131	4.650	16	248.000	0.000
	9	9	0.575	9	2	131	4.352	18	246.000	0.000
ROCI-II B Obliging										
	1	1	0.930	1	2	118	4.433	2	118.000	0.014
	2	2	0.895	2	2	118	3.329	4	234.000	0.011
	3	3	0.866	3	2	118	2.881	6	232.000	0.010
	4	4	0.836	4	2	118	2.692	8	230.000	0.008
	5	5	0.806	5	2	118	2.591	10	228.000	0.005
	6	6	0.774	6	2	118	2.569	12	226.000	0.003
	7	7	0.756	7	2	118	2.408	14	224.000	0.004
ROCI-II B Dominating										
	1	1	0.933	1	2	118	4.223	2	118.000	0.017
	2	2	0.887	2	2	118	3.610	4	234.000	0.007
	3	3	0.851	3	2	118	3.250	6	232.000	0.004
	4	4	0.826	4	2	118	2.889	8	230.000	0.004
	5	5	0.783	5	2	118	2.965	10	228.000	0.002

	Step	Number of Variables	Lambda	*df*1	*df*2	*df*3	Exact F			
							Statistic	*df*1	*df*2	Sig.
	6	6	0.764	6	2	118	2.715	12	226.000	0.002
	7	5	0.765	5	2	118	3.270	10	228.000	0.001
	8	4	0.777	4	2	118	3.870	8	230.000	0.000
ROCI-II B Avoiding										
	1	1	0.887	1	2	118	7.551	2	118.000	0.001
	2	2	0.852	2	2	118	4.890	4	234.000	0.001
	3	3	0.823	3	2	118	3.967	6	232.000	0.001
ROCI-II C Obliging										
	1	1	0.945	1	1	116	6.806	1	116.000	0.010
	2	2	0.913	2	1	116	5.513	2	115.000	0.005
	3	3	0.900	3	1	116	4.217	3	114.000	0.007
	4	4	0.888	4	1	116	3.552	4	113.000	0.009
ROCI0II C Dominating										
	1	1	0.951	1	2	115	2.981	2	115.000	0.055
	2	2	0.909	2	2	115	2.798	4	228.000	0.027
	3	3	0.881	3	2	115	2.465	6	226.000	0.025
	4	4	0.845	4	2	115	2.464	8	224.000	0.014
	5	5	0.823	5	2	115	2.274	10	222.000	0.015
	6	6	0.804	6	2	115	2.118	12	220.000	0.017
	7	7	0.768	7	2	115	2.201	14	218.000	0.009
ROCI-II C Avoiding										
	1	1	0.918	1	2	115	5.110	2	115.000	0.007
	2	2	0.856	2	2	115	4.608	4	228.000	0.001
	3	3	0.816	3	2	115	4.032	6	226.000	0.001
	4	4	0.786	4	2	115	3.580	8	224.000	0.001
	5	5	0.767	5	2	115	3.143	10	222.000	0.001
	6	6	0.749	6	2	115	2.848	12	220.000	0.001
	7	7	0.729	7	2	115	2.665	14	218.000	0.001

Table 8

Summary of the Hypothesis Testing

Dependent variable	Independent variable	Wilk's ƛ	*F*(1,2)	Sig.	Null Hypothesis
ROCI-II A Obliging					
	Emotionality	0.928	10.171	0.002	reject
	Inspirational motivation	0.894	7.787	0.001	reject
	Laissez-faire	0.877	6.098	0.001	reject
	Management by exception passive	0.866	6.098	0.001	reject
ROCI-II A Dominating					
	Management by exception active	0.938	4.336	0.015	reject
	Individual consideration	0.889	3.924	0.004	reject
	Sociability	0.858	3.413	0.003	reject
	Self-control	0.826	3.209	0.002	reject
	Inspirational motivation	0.797	3.054	0.001	reject
	Idealized behaviors	0.750	3.247	0.000	reject
	Idealized attributes	0.731	3.023	0.000	reject
	Satisfaction	0.715	2.825	0.000	reject
	Extra effort	0.695	2.729	0.000	reject
ROCI-II A Avoiding					
	Sociability	0.802	16.133	0.000	reject
	Laissez-faire	0.724	11.398	0.000	reject
	Passive Avoidant	0.691	8.717	0.000	reject
	Idealized Behaviors	0.666	7.206	0.000	reject
	Management by exception active	0.644	6.257	0.000	reject
	Emotionality	0.626	5.552	0.000	reject
	Extra effort	0.607	5.070	0.000	reject
	Inspirational Motivation	0.592	4.650	0.000	reject
	Contingent Reward	0.575	4.352	0.000	reject
ROCI-II B Obliging					
	Effectiveness	0.930	4.433	0.014	reject
	Laissez-faire	0.895	3.329	0.011	reject
	Passive Avoidant	0.866	2.881	0.010	reject
	Well-being	0.836	2.692	0.008	reject
	Idealized behaviors	0.806	2.591	0.005	reject
	Idealized attributes	0.774	2.569	0.003	reject
	Contingent reward	0.756	2.408	0.004	reject
ROCI-II B Dominating					
	Individual consideration	0.887	3.610	0.007	reject
	Emotionality	0.826	2.889	0.004	reject
	Sociability	0.783	2.965	0.002	reject
	Transactional	0.764	2.715	0.002	reject
ROCI-II B Avoiding					
	Sociability	0.887	7.551	0.001	reject

Dependent variable	Independent variable	Wilk's ƛ	*F*(1,2)	Sig.	Null Hypothesis
	Laissez-faire	0.852	4.890	0.001	reject
	Intellectual stimulation	0.823	3.967	0.001	reject
ROCI-II C Obliging					
	Effectiveness	0.945	6.806	0.012	reject
	Extra effort	0.913	5.513	0.005	reject
	Laissez-faire	0.900	4.217	0.007	reject
	Idealized attributes	0.888	3.552	0.009	reject
ROCI-II C Dominating					
	Sociability	0.951	2.981	0.055	fail to reject
	Passive Avoidant	0.909	2.798	0.027	reject
	Emotionality	0.881	2.465	0.025	reject
	Global	0.845	2.464	0.014	reject
	Management by exception active	0.823	2.274	0.015	reject
	Satisfaction	0.804	2.118	0.017	reject
	Effectiveness	0.768	2.201	0.009	reject
ROCI-II C Avoiding					
	Sociability	0.918	5.110	0.007	reject
	Management by exception active	0.856	4.608	0.001	reject
	Intellectual stimulation	0.816	4.032	0.001	reject
	Passive avoidant	0.786	3.580	0.001	reject
	Individual consideration	0.767	3.143	0.001	reject
	Idealized attributes	0.749	2.848	0.001	reject
	Effectiveness	0.729	2.665	0.001	reject

IBM SPSS automatically performed discriminant analysis using an evaluative classification to determine the accuracy of the group classification. Knowing the classification accuracy can impact the results generalizability and strengthens the discriminant analysis validity in classifying the cases correctly (Cui, 2010; Malhotra & Birks, 2003, Chapter 21). No general guidelines guide the researcher in determining classification accuracy (Malhotra et al., 2017). Therefore, it is left up to the researcher to determine the desired cutting score (Yang, 2015). For this study, the cutting score was set at 1.15 to enter the analysis and 1.0 to remove the variable from the analysis.

The classification percentage was listed, ranging from a high classification at 90% to a low classification at 50%. For example, the ROCI-II A obliging–superiors shows a 90.1% accuracy in classification for academic nurse leaders who use obliging below the national norms. The classification percent for peers who use obliging above the norm was 75%. For the ROCI-II A dominating, the classification was 14.7%, indicating that discriminate analysis did poorly classifying peers. Table 9 summarizes the casewise statistics and lists the percent of correctly classified cases according to the discriminant analysis classification function. Table 10 displays the predicted group membership. The predicted group membership provided a percentage of how well discriminant analysis classified the independent variables with the selected dependent variable.

Table 9

Summary of Casewise Statistics Classification Tables

	Percent
ROCI-II A	
Obliging	89.6
Dominating	41.5
Avoiding	67.9
ROCI-II B	
Obliging	56.6
Dominating	54.1
Avoiding	57.4
ROCI-II C	
Obliging	66.9
Dominating	53.8
Avoiding	55.5

Table 10

Classification Results

			Predicted Group Membership			
			0	1	2	Total
ROCI-II A Obliging						
Original	Count	0	118		13	131
		2	1		3	4
		Ungrouped cases	1		2	3
	%	0	90.1		9.9	100.0
		2	25.0		75.0	100.0
		Ungrouped cases	33.3		66.7	100.0
ROCI-II A Dominating						
Original	Count	0	46	35	10	91
		1	3	5	2	10
		2	12	17	5	34
		Ungrouped cases	0	2	1	3
	%	0	50.5	38.5	11.0	100.0
		1	30.0	50.0	20.0	100.0
		2	35.3	50.0	14.7	100.0
		Ungrouped cases	0.0	66.7	33.3	100.0
ROCI-II A Avoiding						
Original	Count	0	18	6	10	34
		1	1	10	0	11
		2	19	7	63	89
		Ungrouped cases	0	2	1	3
	%	0	52.9	17.6	29.4	100.0
		1	9.1	90.9	0.0	100.0
		2	21.3	7.9	70.8	100.0
		Ungrouped cases	0.0	66.7	33.3	100.0
ROCI-II B Obliging						
Original	Count	0	57	17	31	105
		1	1	7	1	9
		2	3	0	5	8
		Ungrouped cases	5	3	8	16
	%	0	54.3	16.2	29.5	100.0
		1	11.1	77.8	11.1	100.0
		2	37.5	0.0	62.5	100.0
		Ungrouped cases	31.3	18.8	50.0	100.0
ROCI-II B Dominating						
Original	Count	0	44	11	9	64
		1	2	2	2	6
		2	15	17	20	52
		Ungrouped cases	7	1	8	16

			Predicted Group Membership			
			0	1	2	Total
Original	%	0	68.8	17.2	14.1	100.0
		1	33.3	33.3	33.3	100.0
		2	28.8	32.7	38.5	100.0
		Ungrouped cases	43.8	6.3	50.0	100.0
ROCI-II B Avoiding						
Original	Count	0	17	6	8	31
		1	1	3	1	5
		2	20	16	50	86
		Ungrouped cases	4	4	8	16
	%	0	54.8	19.4	25.8	100.0
		1	20.0	60.0	20.0	100.0
		2	23.3	18.6	58.1	100.0
		Ungrouped cases	25.0	25.0	50.0	100.0
ROCI-II C Obliging						
Original	Count	0	71		34	105
		2	5		8	13
		Ungrouped cases	12		7	19
	%	0	67.6		32.4	100.0
		2	38.5		61.5	100.0
		Ungrouped cases	63.2		36.8	100.0
ROCI-II C Dominating						
Original	Count	0	37	10	18	65
		1	4	6	1	11
		2	11	11	21	43
		Ungrouped cases	4	8	7	19
	%	0	56.9	15.4	27.7	100.0
		1	36.4	54.5	9.1	100.0
		2	25.6	25.6	48.8	100.0
		Ungrouped cases	21.1	42.1	36.8	100.0
ROCI-II C Avoiding						
Original	Count	0	15	5	10	30
		1	0	7	1	8
		2	22	15	44	81
		Ungrouped cases	8	3	8	19
	%	0	50.0	16.7	33.3	100.0
		1	0.0	87.5	12.5	100.0
		2	27.2	18.5	54.3	100.0
		Ungrouped cases	42.1	15.8	42.1	100.0

Research Question 2

Does a correlation exist among the variables of trait emotional intelligence and conflict management styles?

H_0 Emotional intelligence does not correlate with conflict management styles in nursing school deans, assistant deans, and department chairs.

H_1 Emotional intelligence does correlate with conflict management styles in nursing school deans, assistant deans, and department chairs.

Discriminant analysis was performed to determine if a correlation existed among the independent variables of trait-emotional intelligence and the dependent variables of conflict management styles. The partial F to enter the analysis was set at 1.15 and to remove was 1.0. F value Criteria – F> in 1.15 (represents sig level of .05) and F< out 1.0 (represents sig level of .10). Stepwise discriminant analysis retained the correlated variables that resulted from Box's M tests where the covariance matrices did not differ among groups. Box's M showed homogeneity among variables or equal population covariance matrices for discriminant analysis.

The dependent variables of the ROCI-II (obliging, dominating, and avoiding) were retained for having discriminant properties with selected independent variables. The retained dependent variables and the select independent variables met the assumption of homoscedasticity where F>.05. The I failed to reject the null hypothesis for the identified variables following Box's M analysis. Based on the ROCI-II national managerial norms, the participants used conflict management styles of integrating and compromising consistently below the national norms, resulting in their removal from the discriminant analysis when dummy variables were applied. Box's M results demonstrated equal population covariance for ROCI-II A (obliging, dominating, avoiding), ROCI-II B (dominating, avoiding), and ROCI-II C (obliging, dominating, and

avoiding). Therefore, I failed to reject the null hypothesis. Box's M showed similarity among variables or equal population covariance matrices for discriminant analysis as noted from the similar log determinant values in Table 11 for each dependent variable. The retained dependent variables and the select independent variables met the assumption of homoscedasticity where p >.001 (see Table 12).

In stepwise discriminant analysis, a second analysis used Wilks' Lambda. Wilks' Lambda denotes the significance of the discriminant function supporting the rejection of the null hypothesis. The model discriminates among the group of Lambda which varies from 0 to 1, the closer to 1, the greater the association among groups. For the accepted groups found in Table 13, the Wilks' Lambda significance value indicates the group means differ thereby supporting the rejection of the null hypothesis for the specified variable combinations. The F-value indicates the unique contribution of the independent variable to the dependent variable. The p-value <.05 necessitated that the null hypothesis was rejected and that the identified independent variable was not correlated to the named dependent variable. Hypothesis testing was completed for each dependent variable. The independent variables of emotional intelligence that resulted in statistical significance are identified in Table 13.

The Wilks' Lambda was above .85 for all included variables indicating a high correlation. The four independent variables have a p-value > .05; therefore, we failed to reject the null hypothesis for the four independent variables that were not correlated to conflict management styles. The Wilks' Lambda test results are listed in Table 14 with the results of the hypothesis testing for each variable considered in the stepwise discriminant analysis.

Table 11

Box's Test of Equality of Covariance Matrices Log Determinants for Research Question 2

	Rank	Log Determinant
ROCI-II A Obliging		
0	2	-3.450
2	2	-1.764
Pooled within-groups	2	-3.360
ROCI-II A Dominating		
0	3	-2.825
1	3	-3.672
2	3	-2.689
Pooled within-groups	3	-2.786
ROCI-II A Avoiding		
0	1	-0.836
1	1	-1.546
2	1	-0.875
Pooled within-groups	1	-0.903
ROCI-II B Obliging[a]		
ROCI-II B Dominating		
0	2	-1.559
1	2	-2.457
2	2	-1.556
Pooled within-groups	2	-1.566
ROCI-II B Avoiding		
0	2	-1.273
1	2	-2.625
2	2	-1.768
Pooled within-groups	2	-1.612
ROCI-II C Obliging		
0	1	-1.007
2	1	-0.567
Pooled within-groups	1	-0.947
ROCI-II C Dominating		
0	3	-4.910
1	3	-5.953
2	3	-4.843
Pooled within-groups	3	-4.812
ROCI-II C Avoiding		
0	1	-0.622
1	1	-0.618
2	1	-0.905
Pooled within-groups	1	-0.808

The ranks and natural logarithms of determinants printed are those of the group covariance matrices.

[a] No variables qualified for the analysis

Table 12

Tests null hypothesis of equal population covariance matrices for Research Question 2

Test Results		
ROCI-II A Obliging		
Box's M		6.994
F	Approx.	1.747
	df1	3
	df2	311.345
	Sig.	0.157
ROCI-II A Dominating		
Box's M		8.280
F	Approx.	0.633
	df1	12
	df2	2831.801
	Sig.	0.816
ROCI-II A Avoiding		
Box's M		1.796
F	Approx.	0.878
	df1	2
	df2	8024.007
	Sig.	0.416
ROCI-II B Obliging[a]		
ROCI-II B Dominating		
Box's M		15.846
F	Approx.	1.005
	df1	15
	df2	46073.973
	Sig.	0.446
ROCI-II B Avoiding		
Box's M		7.222
F	Approx.	1.070
	df1	6
	df2	761.316
	Sig.	0.379
ROCI-II C Obliging		
Box's M		1.251
F	Approx.	1.220
	df1	1
	df2	4438.843
	Sig.	0.269
ROCI-II C Dominating		
Box's M		19.028
F	Approx.	1.468

Test Results		
	df1	12
	df2	3565.534
	Sig.	0.128
ROCI-II C Avoiding		
Box's M		1.032
F	Approx.	0.501
	df1	2
	df2	4384.843
	Sig.	0.606

Tests null hypothesis of equal population covariance matrices
a. No variables are qualified for the analysis

Table 13

Wilk's Lambda Hypothesis Testing of the Group Mean for Research Question 2

	Number of					Exact F			
Step	Variables	Lambda	*df*1	*df*2	*df*3	Statistic	*df*1	*df*2	Sig.
ROCI-II A Obliging									
1	1	0.929	1	1	133	10.223	1	133.000	0.002
2	2	0.917	2	1	133	6.002	2	132.000	0.003
ROCI-II A Dominating									
1	1	0.967	1	2	132	2.233	2	132.000	0.111
2	2	0.948	2	2	132	1.766	4	262.000	0.136
3	3	0.923	3	2	132	1.764	6	260.000	0.107
ROCI-II A Avoiding									
1	1	0.800	1	2	132	16.522	2	132.000	0.000
ROCI-II B Obliging[a]									
ROCI-II B Dominating									
1	1	0.948	1	2	119	3.274	2	119.000	0.041
2	2	0.896	2	2	119	3.340	4	236.000	0.011
ROCI-II B Avoiding									
1	1	0.884	1	2	119	7.813	2	119.000	0.001
2	2	0.856	2	2	119	4.777	4	236.000	0.001
ROCI-II C Obliging									
1	1	0.984	1	1	117	1.854	1	117.000	0.176
ROCI-II C Dominating									
1	1	0.955	1	2	116	2.720	2	116.000	0.070
2	2	0.910	2	2	116	2.763	4	230.000	0.028
3	3	0.874	3	2	116	2.655	6	228.000	0.017
ROCI-II C Avoiding									
1	1	0.916	1	2	116	5.312	2	116.000	0.006

a. No variables are qualified for the analysis.

The Wilks' Lambda was above .85 for all included variables indicating a high correlation. The four independent variables have a p-value > .05; therefore, we failed to reject the null hypothesis for the four independent variables that were not correlated to conflict management styles. The Wilks' Lambda test results are listed in Table 14 with the results of the hypothesis testing for each variable considered in the stepwise discriminant analysis.

Table 14

Summary of the Hypothesis Testing for Research Question 2

Dependent variable	Independent variable	Wilk's ƛ	*F*(1,2)	Sig.	H_0
ROCI-II A Obliging					
	Emotionality	0.929	10.223	0.002	reject
	Global	0.917	6.002	0.003	reject
ROCI-II A Dominating					
	Self-control	0.967	2.233	0.111	fail to reject
	Emotionality	0.948	1.766	0.136	fail to reject
	Sociability	0.923	1.764	0.107	fail to reject
ROCI-II A Avoiding					
	Sociability	0.800	16.522	0.000	reject
ROCI-II B Obliging[a]					
ROCI-II B Dominating					
	Emotionality	0.948	3.274	0.041	reject
	Sociability	0.896	3.340	0.011	reject
ROCI-II B Avoiding					
	Sociability	0.884	7.813	0.001	reject
	Emotionality	0.856	4.777	0.001	reject
ROCI-II C Obliging					
	Self-control	0.984	1.854	0.176	fail to reject
ROCI-II C Dominating					
	Sociability	0.955	2.720	0.070	reject
	Emotionality	0.910	2.763	0.028	reject
	Global	0.874	2.655	0.017	reject
ROCI-II C Avoiding					
	Sociability	0.916	5.312	0.006	reject

[a]No variables qualified in the Wilks' Lambda

Discriminant analysis automatically performs an evaluative classification to determine the accuracy of the group classification. Knowing the classification accuracy can impact the

results generalizability. Table 15 displays the predicted group membership. The predicted group membership provided a percentage of how well discriminant analysis classified the independent variables with the selected dependent variable. The percent of correctly classified cases according to the discriminant analysis classification function is included in Table 15.

Table 15

Classification Results and Percentages for Research Question 2

			Predicted Group Membership			
			0	1	2	Total
ROCI-II A Obliging[a]						
Original	Count	0	111		20	131
		2	1		3	4
		Ungrouped cases	5		3	8
	%	0	84.7		15.3	100.0
		2	25.0		75.0	100.0
		Ungrouped cases	62.5		37.5	100.0
ROCI-II A Dominating[b]						
Original	Count	0	37	26	28	91
		1	1	7	2	10
		2	10	5	19	34
		Ungrouped cases	4	2	2	8
	%	0	40.7	28.6	30.8	100.0
		1	10.0	70.0	20.0	100.0
		2	29.4	14.7	55.9	100.0
		Ungrouped cases	50.0	25.0	25.0	100.0
ROCI-II A Avoiding[c]						
Original	Count	0	10	11	13	34
		1	6	5	0	11
		2	15	12	63	90
		Ungrouped cases	3	2	3	8
	%	0	29.4	32.4	38.2	100.0
		1	54.5	45.5	0.0	100.0
		2	16.7	13.3	70.0	100.0
		Ungrouped cases	37.5	25.0	37.5	100.0
ROCI-II B Obliging	No variables are qualified for the analysis					
ROCI-II B Dominating[d]						
Original	Count	0	31	21	12	64
		1	1	4	1	6
		2	17	15	20	52
		Ungrouped cases	10	3	8	21
	%	0	48.4	32.8	18.8	100.0

			Predicted Group Membership			
			0	1	2	Total
		1	16.7	66.7	16.7	100.0
		2	32.7	28.8	38.5	100.0
		Ungrouped cases	47.6	14.3	38.1	100.0
ROCI-II B Avoiding[e]						
Original	Count	0	15	8	8	31
		1	2	0	3	5
		2	16	12	58	86
		Ungrouped cases	6	6	9	21
	%	0	48.4	25.8	25.8	100.0
		1	40.0	0.0	60.0	100.0
		2	18.6	14.0	67.4	100.0
		Ungrouped cases	28.6	28.6	42.9	100.0
ROCI-II C Obliging[f]						
Original	Count	0	61		44	105
		2	8		6	14
		Ungrouped cases	12		12	24
	%	0	58.1		41.9	100.0
		2	57.1		42.9	100.0
		Ungrouped cases	50.0		50.0	100.0
ROCI-II C Dominating[g]						
Original	Count	0	36	18	11	65
		1	2	5	4	11
		2	16	15	12	43
		Ungrouped cases	8	14	2	24
	%	0	55.4	27.7	16.9	100.0
		1	18.2	45.5	36.4	100.0
		2	37.2	34.9	27.9	100.0
		Ungrouped cases	33.3	58.3	8.3	100.0
ROCI-II C Avoiding[h]						
Original	Count	0	19	2	9	30
		1	4	0	4	8
		2	27	5	49	81
		Ungrouped cases	14	1	9	24
	%	0	63.3	6.7	30.0	100.0
		1	50.0	0.0	50.0	100.0
		2	33.3	6.2	60.5	100.0
		Ungrouped cases	58.3	4.2	37.5	100.0

[a]84.4% of original grouped cases correctly classified.

[b]46.7% of original grouped cases correctly classified.

[c]57.8% of original grouped cases correctly classified.

[d]45.1% of original grouped cases correctly classified.

[e]59.8% of original grouped cases correctly classified.
[f]56.3% of original grouped cases correctly classified.
[g]44.5% of original grouped cases correctly classified.
[h]57.1% of original grouped cases correctly classified.

Research Question 3

Does a correlation exist among the variables of leadership styles and conflict management styles?

H_0 Leadership style does not correlate with the type of conflict management style used.

H_1 Leadership style correlate with the type of conflict management style used.

Discriminant analysis was performed to determine if a correlation existed among the independent variables of leadership styles and constructs and the dependent variables of conflict management styles. The partial F to enter the analysis was set at 1.15 and to remove was 1.0. F value Criteria – F> in 1.15 (represents sig level of .05) and F< out 1.0 (represents sig level of .10). Stepwise discriminant analysis retained the correlated variables that resulted from Box's M tests, where the covariance matrices did not differ among groups. Box's M shows similarity among variables or equal population covariance matrices in discriminant analysis. The dependent variables of the ROCI-II (obliging, dominating, and avoiding) were retained as having discriminant properties with selected independent variables. The retained dependent variables and the select independent variables met the assumption of homoscedasticity where F>.05; thereby, the null hypothesis was accepted for the identified variables following Box's M analysis.

Based on the ROCI-II national managerial norms, the participants used the conflict management styles of integrating and compromising consistently below the national norms resulting in their removal from the discriminant analysis when dummy variables were applied. Box's M results demonstrated equal population covariance for ROCI-II A (obliging, dominating,

avoiding), ROCI-II B (obliging, dominating, avoiding), ROCI-II C (obliging, dominating, and avoiding), thereby, I failed to reject the null hypothesis. Box's M showed similarity among variables or equal population covariance matrices for discriminant analysis as noted from the log determinant values in Table 16 for each dependent variable. The retained dependent variables and the select independent variables met the assumption of homoscedasticity where $p > .001$ (see Table 17).

In stepwise discriminant analysis, a second analysis used Wilks' Lambda. Wilks' Lambda denoted the significance of the discriminant function supporting the rejection of the null hypothesis, because the model discriminated among the group of Lambda which varies from 0 to 1. The closer to 1, the greater the association among groups. For the accepted groups, the Wilks' Lambda significance value indicated the group means differ resulting in rejecting the null hypothesis for the specified variable combinations. The F-value indicated the unique contribution of the independent variable to the dependent variable. P-value <.05 led to rejecting the null hypothesis, because the identified independent variable did not correlate with the named dependent variable. Table 18 presents the accepted groups in the discriminant analysis after the Wilks' Lambda test.

Table 16

Box's Test of Equality of Covariance Matrices Log Determinants for Research Question 3

	Rank	Log Determinant
ROCI-II A Obliging		
0	3	-5.229
2	3	-8.841
Pooled within-groups	3	-5.231
ROCI-II A Dominating		
0	6	-9.373
1	6	-10.112
2	6	-9.751
Pooled within-groups	6	-9.142
ROCI-II A Avoiding		
0	6	-12.969
1	6	-12.766
2	6	-11.934
Pooled within-groups	6	-11.957
ROCI-II B Obliging		
0	7	-13.803
1	7	-21.015
2	7	-20.416
Pooled within-groups	7	-13.807
ROCI-II B Dominating		
0	5	-7.959
1	4	.[a]
2	5	-8.101
Pooled within-groups	5	-7.910
ROCI-II B Avoiding		
0	3	-3.437
1	3	-7.135
2	3	-3.992
Pooled within-groups	3	-3.868
ROCI-II C Obliging		
0	4	-6.918
2	4	-7.501
Pooled within-groups	4	-6.877
ROCI-II C Dominating		
0	4	-6.701
1	4	-6.404
2	4	-6.539
Pooled within-groups	4	-6.484
ROCI-II C Avoiding		
0	3	-3.877
1	3	-5.344
2	3	-4.194
Pooled within-groups	3	-4.044

The ranks and natural logarithms of determinants printed are those of the group covariance matrices.

a. Singular

Table 17

Box's M Test Results of Equality of Covariance Matrices for Research Question 3

Test Results		
ROCI-II A Obliging		
Box's M		10.554
F	Approx.	1.051
	df1	6
	df2	146.385
	Sig.	0.395
ROCI-II A Dominating		
Box's M		48.971
F	Approx.	0.963
	df1	42
	df2	2120.637
	Sig.	0.540
ROCI-II A Avoiding		
Box's M		39.500
F	Approx.	0.792
	df1	42
	df2	2672.618
	Sig.	0.829
ROCI-II B Obliging		
Box's M		103.578
F	Approx.	1.143
	df1	56
	df2	1097.460
	Sig.	0.223
ROCI-II B Dominating[a]		
Box's M		15.846
F	Approx.	1.005
	df1	15
	df2	46073.973
	Sig.	0.446
ROCI-II B Avoiding		
Box's M		10.656
F	Approx.	0.728
	df1	12
	df2	483.759
	Sig.	0.724
ROCI-II C Obliging		
Box's M		11.706
F	Approx.	1.023
	df1	10
	df2	1911.390
	Sig.	0.421
ROCI-II C Dominating		
Box's M		15.292

Test Results		
F	Approx.	0.688
	df1	20
	df2	3018.671
	Sig.	0.842
ROCI-II C Avoiding		
Box's M		16.093
F	Approx.	1.200
	df1	12
	df2	1661.942
	Sig.	0.277

Tests null hypothesis of equal population covariance matrices

a. Some covariance matrices are singular and the usual procedure will not work. The non-singular groups will be tested against their own pooled within-groups covariance matrix. The log of its determinant is -7.882.

Table 18

Wilk's Lambda Hypothesis Testing of the Group Mean for Research Question 3

Step	Number of Variables	Lambda	*df*1	*df*2	*df*3	Exact F			
						Statistic	*df*1	*df*2	Sig.
ROCI-II A Obliging									
1	1	0.963	1	1	132	5.046	1	132.000	0.026
2	2	0.951	2	1	132	3.359	2	131.000	0.038
3	3	0.942	3	1	132	2.682	3	130.000	0.050
ROCI-II A Dominating									
1	1	0.938	1	2	131	4.336	2	131.000	0.015
2	2	0.889	2	2	131	3.924	4	260.000	0.004
3	3	0.860	3	2	131	3.369	6	258.000	0.003
4	4	0.823	4	2	131	3.264	8	256.000	0.001
5	5	0.800	5	2	131	3.007	10	254.000	0.001
6	6	0.783	6	2	131	2.728	12	252.000	0.002
ROCI-II A Avoiding									
1	1	0.828	1	2	131	13.627	2	131.000	0.000
2	2	0.767	2	2	131	9.241	4	260.000	0.000
3	3	0.745	3	2	131	6.827	6	258.000	0.000
4	4	0.727	4	2	131	5.536	8	256.000	0.000
5	5	0.712	5	2	131	4.709	10	254.000	0.000
6	6	0.681	6	2	131	4.448	12	252.000	0.000
7	5	0.685	5	2	131	5.285	10	254.000	0.000
8	6	0.669	6	2	131	4.680	12	252.000	0.000
ROCI-II B Obliging									
1	1	0.930	1	2	118	4.433	2	118.000	0.014
2	2	0.895	2	2	118	3.329	4	234.000	0.011
3	3	0.866	3	2	118	2.881	6	232.000	0.010
4	4	0.841	4	2	118	2.595	8	230.000	0.010
5	5	0.800	5	2	118	2.695	10	228.000	0.004
6	6	0.781	6	2	118	2.471	12	226.000	0.005
7	7	0.764	7	2	118	2.308	14	224.000	0.006
ROCI-II B Dominating									
1	1	0.933	1	2	118	4.223	2	118.000	0.017
2	2	0.887	2	2	118	3.610	4	234.000	0.007
3	3	0.851	3	2	118	3.250	6	232.000	0.004
4	4	0.834	4	2	118	2.739	8	230.000	0.007
5	5	0.802	5	2	118	2.661	10	228.000	0.004
ROCI-II B Avoiding									
1	1	0.910	1	2	118	5.866	2	118.000	0.004
2	2	0.860	2	2	118	4.575	4	234.000	0.001
3	3	0.840	3	2	118	3.534	6	232.000	0.002
ROCI-II C Obliging									
1	1	0.945	1	1	116	6.806	1	116.000	0.010
2	2	0.913	2	1	116	5.513	2	115.000	0.005

Step	Number of Variables	Lambda	*df*1	*df*2	*df*3	Exact F			
						Statistic	*df*1	*df*2	Sig.
3	3	0.900	3	1	116	4.217	3	114.000	0.007
4	4	0.888	4	1	116	3.552	4	113.000	0.009
ROCI-II C Dominating									
1	1	0.965	1	2	115	2.083	2	115.000	0.129
2	2	0.944	2	2	115	1.679	4	228.000	0.156
3	3	0.893	3	2	115	2.199	6	226.000	0.044
4	4	0.870	4	2	115	2.011	8	224.000	0.046
ROCI-II C Avoiding									
1	1	0.935	1	2	115	4.001	2	115.000	0.021
2	2	0.887	2	2	115	3.519	4	228.000	0.008
3	3	0.858	3	2	115	3.009	6	226.000	0.008

Summary of the Hypothesis Testing

The null hypothesis was rejected for the majority of the variables. Wilk's Lambda ranged from .669, demonstrating a moderate correlation, to .965, signifying a strong correlation. The p-value for three variables was > .05 leading to failing to reject null hypothesis for those variables. The Wilks' Lambda test results are listed in Table 19 with the results of the hypothesis testing for each variable considered in the stepwise discriminant analysis.

ROCI-II A obliging showed a 79.4% accuracy in classification for academic nurse leaders who used obliging–superiors below the national norms. The classification percent for those who used obliging–peers above the national norm was 75%. For the ROCI-II B avoiding–subordinates, the classification was at 0%, indicating that discriminate analysis did poorly classifying the group.

The percent of correctly classified cases according to the discriminant analysis classification function is included in Table 20. Discriminant analysis automatically performed an evaluative classification to determine the accuracy of the group classification. ROCI-II A obliging noted that 79.3% of the original groups were correctly classified. Knowing the

Table 19

Summary of the Hypothesis Testing for Research Question 3

Dependent variable	Independent variable	Wilk's ƛ	*F*(1,2)	Sig.	H_0
ROCI-II A Obliging					
	Laissez-faire	0.963	5.046	0.026	reject
	Inspirational motivation	0.951	3.359	0.038	reject
	Effectiveness	0.942	2.682	0.050	reject
ROCI-II A Dominating					
	Management by exception active	0.938	4.336	0.015	reject
	Individual consideration	0.889	3.924	0.004	reject
	Idealized behaviors	0.860	3.369	0.003	reject
	Inspirational motivation	0.823	3.264	0.001	reject
	Extra effort	0.800	3.007	0.001	reject
	Laissez-faire	0.783	2.728	0.002	reject
ROCI-II A Avoiding					
	Laissez-faire	0.828	13.627	0.000	reject
	Management by exception active	0.745	6.827	0.000	reject
	Passive Avoidant	0.727	5.536	0.000	reject
	Individual Consideration	0.712	4.709	0.000	reject
	Transformational	0.681	4.448	0.000	reject
	Contingent Reward	0.669	4.680	0.000	reject
ROCI-II B Obliging					
	Effectiveness	0.930	4.433	0.014	reject
	Laissez-faire	0.895	3.329	0.011	reject
	Passive Avoidant	0.866	2.881	0.010	reject
	Idealized behaviors	0.841	2.595	0.010	reject
	Inspirational Motivation	0.800	2.695	0.004	reject
	Idealized attributes	0.781	2.471	0.005	reject
	Contingent Reward	0.764	2.308	0.006	reject
ROCI-II B Dominating					
	Management by exception active	0.933	4.223	0.017	reject
	Individual Consideration	0.887	3.610	0.070	fail to reject
	Idealized Attributes	0.851	3.2504	0.004	reject
	Satisfaction	0.834	2.739	0.007	reject
	Extra Effort	0.802	2.661	0.004	reject
ROCI-II B Avoiding					
	Inspirational Motivation	0.910	5.866	0.004	reject
	Laissez-faire	0.860	4.575	0.001	reject
	Management by exception active	0.840	3.534	0.002	reject
ROCI-II C Obliging					
	Effectiveness	0.945	6.806	0.010	reject
	Extra effort	0.913	5.513	0.005	reject
	Laissez-faire	0.900	4.217	0.007	reject
	Idealized attributes	0.888	3.552	0.009	reject

Dependent variable	Independent variable	Wilk's ƛ	*F*(1,2)	Sig.	H_0
ROCI-II C Dominating					
	Management by exception active	0.965	2.083	0.129	fail to reject
	Effectiveness	0.944	1.679	0.156	fail to reject
	Satisfaction	0.893	2.199	0.044	reject
	Individual Consideration	0.870	2.011	0.046	reject
ROCI-II C Avoiding					
	Management by exception active	0.935	4.001	0.021	reject
	Idealized attributes	0.887	3.519	0.008	reject
	Intellectual stimulation	0.858	3.009	0.008	reject

classification accuracy can impact the results generalizability. Table 20 displays the predicted group membership. The predicted group membership provided a percentage of how well discriminant analysis classified the independent variables with the selected dependent variable.

Table 20

Classification Results and Percentages

			Predicted Group Membership			Total
ROCI-II A Obliging[a]			0	1	2	
Original	Count	0	104		27	131
		2	1		3	4
		Ungrouped cases	1		2	3
	%	0	79.4		20.6	100.0
		2	25.0		75.0	100.0
		Ungrouped cases	33.3		66.7	100.0
ROCI-II A Dominating[b]						
Original	Count	0	54	15	22	91
		1	2	6	2	10
		2	7	9	17	33
		Ungrouped cases	0	0	3	3
	%	0	59.3	16.5	24.2	100.0
		1	20.0	60.0	20.0	100.0
		2	21.2	27.3	51.5	100.0
		Ungrouped cases	0.0	0.0	100.0	100.0
ROCI-II A Avoiding[c]						
Original	Count	0	14	7	13	34
		1	3	7	1	11
		2	22	12	56	90
		Ungrouped cases	0	1	2	3
	%	0	41.2	20.6	38.2	100.0
		1	27.3	63.6	9.1	100.0
		2	24.4	13.3	62.2	100.0
		Ungrouped cases	0.0	33.3	66.7	100.0
ROCI-II B Obliging[d]						
Original	Count	0	60	17	28	105
		1	0	8	1	9
		2	2	0	6	8
		Ungrouped cases	6	2	8	16
	%	0	57.1	16.2	26.7	100.0
		1	0.0	88.9	11.1	100.0
		2	25.0	0.0	75.0	100.0
		Ungrouped cases	37.5	12.5	50.0	100.0
ROCI-II B Dominating[e]						
Original	Count	0	40	12	12	64
		1	2	3	1	6
		2	15	18	18	51
		Ungrouped cases	4	9	3	16
	%	0	62.5	18.8	18.8	100.0
		1	33.3	50.0	16.7	100.0
		2	29.4	35.3	35.3	100.0

			Predicted Group Membership			Total
		Ungrouped cases	25.0	56.3	18.8	100.0
ROCI-II B Avoiding[f]						
Original	Count	0	17	6	8	31
		1	1	3	1	5
		2	19	15	52	86
		Ungrouped cases	5	6	5	16
	%	0	54.8	19.4	25.8	100.0
		1	20.0	60.0	20.0	100.0
		2	22.1	17.4	60.5	100.0
		Ungrouped cases	31.3	37.5	31.3	100.0
ROCI-II C Obliging[g]						
Original	Count	0	71		34	
		2	5		8	13
		Ungrouped cases	12		7	19
	%	0	67.6		32.4	100.0
		2	38.5		61.5	100.0
		Ungrouped cases	63.2		36.8	100.0
ROCI-II C Dominating[h]						
Original	Count	0	33	12	20	65
		1	3	8	0	11
		2	12	9	22	43
		Ungrouped cases	6	3	10	19
	%	0	50.8	18.5	30.8	100.0
		1	27.3	72.7	0.0	100.0
		2	27.9	20.9	51.2	100.0
		Ungrouped cases	31.6	15.8	52.6	100.0
ROCI-II C Avoiding[i]						
Original	Count	0	11	7	12	30
		1	0	7	1	8
		2	27	19	35	81
		Ungrouped cases	11	3	5	19
	%	0	36.7	23.3	40.0	100.0
		1	0.0	87.5	12.5	100.0
		2	33.3	23.5	43.2	100.0
		Ungrouped cases	57.9	15.8	26.3	100.0

[a]79.3% of original grouped cases correctly classified.

[b]57.5% of original grouped cases correctly classified.

[c]57.0% of original grouped cases correctly classified.

[d]60.7% of original grouped cases correctly classified.

[e]50.4% of original grouped cases correctly classified.

[f]59.0% of original grouped cases correctly classified.

[g]66.9% of original grouped cases correctly classified.

[h]52.9% of original grouped cases correctly classified.

[i]44.5% of original grouped cases correctly classified.

Summary

Chapter 4 presented the study results of the correlations among emotional intelligence, leadership styles, and conflict management styles. Stepwise discriminant analysis isolated each conflict management style dependent variable to determine the correlation with the individual independent variables of emotional intelligence and leadership styles. Due to the low variance of the conflict management styles of integrating and compromising, these variables were automatically removed from all analyses by SPSS. The three dependent variables obliging, dominating, and avoiding of the ROCI-II subsets A, B, and C were analyzed. Discriminant analysis detected a correlation among the independent variables. The null hypothesis was rejected for the variables kept in the classification, as seen in Table 10. I failed to reject the null hypothesis for the variables not included in the discriminant analysis. These variables were removed from the analysis, because there was no correlation.

Research question 1 guided the investigation of the correlation among conflict management styles and emotional intelligence. Sociability and emotionality correlated with the dependent variables of obliging, avoiding, and dominating. The emotional intelligence variable of self-control only correlated with the conflict management styles dominating–superiors and obliging–peers. Well-being correlated with one dependent variables that met the homogeneity of the covariance and remained in the analysis.

Research question 3 guided the investigation of the correlations among conflict management styles and leadership styles. Discriminant analysis was used to analyze the correlations among the variables. The null hypothesis for each variable was analyzed separately. Table 20 provides a detailed list of the variables and their p-value indicating the significance of the correlation. Wilk's Lambda ranged from .669 demonstrating a moderate correlation to .965

signifying a strong correlation. The majority of the retained variables showed a moderate to strong correlation.

Chapter 5 provides an examination of the study results. Interpretation of the findings is discussed, and conclusions are extrapolated. Limitations and implications of the study are stated. Lastly, recommendations for future research are posited.

CHAPTER 5. DISCUSSION, IMPLICATIONS, RECOMMENDATIONS

This study aimed to identify a correlation among academic nurse leaders' emotional intelligence, leadership styles, and conflict management styles. Chapter 5 provides a summary of the highlights of the research problems, the study's significance, highlights of the research literature, methodology, and the research results. Next is a discussion of the results and conclusions. The findings are then compared to those of previous research. Chapter 5 also addresses the limitations and discusses the implications for practice and how this new information can advance future practice . Lastly, future research recommendations are suggested.

Summary of the Results

This study investigated the correlation among nurse education administrators' emotional intelligence, leadership skills, and conflict management strategies. The first research question aimed to identify a relationship among emotional intelligence factors, leadership styles, and conflict management styles. The second research question aimed to identify a relationship among emotional intelligence and conflict management styles. The third question aimed to identify a relationship among leadership styles and conflict management styles. As a result of identifying whether a correlation exists, academic nurse leaders can be positioned to manage conflict and decrease incivility through developing emotional intelligence and leadership and conflict management programs. The study adds to the limited body of literature on emotional intelligence, leadership, and conflict management styles of academic nurse leaders. The additional findings from this study contribute to the body of knowledge related to academic nurse administrators.

The literature review began with emotional intelligence and emphasized trait emotional intelligence. Trait emotional intelligence includes the variable of well-being, self-control,

sociability, and emotionality. The next focus of the literature review was on leadership styles. Leadership styles have evolved as society has changed. The leadership styles of transformational, transactional, and passive-avoidant as part of the full range leadership model provided the variables for this study. The full range leadership model was selected because of its ability to identify a full range of leadership styles rather than focusing on one particular leadership style.

The literature review concluded with a review of conflict management research. Conflict has always existed and is found everywhere (Kohlhoffer–Mizser, 2020), but conflict management research accelerated during the last century (Alnajjar & Hashish, 2022; Delak & Širok, 2022; Gokoglan & Bekar, 2021). The study of conflict evolved from the perceived desire to eliminate conflict entirely (McKibben, 2017) to accepting and managing conflict. The Rahim conflict management model was selected for this study due to the high reliability and validity reports. Rahim's conflict management model includes avoiding, compromising, dominating, integrating, and obliging. Like leadership styles, conflict management styles are situational.

This study used a quantitative, non-experimental, correlational design using multivariate discriminant analysis. Discriminant analysis allows for multiple independent and dependent variables to be analyzed simultaneously. Each independent variable was analyzed independently from the selected dependent variable using stepwise discriminant analysis to check for correlation. Variables that showed weak correlation were removed from the analyses. Thus, the conflict management variables of integrating and collaborating were removed. The remaining correlated variables were listed in hierarchal order based on their percentage of correlation. The study results confirmed a correlation for research questions 1, 2, and 3 among variables of emotional intelligence, leadership styles, and conflict management styles.

Discussion of the Results

The research questions began as broad statements to identify the correlation of emotional intelligence and leadership styles with the choice of conflict management styles in academic nurse leaders. The focus became specific as discriminant analysis categorized the individual emotional intelligence factors and leadership style constructs that correlated to individual conflict management styles. Discriminant analysis removed several variables for homogeneity in the first step because there was nothing to discriminate without variability. The first step led to removing the conflict management styles of compromising and integrating. All other variables were used in the data analysis and have remained in the results. In the second step of discriminant analysis, a strong to moderate correlation was identified among the remaining variables. The results of the analyses are discussed in this section.

Research Question 1

Does a correlation exist among the variables of trait emotional intelligence, leadership styles, and conflict management styles of academic nursing administrators?

In order to identify a correlation with conflict management styles, it was necessary to separate the emotional intelligence factors and the leadership style constructs. A correlation was identified with the factors of sociability and emotionality but not with the general term of emotional intelligence. Leadership style correlation had more significant variability than emotional intelligence correlation. All of the full range leadership model constructs were represented in the results. None of the three leadership styles dominated the results. Discriminant analysis included the nine constructs of the full range leadership model. The conflict management styles of integrating and compromising were removed in the discriminant analysis

based on the participants' survey responses, where they reported usage below the survey's established national norms.

There was substantial variability among emotional intelligence factors, leadership style constructs, and individual conflict management styles. Participants differentiated among the emotional intelligence factors and leadership styles used when responding to superiors, subordinates, or peers. The correlation was categorized by the conflict management styles of obliging, dominating, and avoiding, and the superior, subordinate, or peer relationship. For example, the emotional intelligence variable of emotionality was found to have a very strong positive-correlation (r = .93) with the conflict management style of obliging superiors, but emotionality did not correlate to obliging for subordinates and peers. Emotionality was found to have a very strong correlation to dominating for subordinates (r =.83) and peers (r = .88) but lacked a correlation to superiors. The results imply that responses to conflict are not based on the optimal outcome for the organization but on personal interpretation of the situation or how the individual values the relationship.

The leadership style of laissez-faire had a very strong correlation to obliging in all three relationships, superiors (r = .88), subordinates (r = .90), and peers (r = .90). The laissez-faire style showed no correlation to the conflict management styles of dominating and avoiding–peers. There was a strong correlation between laissez-faire and avoiding–superiors (r = .72). There was a very strong correlation between laissez-faire and avoiding–subordinates (r = .89). The results of this study emphasize the situational nature of leadership and conflict management styles. The use of emotional intelligence or a leadership or conflict management style varies depending on whether the conflict is with a superior, subordinate, or peer.

Research Question 2

Does a correlation exist among the variables of trait emotional intelligence and conflict management styles?

Discriminant analysis program performed two functions to address the second research question, does a correlation exists between emotional intelligence and conflict management. The Box's M test results removed the conflict management variables of integrating and compromising from the ROCI-II A, B, and C tests. There was not enough variability in the data of integrating and compromising to perform the next step of discriminant analysis. With their removal, integrating and compromising could not be used to test the hypothesis for research question 2.

The second step of discriminant analysis identified the four independent variables of emotional intelligence that had a statistically significant correlation to the three remaining dependent variables of conflict management. There was a very strong correlation between the emotional intelligence factor of emotionality (r = .93) and obliging–superiors. There was also a very strong correlation between the emotional intelligence factor of self-control (r = .98) and obliging–peers. The variable obliging–subordinates did not correlate with any emotional intelligence variables. The conflict management style of avoiding and the emotional intelligence factor of sociability had a very strong correlation with superiors (r = .80) and peers (r = .92). Self-control had a very strong correlation with avoiding–subordinates (r = .98).

The conflict management style of dominating correlated with multiple emotional intelligence factors. There was a very strong correlation between dominating–superiors and the emotional intelligence factors of self-control (r = .97), emotionality (r = .95), and sociability (r = .92). The conflict management style of dominating–subordinates had a very strong correlation

with the emotional intelligence factors of emotionality (r = .95) and sociability (r = .90). The conflict management style of dominating–peers also showed a very strong correlation with the emotional intelligence factors of sociability (r = .96) and emotionality (r = .91). Based on the results of this study, more emotional intelligence factors are correlated with the dominating conflict management style.

The emotional intelligence factor of well-being was not correlated to the conflict management styles of obliging, dominating, or avoiding. The use of well-being in conflict could not be investigated because the conflict management styles of compromising and integrating were removed during data analysis. Well-being may be correlated with the conflict management styles of compromising and integrating, where the conflict outcome benefits both parties.

Sociability was the most frequently used emotional intelligence factor and was used with dominating and avoiding. The participant's responses varied based on whether the relationship was with a supervisor, subordinate, or peer. The results suggest that the emotional intelligence factors of sociability and emotionality contribute to how academic nurse leaders utilize the conflict management styles of obliging, dominating, and avoiding.

Research Question 3

Does a correlation exist among the variables of leadership styles and conflict management styles?

The Box's M test removed the conflict management variables of integrating and compromising from the analysis due to a lack of variability in the data. Nine leadership constructs were included in the discriminant analysis, together with the three remaining conflict management styles of obliging, dominating, and avoiding.

Leadership style constructs of laissez-faire exhibited a very strong correlation for obliging when interacting with superiors (r = .96), subordinates (r = .90), or peers (r = .90). This correlation was unique to this group since laissez-faire was a leadership construct that was consistent across all three leader relationships. Obliging for subordinates included constructs from transformational, transactional, and passive avoidant leadership styles. Obliging–subordinates had four leadership style constructs that were very strongly correlated; laissez-faire (r = .90), passive avoidant (r = .87), idealized behaviors (r = .84), and inspirational motivation (r = .80). Two additional leadership constructs, idealized attributes (r = .78) and contingent reward (r = .76) were strongly correlated.

Active management by exception was very strongly correlated to dominating for all three interactions, whether superiors (r = .94), subordinates (r = .93), or peers (r = .97). Individual consideration was also very strongly correlated to dominating for superiors (r = .89), subordinates (r = .89), and peers (r = .87). The constructs of individual consideration and active management by exception are adjacent to each other in the full range leadership model. This result is the closest to consistency in any of the correlations across leadership styles and conflict management styles. Active management by exception occurs when the manager corrects current actions while monitoring for deviations from the expected outcome. When a leader is dominating, they have a high concern for self and low concern for others and want to exert control or power through their position. Active management by exception supports dominating behavior.

The conflict management style of avoiding–subordinates (r = .84) and peers (r = .94) had a very strong correlation. When compared to avoiding–superiors, the strength of the correlation with active management by exception (r = .75) was less. The leadership construct of laissez-faire

showed up again with a very strong correlation with the conflict management style of avoiding–superiors (r = .83) and subordinates (r = .86). A laissez-faire leader has minimal involvement which would be demonstrated by avoiding conflict.

The individual emotional intelligence factors of emotionality and sociability significantly correlated to the conflict management styles of obliging, dominating, and avoiding. Though discriminant analysis identified a correlation among the variables, there was not a specific leadership style or construct that showed a particular pattern. The results were also varied based on whether the conflict was with a superior, subordinate, or peer. According to the research (Asrar–ul–Haq & Anwar, 2018; Bass et al., 2003; Chen et al., 2019; Yazdanmehr et al., 2020), the use of emotional intelligence, leadership styles, and conflict management styles was situational. The results of this study confirmed the situational nature, as no particular emotional intelligence variable or leadership style correlated to a specific conflict management style.

An area of interest that arose with the study results was the consistent removal of the conflict management styles of integrating and compromising during the data analysis. The raw data showed that academic nurse leaders used these two conflict management styles. However, when the raw data were converted to dummy variables for the discriminant analysis, all participants reported using these styles below the national norms. The reported use of integrating and compromising below the national norms was a fascinating result because integrating is a win-win for both parties, and compromising is a no win-no lose involving give-and-take to obtain an equally acceptable result for both parties. Both styles are preferred because the outcome positively benefits both parties.

The participants' remaining conflict management styles were obliging, dominating, and avoiding. These three management styles result in a winner and loser in the conflict outcome. The participants reported using the three styles consistently, with the most significant number of respondents employing avoiding above the national norms in all three relationships: superiors, subordinates, and peers. There is a similarity in the conflict management style used by the participants related to the fight-or-flight response where dominating equals fight. Obliging and avoiding equal flight.

Sociability was the emotional intelligence concept that correlated most often with the conflict management styles of obliging, dominating, and avoiding. Emotionality was the second most often emotional intelligence concept identified in the data. Self-control showed up in the results, whereas well-being did not appear. The factor of sociability was significantly correlated to obliging, dominating, and avoiding conflict management styles. The sociability facets are emotion management, assertiveness, and social awareness. Because there are three facets, it is difficult to know which specific facet contributed to the correlation with the conflict management styles.

Conclusions Based on the Results

This section of the conclusion begins by comparing the study conclusions to the theoretical framework of emotional intelligence. The second section reviews of the conclusions compared to previous literature, especially more recent studies. This comparison of recent studies to the research provides additional insight into the perplexing study of emotional intelligence, leadership styles, and conflict management styles. The third section provides an interpretation of the results.

The results support a correlation between emotional intelligence, leadership styles, and conflict management. However, the correlations are neither definitive nor clear-cut; therefore, there are opportunities for additional research. The results also supported the situational outcomes of leadership and conflict management's superior, subordinate, and peer relationships. The results provided a more detailed examination of which emotional intelligence factors correlated to conflict management styles. Nevertheless, questions remain about the correlation among leadership styles and conflict management.

Comparison of the Findings Within the Theoretical Framework

The theoretical framework for this study originated with trait emotional intelligence. As a personality construct, trait emotional intelligence was related to leadership styles and conflict management styles (Khosravi et al., 2020; Kohlhoffer–Mizser, 2020; Savel & Munro, 2016). The premise is that a leader with high emotional intelligence can manage and moderate their and others' emotions (Goleman, 1995). As a result of moderating and managing emotions, a leader can use leadership styles and conflict management styles that promote positive outcomes (Patton, 2020; Yin et al., 2020). The study results identified that the emotional intelligence factors of emotionality and sociability strongly correlation to the conflict management styles of obliging, dominating, and avoiding. No correlation was identified between emotional intelligence and obliging with peers. With the removal of integrating and compromising from the analysis, gaps remain in the correlation of emotional intelligence to these two conflict management styles.

Comparison of the Results with the Previous Literature

Patton (2020) noted that nurses and physicians commonly used avoidance. The study results support this observation. Al–Hamdan et al. (2018) posited that clinical nurse managers used integrating the most and dominating the least. The research by Al–Hamdan et al. (2018) did

not correspond to the results of this study. In this study, the conflict management style of integrating was removed from the analysis because the respondents reported the use of integrating consistently below the national norms. The emotional intelligence factor of self-control correlated with the conflict management style of dominating–superiors. The emotional intelligence factor of well-being correlated with the conflict management style of obliging–subordinates.

Previous literature indicated that emotional intelligence and specific leadership and conflict management styles are necessary to manage incivility (Anthony & Brett, 2020; Casale, 2017). The literature indicated that high emotional intelligence in the administrator improved patient and student outcomes (Nel, 2019). Research supported transformational leadership as the preferred leadership style of academic leaders (Apore & Asamoah, 2019; Baba et al., 2019). Also, conflict management style was influenced by emotional intelligence (Patton, 2020) and leadership styles (Hassanian et al., 2019; Kohlhoffer–Mizser, 2020). However, there was a gap in the literature that focused on the relationship among the variables of emotional intelligence, leadership styles, and conflict management styles of academic nurse administrators.

The literature noted that transformational leadership correlated with conflict management styles (Bakhtawari et al., 2016; Kammerhoff et al., 2019; Tanveer et al., 2018). Since this study analyzed the individual constructs of leadership styles and the conflict management styles that remained in the analysis, the results did not support a specific correlation among the transformational leadership constructs and obliging, dominating, and avoiding. The leadership construct of laissez-faire was found in obliging for superiors, subordinates, and peers. This correlation was the only one where one leadership construct was found in all three relationships of a conflict management style. Researchers (Schermuly et al., 2022) continue to debate the

usefulness of the full range leadership model as new leadership theories are presented and argued. Nevertheless, the full range leadership model remains at the forefront of leadership studies (Batista–Foguet et al., 2021; Braathu et al., 2022; Davies et al., 2021; Jamali et al., 2022).

Bass (1995) noted that there was no one correct leadership style, but different situations require different leadership styles. The diversity of leadership styles is anticipated across superior, subordinate, and peer relationships. This result was not surprising because individuals have different hierarchical relationships as they navigate the work environment. The study results confirmed the proposition by Chen et al. (2019) that the emotional intelligence levels and the leadership styles used when dealing with conflict vary depending on whether the leader is dealing with superiors, peers, or subordinates. The analysis results indicated correlations among academic nurse leaders' various emotional intelligence and leadership styles. Numerous emotional intelligence and leadership styles correlated to conflict management for superiors. The correlation of leadership styles with conflict management of subordinates had the least variability. Researchers continue to study the need for emotional intelligence in stressful situations, such as conflict (Khosravi et al., 2020; Prajapati et al., 2021; Sambol et al., 2022) and in jobs that have high emotional labor, such as nurses and teachers (Hourani et al., 2021; Lanlv & Ming–Tsung, 2021).

Interpretation of the Findings

The results of this study supported previous research that there were correlations among the variables of emotional intelligence and conflict management styles. However, previous research referred to the general term of emotional intelligence and often did not clarify whether it was ability, trait, or mixed-emotional intelligence (Beitler et al., 2018; Blizzard & Woods, 2020; Chen et al., 2019; Mansel & Einion, 2019; Patton, 2020). In past research, each construct of

emotional intelligence was explained and tested differently, making it difficult to interpret where the correlation occurs. This study utilized the TEIQue-SF to test for trait emotional intelligence to refine the emotional intelligence alternatives. The results showed a strong correlation among the trait emotional intelligence factors of emotionality and sociability to the conflict management styles of obliging, dominating, and avoiding.

Since this study was limited to analyzing the individual constructs of leadership styles and the conflict management styles of obliging, dominating, and avoiding that remained in the analysis, the results could not support a strong correlation among transformational leadership and conflict management styles because of the limitations. Leadership and conflict management styles change depending on the type of conflict and the importance of the outcome to the involved parties. The removal of the conflict management styles of integrating and compromising from the data analysis prompted reflection on why those styles were not used more frequently by academic nurse leaders. It can be conjectured that integrating and compromising conflict management styles are not intuitive. In business, negotiation and management skills are taught rather than assumed. The natural reaction to conflict is fight-or-flight, directing the individual to conflict management styles of obliging, dominating, or avoiding.

Nurses are known for empathy and nurturing and may see that avoiding and obliging are congruent with caring behaviors. Nurses are expected to put the patient first through a demonstration of caring and compassion. Like in business, the conflict management styles of compromising and integrating need to be taught to academic nurse leaders. In compromising and integrating styles, where both parties benefit, both parties must want to work towards an agreement. Integrating and compromising cannot be reached if only one party wants to

participate. Often nursing leadership development programs focus on the curriculum, roles and responsibilities in the leadership position, and administrative duties. Little attention is given to developing conflict management skills, especially compromising and integrating, that lead to positive outcomes following conflict.

Limitations

Keserliouglu et al. (2019) posited that good science includes full disclosure of any limitations related to the study. This study had several limitations. First are the potential internal validity limitations. Drawing the participants from a convenience sample prevents generalizing the results to the entire population of academic nurse leaders. Online surveys may appeal to a particular group, thus leaving out potential respondents who may not be comfortable with this method of responding to surveys. Some respondents did not complete the survey entirely because of the time needed. Incomplete responses prevented their data from being used in the data analysis. Many did not attempt to participate in the survey. The timing of when the surveys were sent out could have impacted who responded and the response rate. The surveys were sent out only once. Reminders and additional contact did not happen due to the confidentiality and anonymity of the surveys. It was not possible to know who responded and who did not respond. Additional confounding factors such as sex, age, and experience were not addressed in this study and may impact the level of emotional intelligence and leadership and conflict management styles used.

Additional limitations are included in the survey design. The three questionnaires used in the survey were based on self-reports. Self-reports are recognized for having social desirability bias (Vargas & Mancia, 2019). Employing Likert scales can be a limitation because they are nominal and considered the least precise when comparing groups. Likert scales do not provide an

exact measurement of behavior. The selection of discriminant analysis has its limitations. The requirement to make the dependent variables categorical resulted in removing the variables of compromising and integrating from the data analysis when the dummy variables were applied. According to Eisenbeis (1977), common limitations to discriminant analysis include variable distribution, interpretation of the results, group definitions, group dispersion, and the estimation of the error rate classification. In the current study, a significant factor was the requirement to make the dependent variables categorical. This change resulted in the removal from the data analysis of the variables of compromising and integrating after the dummy variables were applied.

Some delimitations are included as many approaches, and additional factors contribute to emotional intelligence, leadership styles, and conflict management styles. A comprehensive understanding of incivility and bullying was too large to cover in this study. Only a few possible contributing factors to the problem were considered in this study. Examining conflict management and its correlation to emotional intelligence and leadership styles was one approach to addressing the incivility problem in nursing. Though the research problem originated because of rising incidents of incivility and bullying, this study does not directly address the problem. The scope of the study does not attempt to understand the driving forces that led to the development of emotional intelligence or leadership styles of nursing education administrators. Although there are many types of emotional intelligence, leadership styles, and conflict management styles, this study focused on trait emotional intelligence, the full range leadership model, and Rahim's conflict management styles. Different surveys may generate different results.

Implications for Practice

Public Services International, the International Council of Nurses, and the World Health Organization acknowledge that incivility and bullying in nursing are global problems (Anthony & Brett, 2020). Academic nurse leaders are positioned to address and mitigate incivility and bullying early in the education of student nurses (Anthony & Brett, 2020; O'Flynn–Magee et al., 2021).

Bellack (2018) posited that emotional intelligence, specifically emotional and social competencies, are essential skills in a "relationship-intense profession" (p. 455). This study substantiated that view with the resulting correlations that were high in emotionality and sociability. Since conflict management skills are necessary when incivility and bullying occur, the study results confirmed that high emotional intelligence factors of emotionality and sociability correlated with conflict management styles. Academic nurse leaders can use this information to develop and strengthen their and their students' emotionality and sociability emotional intelligence to manage conflict better. The results also identified that integrating and compromising are not used enough or effectively by academic nurse leaders. Academic nurse leaders can use this information to increase their skills in conflict management, where all involved parties benefit. Once mastered by the academic nurse leader, these skills can then be taught to the faculty and the nursing students.

Although leadership training encompasses many responsibilities of the leadership role, more emphasis must be focused on developing the conflict management styles of integrating and compromising to ensure success for both individuals and groups involved in the conflict. Integrating and compromising can be incorporated into communication, delegation, teamwork, and interprofessional development in education and practice. Nursing school administrators will

benefit from understanding the relationship among the variables of emotional intelligence, leadership styles, and conflict management. This knowledge may direct the practice of their leadership style toward decreasing incivility and bullying in nursing education and student nurses' future practice (Bouws et al., 2020). The limited use of compromising and integrating can be a focus for future leadership development and succession planning.

Recommendations for Further Research

This research study's broad-view approach suggests numerous recommendations for further research. These included questions that developed directly from the data. The removal of integrating and compromising from the data analysis caused a gap in the knowledge needed to address conflict management fully. There are many unknowns with these two styles removed from the statistical analysis. It was impossible to form any conclusions regarding the absence of these two conflict management styles. Additional analysis of the conflict management styles of compromising and integrating using a different methodology would further the knowledge.

A more accurate picture of which emotional intelligence traits correlate with specific conflict management styles can be studied by further refining the four emotional intelligence factors down to the 15 facets. Greater awareness is needed to understand the relationship among obliging, dominating, and avoiding, and fight or flight. Applying a different methodology, such as regression analysis to the study, would allow the researcher to analyze the variables differently. Regression analysis would look at the dependent variables one at a time and could include integrating and compromising which were removed in discriminant analysis.

Future research could include the demographics of the participants and nonparticipants. Beitler et al. (2018) noted that age could make a difference in emotional intelligence. Al–Hamdan et al. (2018) did not agree; they reported that sex, age, religious beliefs, and education

did not make a difference in the selection of conflict management styles. Further research is needed to study if the size of the nursing program, the number of faculty, or formal leadership development correlates with emotional intelligence, leadership styles, and conflict management styles. A qualitative study could be conducted on the individual respondents associated with their preferred conflict management style. Qualitative studies could address individual contributing factors to conflict management, such as family background, previous education about conflict management, and experience.

Conclusion

This quantitative, non-experimental, correlational study using multivariate discriminant analysis analyzed the correlation among 122 academic nurse leaders' emotional intelligence, leadership styles, and conflict management styles. Discriminant analysis was selected because of the capability to analyze multiple variables simultaneously. The analysis removed the conflict management variables of compromising and integrating for lack of variability. The remaining conflict management variables of obliging, dominating, and avoiding were correlated to emotional intelligence and leadership style variables. A strong correlation was found among the emotional intelligence factors of emotionality and sociability with conflict management. There was a correlation among the conflict management variables and leadership styles through multiple leadership constructs correlated to each of the three conflict management styles. The results supported the research that leadership and conflict management styles are situational (Asrar–ul–Haq & Anwar, 2018; Bass et al., 2003; Chen et al., 2019; Yazdanmehr et al., 2020).

By considering the role of emotional intelligence, leadership styles, and conflict management styles, I have provided a modest contribution to understanding the academic nurse leaders' role in addressing the ongoing problem of incivility and bullying in nursing. Academic

nurse leaders are positioned to change the culture of incivility and bullying as soon as students begin nursing school by modeling and teaching conflict management skills. Emotional intelligence and leadership styles correlate with conflict management styles, but further research is needed to clarify and refine the specifics of the correlation to guide future practice and education. Nursing is a profession fraught with incivility, bullying, and extreme stress. Academia is competitive and demanding. Leadership roles are either desired or appointed. Understanding and utilizing emotional intelligence and appropriate leadership and conflict management styles can negate much of the hostile environment surrounding nursing.

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APPENDIX A. ROCI-II A INTEGRATING POOLED WITHIN-GROUPS MATRICES

Measure	Correlation	Trait Emotional Intelligence Questionnaire					Multifactor Leadership Questionnaire					
							Transformational Leadership					
		Well-being	Self-Control	Emotionality	Sociability	Global	Idealized Attributes	Idealized Behaviors	Inspirational Motivation	Intellectual Stimulation	Individual Consideration	Transformational
TEIQue												
	Well-being	1.000	0.496	0.424	0.253	0.685	-0.304	-0.280	-0.436	-0.132	-0.280	-0.366
	Self-Control	0.496	1.000	0.460	0.341	0.734	-0.131	-0.195	-0.327	-0.087	-0.142	-0.228
	Emotionality	0.424	0.460	1.000	0.425	0.827	-0.217	-0.353	-0.475	-0.338	-0.317	-0.434
	Sociability	0.253	0.341	0.425	1.000	0.680	-0.294	-0.353	-0.460	-0.262	-0.202	-0.405
	Global	0.685	0.734	0.827	0.680	1.000	-0.333	-0.408	-0.589	-0.306	-0.329	-0.503
MLQ												
	Idealized Attributes	-0.304	-0.131	-0.217	-0.294	-0.333	1.000	0.476	0.556	0.360	0.452	0.722
	Idealized Behaviors	-0.280	-0.195	-0.353	-0.353	-0.408	0.476	1.000	0.605	0.508	0.517	0.810
	Inspirational Motivation	-0.436	-0.327	-0.475	-0.460	-0.589	0.556	0.605	1.000	0.571	0.564	0.840
	Intellectual Stimulation	-0.132	-0.087	-0.338	-0.262	-0.306	0.360	0.508	0.571	1.000	0.601	0.766
	Individual Consideration	-0.280	-0.142	-0.317	-0.202	-0.329	0.452	0.517	0.564	0.601	1.000	0.787
	Transformational	-0.366	-0.228	-0.434	-0.405	-0.503	0.722	0.810	0.840	0.766	0.787	1.000
	Contingent Reward	-0.297	-0.119	-0.284	-0.233	-0.322	0.566	0.556	0.498	0.414	0.509	0.650
	Mgmt by Exception Active	0.090	0.030	0.132	0.100	0.118	0.215	0.103	-0.019	-0.080	0.019	0.064
	Transactional	-0.089	-0.040	-0.052	-0.048	-0.081	0.453	0.366	0.247	0.157	0.280	0.387
	Mgmt by Exception Passive	0.236	0.167	0.332	0.424	0.403	-0.117	-0.179	-0.346	-0.172	-0.335	-0.289
	Laissez-Faire	0.232	0.232	0.399	0.422	0.440	-0.186	-0.258	-0.343	-0.199	-0.304	-0.329
	Passive Avoidant	0.264	0.221	0.408	0.477	0.473	-0.167	-0.242	-0.389	-0.208	-0.362	-0.346
	Extra Effort	-0.245	-0.207	-0.157	-0.358	-0.314	0.406	0.411	0.422	0.288	0.383	0.488
	Effectiveness	-0.443	-0.320	-0.341	-0.388	-0.497	0.531	0.523	0.606	0.450	0.583	0.685
	Satisfaction	-0.371	-0.336	-0.364	-0.314	-0.471	0.583	0.493	0.528	0.402	0.503	0.639

Appendix A (cont'd)

ROCI-II A Integrating Pooled Within-Groups Matrices

		Multifactor Leadership Questionnaire								
		Transactional Leadership			Passive Avoidant			Outcomes of Leadership		
Measure	Correlation	Contingent Reward	Mgmt by Exception Active	Transactional	Mgmt by Exception Passive	Laissez-Faire	Passive Avoidant	Extra Effort	Effectiveness	Satisfaction
TEIQue										
	Well-being	-0.297	0.090	-0.089	0.236	0.232	0.264	-0.245	-0.443	-0.371
	Self-Control	-0.119	0.030	-0.040	0.167	0.232	0.221	-0.207	-0.320	-0.336
	Emotionality	-0.284	0.132	-0.052	0.332	0.399	0.408	-0.157	-0.341	-0.364
	Sociability	-0.233	0.100	-0.048	0.424	0.422	0.477	-0.358	-0.388	-0.314
	Global	-0.322	0.118	-0.081	0.403	0.440	0.473	-0.314	-0.497	-0.471
MLQ										
	Idealized Attributes	0.566	0.215	0.453	-0.117	-0.186	-0.167	0.406	0.531	0.583
	Idealized Behaviors	0.556	0.103	0.366	-0.179	-0.258	-0.242	0.411	0.523	0.493
	Inspirational Motivation	0.498	-0.019	0.247	-0.346	-0.343	-0.389	0.422	0.606	0.528
	Intellectual Stimulation	0.414	-0.080	0.157	-0.172	-0.199	-0.208	0.288	0.450	0.402
	Individual Consideration	0.509	0.019	0.280	-0.335	-0.304	-0.362	0.383	0.583	0.503
	Transformational	0.650	0.064	0.387	-0.289	-0.329	-0.346	0.488	0.685	0.639
	Contingent Reward	1.000	0.256	0.711	-0.045	-0.208	-0.133	0.334	0.511	0.447
	Mgmt by Exception Active	0.256	1.000	0.862	0.200	0.179	0.215	0.002	0.029	0.020
	Transactional	0.711	0.862	1.000	0.122	0.021	0.087	0.176	0.288	0.249
	Mgmt by Exception Passive	-0.045	0.200	0.122	1.000	0.570	0.909	-0.219	-0.253	-0.218
	Laissez-Faire	-0.208	0.179	0.021	0.570	1.000	0.860	-0.285	-0.336	-0.326
	Passive Avoidant	-0.133	0.215	0.087	0.909	0.860	1.000	-0.280	-0.327	-0.300
	Extra Effort	0.334	0.002	0.176	-0.219	-0.285	-0.280	1.000	0.540	0.535
	Effectiveness	0.511	0.029	0.288	-0.253	-0.336	-0.327	0.540	1.000	0.696
	Satisfaction	0.447	0.020	0.249	-0.218	-0.326	-0.300	0.535	0.696	1.000

APPENDIX B. ROCI-II A OBLIGING POOLED WITHIN-GROUPS MATRICES

Measure	Correlation	Trait Emotional Intelligence Questionnaire					Multifactor Leadership Questionnaire					
							Transformational Leadership					
		Well-being	Self-Control	Emotionality	Sociability	Global	Idealized Attributes	Idealized Behaviors	Inspirational Motivation	Intellectual Stimulation	Individual Consideration	Transformational
TEIQue												
	Well-being	1.000	0.492	0.417	0.252	0.682	-0.306	-0.277	-0.442	-0.137	-0.281	-0.369
	Self-Control	0.492	1.000	0.454	0.340	0.732	-0.132	-0.192	-0.332	-0.092	-0.143	-0.230
	Emotionality	0.417	0.454	1.000	0.434	0.824	-0.227	-0.353	-0.504	-0.367	-0.330	-0.454
	Sociability	0.252	0.340	0.434	1.000	0.685	-0.294	-0.353	-0.461	-0.263	-0.202	-0.405
	Global	0.682	0.732	0.824	0.685	1.000	-0.338	-0.406	-0.603	-0.319	-0.334	-0.512
MLQ												
	Idealized Attributes	-0.306	-0.132	-0.227	-0.294	-0.338	1.000	0.476	0.557	0.360	0.452	0.722
	Idealized Behaviors	-0.277	-0.192	-0.353	-0.353	-0.406	0.476	1.000	0.607	0.512	0.518	0.812
	Inspirational Motivation	-0.442	-0.332	-0.504	-0.461	-0.603	0.557	0.607	1.000	0.570	0.564	0.840
	Intellectual Stimulation	-0.137	-0.092	-0.367	-0.263	-0.319	0.360	0.512	0.570	1.000	0.602	0.767
	Individual Consideration	-0.281	-0.143	-0.330	-0.202	-0.334	0.452	0.518	0.564	0.602	1.000	0.787
	Transformational	-0.369	-0.230	-0.454	-0.405	-0.512	0.722	0.812	0.840	0.767	0.787	1.000
	Contingent Reward	-0.296	-0.117	-0.286	-0.232	-0.321	0.566	0.555	0.500	0.417	0.509	0.651
	Mgmt by Exception Active	0.086	0.025	0.121	0.099	0.111	0.215	0.106	-0.021	-0.084	0.019	0.063
	Transactional	-0.092	-0.043	-0.061	-0.049	-0.087	0.453	0.368	0.246	0.156	0.280	0.386
	Mgmt by Exception Passive	0.235	0.165	0.337	0.424	0.405	-0.117	-0.178	-0.347	-0.174	-0.335	-0.290
	Laissez-Faire	0.220	0.219	0.368	0.425	0.422	-0.191	-0.254	-0.357	-0.214	-0.310	-0.337
	Passive Avoidant	0.257	0.213	0.394	0.477	0.464	-0.168	-0.238	-0.396	-0.216	-0.364	-0.350
	Extra Effort	-0.244	-0.206	-0.158	-0.357	-0.315	0.406	0.411	0.423	0.289	0.383	0.488
	Effectiveness	-0.439	-0.315	-0.332	-0.387	-0.492	0.534	0.522	0.612	0.457	0.586	0.689
	Satisfaction	-0.368	-0.332	-0.361	-0.313	-0.469	0.585	0.492	0.532	0.406	0.504	0.641

Appendix B (cont'd)

ROCI-II A Obliging Pooled Within-Groups Matrices

Measure	Correlation	Multifactor Leadership Questionnaire								
		Transactional Leadership			Passive Avoidant			Outcomes of Leadership		
		Contingent Reward	Mgmt by Exception Active	Transactional	Mgmt by Exception Passive	Laissez-Faire	Passive Avoidant	Extra Effort	Effectiveness	Satisfaction
TEIQue										
	Well-being	-0.296	0.086	-0.092	0.235	0.220	0.257	-0.244	-0.439	-0.368
	Self-Control	-0.117	0.025	-0.043	0.165	0.219	0.213	-0.206	-0.315	-0.332
	Emotionality	-0.286	0.121	-0.061	0.337	0.368	0.394	-0.158	-0.332	-0.361
	Sociability	-0.232	0.099	-0.049	0.424	0.425	0.477	-0.357	-0.387	-0.313
	Global	-0.321	0.111	-0.087	0.405	0.422	0.464	-0.315	-0.492	-0.469
MLQ										
	Idealized Attributes	0.566	0.215	0.453	-0.117	-0.191	-0.168	0.406	0.534	0.585
	Idealized Behaviors	0.555	0.106	0.368	-0.178	-0.254	-0.238	0.411	0.522	0.492
	Inspirational Motivation	0.500	-0.021	0.246	-0.347	-0.357	-0.396	0.423	0.612	0.532
	Intellectual Stimulation	0.417	-0.084	0.156	-0.174	-0.214	-0.216	0.289	0.457	0.406
	Individual Consideration	0.509	0.019	0.280	-0.335	-0.310	-0.364	0.383	0.586	0.504
	Transformational	0.651	0.063	0.386	-0.290	-0.337	-0.350	0.488	0.689	0.641
	Contingent Reward	1.000	0.259	0.712	-0.044	-0.205	-0.130	0.334	0.510	0.447
	Mgmt by Exception Active	0.259	1.000	0.862	0.199	0.172	0.210	0.003	0.034	0.024
	Transactional	0.712	0.862	1.000	0.122	0.017	0.084	0.177	0.291	0.251
	Mgmt by Exception Passive	-0.044	0.199	0.122	1.000	0.576	0.913	-0.219	-0.252	-0.217
	Laissez-Faire	-0.205	0.172	0.017	0.576	1.000	0.860	-0.287	-0.327	-0.321
	Passive Avoidant	-0.130	0.210	0.084	0.913	0.860	1.000	-0.280	-0.321	-0.296
	Extra Effort	0.334	0.003	0.177	-0.219	-0.287	-0.280	1.000	0.540	0.535
	Effectiveness	0.510	0.034	0.291	-0.252	-0.327	-0.321	0.540	1.000	0.694
	Satisfaction	0.447	0.024	0.251	-0.217	-0.321	-0.296	0.535	0.694	1.000

APPENDIX C. ROCI-II A DOMINATING POOLED WITHIN-GROUPS MATRICES

Measure	Correlation	Trait Emotional Intelligence Questionnaire					Multifactor Leadership Questionnaire					
							Transformational Leadership					
		Well-being	Self-Control	Emotionality	Sociability	Global	Idealized Attributes	Idealized Behaviors	Inspirational Motivation	Intellectual Stimulation	Individual Consideration	Transformational
TEIQue												
	Well-being	1.000	0.491	0.419	0.263	0.682	-0.300	-0.274	-0.443	-0.126	-0.273	-0.361
	Self-Control	0.491	1.000	0.464	0.351	0.733	-0.118	-0.179	-0.350	-0.096	-0.144	-0.228
	Emotionality	0.419	0.464	1.000	0.442	0.829	-0.217	-0.355	-0.471	-0.327	-0.302	-0.426
	Sociability	0.263	0.351	0.442	1.000	0.690	-0.297	-0.358	-0.484	-0.289	-0.231	-0.425
	Global	0.682	0.733	0.829	0.690	1.000	-0.328	-0.403	-0.603	-0.312	-0.332	-0.504
MLQ												
	Idealized Attributes	-0.300	-0.118	-0.217	-0.297	-0.328	1.000	0.471	0.574	0.374	0.465	0.730
	Idealized Behaviors	-0.274	-0.179	-0.355	-0.358	-0.403	0.471	1.000	0.629	0.531	0.535	0.822
	Inspirational Motivation	-0.443	-0.350	-0.471	-0.484	-0.603	0.574	0.629	1.000	0.557	0.553	0.842
	Intellectual Stimulation	-0.126	-0.096	-0.327	-0.289	-0.312	0.374	0.531	0.557	1.000	0.584	0.764
	Individual Consideration	-0.273	-0.144	-0.302	-0.231	-0.332	0.465	0.535	0.553	0.584	1.000	0.783
	Transformational	-0.361	-0.228	-0.426	-0.425	-0.504	0.730	0.822	0.842	0.764	0.783	1.000
	Contingent Reward	-0.291	-0.105	-0.283	-0.237	-0.316	0.563	0.551	0.514	0.427	0.521	0.655
	Mgmt by Exception Active	0.077	0.030	0.109	0.130	0.116	0.221	0.103	0.020	-0.032	0.077	0.101
	Transactional	-0.099	-0.034	-0.071	-0.032	-0.083	0.458	0.366	0.286	0.202	0.330	0.419
	Mgmt by Exception Passive	0.235	0.174	0.327	0.436	0.406	-0.120	-0.186	-0.338	-0.158	-0.326	-0.283
	Laissez-Faire	0.239	0.245	0.406	0.422	0.447	-0.191	-0.266	-0.347	-0.205	-0.315	-0.336
	Passive Avoidant	0.267	0.232	0.408	0.484	0.478	-0.171	-0.250	-0.385	-0.201	-0.362	-0.345
	Extra Effort	-0.243	-0.195	-0.161	-0.358	-0.310	0.402	0.405	0.445	0.309	0.404	0.499
	Effectiveness	-0.438	-0.314	-0.336	-0.399	-0.494	0.530	0.522	0.613	0.452	0.585	0.684
	Satisfaction	-0.366	-0.340	-0.354	-0.333	-0.472	0.590	0.500	0.522	0.388	0.489	0.632

Appendix C (cont'd)

ROCI-II A Dominating Pooled Within-Groups Matrices

Measure	Correlation	Multifactor Leadership Questionnaire								
		Transactional Leadership			Passive Avoidant			Outcomes of Leadership		
		Contingent Reward	Mgmt by Exception Active	Transactional	Mgmt by Exception Passive	Laissez-Faire	Passive Avoidant	Extra Effort	Effectiveness	Satisfaction
TEIQue										
	Well-being	-0.291	0.077	-0.099	0.235	0.239	0.267	-0.243	-0.438	-0.366
	Self-Control	-0.105	0.030	-0.034	0.174	0.245	0.232	-0.195	-0.314	-0.340
	Emotionality	-0.283	0.109	-0.071	0.327	0.406	0.408	-0.161	-0.336	-0.354
	Sociability	-0.237	0.130	-0.032	0.436	0.422	0.484	-0.358	-0.399	-0.333
	Global	-0.316	0.116	-0.083	0.406	0.447	0.478	-0.310	-0.494	-0.472
MLQ										
	Idealized Attributes	0.563	0.221	0.458	-0.120	-0.191	-0.171	0.402	0.530	0.590
	Idealized Behaviors	0.551	0.103	0.366	-0.186	-0.266	-0.250	0.405	0.522	0.500
	Inspirational Motivation	0.514	0.020	0.286	-0.338	-0.347	-0.385	0.445	0.613	0.522
	Intellectual Stimulation	0.427	-0.032	0.202	-0.158	-0.205	-0.201	0.309	0.452	0.388
	Individual Consideration	0.521	0.077	0.330	-0.326	-0.315	-0.362	0.404	0.585	0.489
	Transformational	0.655	0.101	0.419	-0.283	-0.336	-0.345	0.499	0.684	0.632
	Contingent Reward	1.000	0.268	0.723	-0.047	-0.214	-0.137	0.329	0.508	0.450
	Mgmt by Exception Active	0.268	1.000	0.859	0.186	0.189	0.211	-0.010	0.047	0.056
	Transactional	0.723	0.859	1.000	0.108	0.022	0.078	0.167	0.302	0.279
	Mgmt by Exception Passive	-0.047	0.186	0.108	1.000	0.573	0.910	-0.227	-0.252	-0.210
	Laissez-Faire	-0.214	0.189	0.022	0.573	1.000	0.861	-0.291	-0.342	-0.333
	Passive Avoidant	-0.137	0.211	0.078	0.910	0.861	1.000	-0.288	-0.329	-0.298
	Extra Effort	0.329	-0.010	0.167	-0.227	-0.291	-0.288	1.000	0.542	0.547
	Effectiveness	0.508	0.047	0.302	-0.252	-0.342	-0.329	0.542	1.000	0.695
	Satisfaction	0.450	0.056	0.279	-0.210	-0.333	-0.298	0.547	0.695	1.000

APPENDIX D. ROCI-II A AVOIDING POOLED WITHIN-GROUPS MATRICES

Measure	Correlation	Trait Emotional Intelligence Questionnaire					Multifactor Leadership Questionnaire					
							Transformational Leadership					
		Well-being	Self-Control	Emotionality	Sociability	Global	Idealized Attributes	Idealized Behaviors	Inspirational Motivation	Intellectual Stimulation	Individual Consideration	Transformational
TEIQue												
	Well-being	1.000	0.500	0.408	0.233	0.687	-0.297	-0.267	-0.438	-0.109	-0.260	-0.356
	Self-Control	0.500	1.000	0.459	0.331	0.742	-0.112	-0.171	-0.310	-0.063	-0.136	-0.207
	Emotionality	0.408	0.459	1.000	0.407	0.827	-0.197	-0.329	-0.464	-0.314	-0.296	-0.414
	Sociability	0.233	0.331	0.407	1.000	0.647	-0.236	-0.244	-0.378	-0.170	-0.165	-0.310
	Global	0.687	0.742	0.827	0.647	1.000	-0.297	-0.350	-0.554	-0.252	-0.306	-0.456
MLQ												
	Idealized Attributes	-0.297	-0.112	-0.197	-0.236	-0.297	1.000	0.444	0.531	0.327	0.445	0.710
	Idealized Behaviors	-0.267	-0.171	-0.329	-0.244	-0.350	0.444	1.000	0.559	0.464	0.514	0.788
	Inspirational Motivation	-0.438	-0.310	-0.464	-0.378	-0.554	0.531	0.559	1.000	0.535	0.566	0.823
	Intellectual Stimulation	-0.109	-0.063	-0.314	-0.170	-0.252	0.327	0.464	0.535	1.000	0.596	0.747
	Individual Consideration	-0.260	-0.136	-0.296	-0.165	-0.306	0.445	0.514	0.566	0.596	1.000	0.798
	Transformational	-0.356	-0.207	-0.414	-0.310	-0.456	0.710	0.788	0.823	0.747	0.798	1.000
	Contingent Reward	-0.275	-0.107	-0.257	-0.173	-0.284	0.556	0.539	0.481	0.387	0.493	0.638
	Mgmt by Exception Active	0.061	0.019	0.101	0.036	0.074	0.252	0.163	0.024	-0.042	0.053	0.121
	Transactional	-0.097	-0.040	-0.059	-0.062	-0.091	0.465	0.393	0.264	0.168	0.290	0.414
	Mgmt by Exception Passive	0.218	0.160	0.314	0.417	0.385	-0.098	-0.151	-0.332	-0.146	-0.318	-0.267
	Laissez-Faire	0.187	0.225	0.364	0.322	0.378	-0.137	-0.169	-0.281	-0.120	-0.263	-0.249
	Passive Avoidant	0.231	0.212	0.378	0.424	0.431	-0.129	-0.178	-0.350	-0.152	-0.332	-0.292
	Extra Effort	-0.227	-0.200	-0.134	-0.338	-0.289	0.395	0.397	0.411	0.266	0.367	0.476
	Effectiveness	-0.427	-0.311	-0.313	-0.328	-0.461	0.514	0.491	0.586	0.416	0.570	0.666
	Satisfaction	-0.361	-0.322	-0.342	-0.236	-0.433	0.563	0.450	0.491	0.361	0.493	0.610

Appendix D (cont'd)

ROCI-II A Avoiding Pooled Within-Groups Matrices

Measure	Correlation	Multifactor Leadership Questionnaire								
		Transactional Leadership			Passive Avoidant			Outcomes of Leadership		
		Contingent Reward	Mgmt by Exception Active	Transactional	Mgmt by Exception Passive	Laissez-Faire	Passive Avoidant	Extra Effort	Effectiveness	Satisfaction
TEIQue										
	Well-being	-0.275	0.061	-0.097	0.218	0.187	0.231	-0.227	-0.427	-0.361
	Self-Control	-0.107	0.019	-0.040	0.160	0.225	0.212	-0.200	-0.311	-0.322
	Emotionality	-0.257	0.101	-0.059	0.314	0.364	0.378	-0.134	-0.313	-0.342
	Sociability	-0.173	0.036	-0.062	0.417	0.322	0.424	-0.338	-0.328	-0.236
	Global	-0.284	0.074	-0.091	0.385	0.378	0.431	-0.289	-0.461	-0.433
MLQ										
	Idealized Attributes	0.556	0.252	0.465	-0.098	-0.137	-0.129	0.395	0.514	0.563
	Idealized Behaviors	0.539	0.163	0.393	-0.151	-0.169	-0.178	0.397	0.491	0.450
	Inspirational Motivation	0.481	0.024	0.264	-0.332	-0.281	-0.350	0.411	0.586	0.491
	Intellectual Stimulation	0.387	-0.042	0.168	-0.146	-0.120	-0.152	0.266	0.416	0.361
	Individual Consideration	0.493	0.053	0.290	-0.318	-0.263	-0.332	0.367	0.570	0.493
	Transformational	0.638	0.121	0.414	-0.267	-0.249	-0.292	0.476	0.666	0.610
	Contingent Reward	1.000	0.309	0.734	-0.014	-0.136	-0.075	0.313	0.485	0.424
	Mgmt by Exception Active	0.309	1.000	0.873	0.177	0.111	0.167	0.033	0.080	0.061
	Transactional	0.734	0.873	1.000	0.118	0.008	0.080	0.184	0.305	0.261
	Mgmt by Exception Passive	-0.014	0.177	0.118	1.000	0.565	0.917	-0.201	-0.227	-0.195
	Laissez-Faire	-0.136	0.111	0.008	0.565	1.000	0.847	-0.246	-0.265	-0.270
	Passive Avoidant	-0.075	0.167	0.080	0.917	0.847	1.000	-0.248	-0.274	-0.256
	Extra Effort	0.313	0.033	0.184	-0.201	-0.246	-0.248	1.000	0.525	0.525
	Effectiveness	0.485	0.080	0.305	-0.227	-0.265	-0.274	0.525	1.000	0.680
	Satisfaction	0.424	0.061	0.261	-0.195	-0.270	-0.256	0.525	0.680	1.000

APPENDIX E. ROCI-II A COMPROMISING POOLED WITHIN-GROUPS MATRICES

Measure	Correlation	Trait Emotional Intelligence Questionnaire					Multifactor Leadership Questionnaire					
							Transformational Leadership					
		Well-being	Self-Control	Emotionality	Sociability	Global	Idealized Attributes	Idealized Behaviors	Inspirational Motivation	Intellectual Stimulation	Individual Consideration	Transformational
TEIQue	Well-being	1.000	0.496	0.424	0.253	0.685	-0.304	-0.280	-0.436	-0.132	-0.280	-0.366
	Self-Control	0.496	1.000	0.460	0.341	0.734	-0.131	-0.195	-0.327	-0.087	-0.142	-0.228
	Emotionality	0.424	0.460	1.000	0.425	0.827	-0.217	-0.353	-0.475	-0.338	-0.317	-0.434
	Sociability	0.253	0.341	0.425	1.000	0.680	-0.294	-0.353	-0.460	-0.262	-0.202	-0.405
	Global	0.685	0.734	0.827	0.680	1.000	-0.333	-0.408	-0.589	-0.306	-0.329	-0.503
MLQ	Idealized Attributes	-0.304	-0.131	-0.217	-0.294	-0.333	1.000	0.476	0.556	0.360	0.452	0.722
	Idealized Behaviors	-0.280	-0.195	-0.353	-0.353	-0.408	0.476	1.000	0.605	0.508	0.517	0.810
	Inspirational Motivation	-0.436	-0.327	-0.475	-0.460	-0.589	0.556	0.605	1.000	0.571	0.564	0.840
	Intellectual Stimulation	-0.132	-0.087	-0.338	-0.262	-0.306	0.360	0.508	0.571	1.000	0.601	0.766
	Individual Consideration	-0.280	-0.142	-0.317	-0.202	-0.329	0.452	0.517	0.564	0.601	1.000	0.787
	Transformational	-0.366	-0.228	-0.434	-0.405	-0.503	0.722	0.810	0.840	0.766	0.787	1.000
	Contingent Reward	-0.297	-0.119	-0.284	-0.233	-0.322	0.566	0.556	0.498	0.414	0.509	0.650
	Mgmt by Exception Active	0.090	0.030	0.132	0.100	0.118	0.215	0.103	-0.019	-0.080	0.019	0.064
	Transactional	-0.089	-0.040	-0.052	-0.048	-0.081	0.453	0.366	0.247	0.157	0.280	0.387
	Mgmt by Exception Passive	0.236	0.167	0.332	0.424	0.403	-0.117	-0.179	-0.346	-0.172	-0.335	-0.289
	Laissez-Faire	0.232	0.232	0.399	0.422	0.440	-0.186	-0.258	-0.343	-0.199	-0.304	-0.329
	Passive Avoidant	0.264	0.221	0.408	0.477	0.473	-0.167	-0.242	-0.389	-0.208	-0.362	-0.346
	Extra Effort	-0.245	-0.207	-0.157	-0.358	-0.314	0.406	0.411	0.422	0.288	0.383	0.488
	Effectiveness	-0.443	-0.320	-0.341	-0.388	-0.497	0.531	0.523	0.606	0.450	0.583	0.685
	Satisfaction	-0.371	-0.336	-0.364	-0.314	-0.471	0.583	0.493	0.528	0.402	0.503	0.639

Appendix E (cont'd)

ROCI-II A Compromising Pooled Within-Groups Matrices

Measure	Correlation	Multifactor Leadership Questionnaire								
		Transactional Leadership			Passive Avoidant			Outcomes of Leadership		
		Contingent Reward	Mgmt by Exception Active	Transactional	Mgmt by Exception Passive	Laissez-Faire	Passive Avoidant	Extra Effort	Effectiveness	Satisfaction
TEIQue										
	Well-being	-0.297	0.090	-0.089	0.236	0.232	0.264	-0.245	-0.443	-0.371
	Self-Control	-0.119	0.030	-0.040	0.167	0.232	0.221	-0.207	-0.320	-0.336
	Emotionality	-0.284	0.132	-0.052	0.332	0.399	0.408	-0.157	-0.341	-0.364
	Sociability	-0.233	0.100	-0.048	0.424	0.422	0.477	-0.358	-0.388	-0.314
	Global	-0.322	0.118	-0.081	0.403	0.440	0.473	-0.314	-0.497	-0.471
		0.566	0.215	0.453	-0.117	-0.186	-0.167	0.406	0.531	0.583
MLQ	Idealized Attributes									
	Idealized Behaviors	0.556	0.103	0.366	-0.179	-0.258	-0.242	0.411	0.523	0.493
	Inspirational Motivation	0.498	-0.019	0.247	-0.346	-0.343	-0.389	0.422	0.606	0.528
	Intellectual Stimulation	0.414	-0.080	0.157	-0.172	-0.199	-0.208	0.288	0.450	0.402
	Individual Consideration	0.509	0.019	0.280	-0.335	-0.304	-0.362	0.383	0.583	0.503
	Transformational	0.650	0.064	0.387	-0.289	-0.329	-0.346	0.488	0.685	0.639
	Contingent Reward	1.000	0.256	0.711	-0.045	-0.208	-0.133	0.334	0.511	0.447
	Mgmt by Exception Active	0.256	1.000	0.862	0.200	0.179	0.215	0.002	0.029	0.020
	Transactional	0.711	0.862	1.000	0.122	0.021	0.087	0.176	0.288	0.249
	Mgmt by Exception Passive	-0.045	0.200	0.122	1.000	0.570	0.909	-0.219	-0.253	-0.218
	Laissez-Faire	-0.208	0.179	0.021	0.570	1.000	0.860	-0.285	-0.336	-0.326
	Passive Avoidant	-0.133	0.215	0.087	0.909	0.860	1.000	-0.280	-0.327	-0.300
	Extra Effort	0.334	0.002	0.176	-0.219	-0.285	-0.280	1.000	0.540	0.535
	Effectiveness	0.511	0.029	0.288	-0.253	-0.336	-0.327	0.540	1.000	0.696
	Satisfaction	0.447	0.020	0.249	-0.218	-0.326	-0.300	0.535	0.696	1.000

APPENDIX F. ROCI-II B INTEGRATING POOLED WITHIN-GROUPS MATRICES

Measure	Correlation	Trait Emotional Intelligence Questionnaire					Multifactor Leadership Questionnaire					
							Transformational Leadership					
		Well-being	Self-Control	Emotionality	Sociability	Global	Idealized Attributes	Idealized Behaviors	Inspirational Motivation	Intellectual Stimulation	Individual Consideration	Transformational
TEIQue												
	Well-being	1.000	0.483	0.420	0.285	0.687	-0.296	-0.284	-0.428	-0.112	-0.228	-0.351
	Self-Control	0.483	1.000	0.466	0.335	0.722	-0.145	-0.188	-0.301	-0.081	-0.089	-0.211
	Emotionality	0.420	0.466	1.000	0.435	0.836	-0.223	-0.353	-0.471	-0.325	-0.299	-0.433
	Sociability	0.285	0.335	0.435	1.000	0.684	-0.327	-0.326	-0.435	-0.225	-0.174	-0.388
	Global	0.687	0.722	0.836	0.684	1.000	-0.347	-0.396	-0.568	-0.282	-0.285	-0.488
MLQ												
	Idealized Attributes	-0.296	-0.145	-0.223	-0.327	-0.347	1.000	0.445	0.569	0.335	0.445	0.717
	Idealized Behaviors	-0.284	-0.188	-0.353	-0.326	-0.396	0.445	1.000	0.588	0.465	0.500	0.792
	Inspirational Motivation	-0.428	-0.301	-0.471	-0.435	-0.568	0.569	0.588	1.000	0.543	0.545	0.837
	Intellectual Stimulation	-0.112	-0.081	-0.325	-0.225	-0.282	0.335	0.465	0.543	1.000	0.595	0.748
	Individual Consideration	-0.228	-0.089	-0.299	-0.174	-0.285	0.445	0.500	0.545	0.595	1.000	0.784
	Transformational	-0.351	-0.211	-0.433	-0.388	-0.488	0.717	0.792	0.837	0.748	0.784	1.000
	Contingent Reward	-0.292	-0.105	-0.285	-0.218	-0.315	0.576	0.542	0.501	0.403	0.497	0.651
	Mgmt by Exception Active	0.111	-0.008	0.121	0.079	0.098	0.145	0.074	0.000	-0.086	0.004	0.038
	Transactional	-0.079	-0.062	-0.068	-0.061	-0.101	0.421	0.351	0.274	0.158	0.274	0.384
	Mgmt by Exception Passive	0.227	0.150	0.331	0.450	0.403	-0.116	-0.174	-0.335	-0.157	-0.322	-0.282
	Laissez-Faire	0.220	0.236	0.395	0.409	0.433	-0.190	-0.247	-0.304	-0.155	-0.292	-0.307
	Passive Avoidant	0.252	0.211	0.404	0.485	0.468	-0.168	-0.232	-0.361	-0.175	-0.346	-0.330
	Extra Effort	-0.244	-0.164	-0.144	-0.299	-0.272	0.458	0.437	0.417	0.292	0.364	0.509
	Effectiveness	-0.412	-0.299	-0.336	-0.391	-0.479	0.517	0.504	0.599	0.435	0.552	0.671
	Satisfaction	-0.360	-0.302	-0.374	-0.302	-0.455	0.595	0.485	0.534	0.418	0.484	0.648

Appendix F (cont'd)

ROCI-II B Integrating Pooled Within-Groups Matrices

Measure	Correlation	Multifactor Leadership Questionnaire								
		Transactional Leadership			Passive Avoidant			Outcomes of Leadership		
		Contingent Reward	Mgmt by Exception Active	Transactional	Mgmt by Exception Passive	Laissez-Faire	Passive Avoidant	Extra Effort	Effectiveness	Satisfaction
TEIQue										
	Well-being	-0.292	0.111	-0.079	0.227	0.220	0.252	-0.244	-0.412	-0.360
	Self-Control	-0.105	-0.008	-0.062	0.150	0.236	0.211	-0.164	-0.299	-0.302
	Emotionality	-0.285	0.121	-0.068	0.331	0.395	0.404	-0.144	-0.336	-0.374
	Sociability	-0.218	0.079	-0.061	0.450	0.409	0.485	-0.299	-0.391	-0.302
	Global	-0.315	0.098	-0.101	0.403	0.433	0.468	-0.272	-0.479	-0.455
MLQ										
	Idealized Attributes	0.576	0.145	0.421	-0.116	-0.190	-0.168	0.458	0.517	0.595
	Idealized Behaviors	0.542	0.074	0.351	-0.174	-0.247	-0.232	0.437	0.504	0.485
	Inspirational Motivation	0.501	0.000	0.274	-0.335	-0.304	-0.361	0.417	0.599	0.534
	Intellectual Stimulation	0.403	-0.086	0.158	-0.157	-0.155	-0.175	0.292	0.435	0.418
	Individual Consideration	0.497	0.004	0.274	-0.322	-0.292	-0.346	0.364	0.552	0.484
	Transformational	0.651	0.038	0.384	-0.282	-0.307	-0.330	0.509	0.671	0.648
	Contingent Reward	1.000	0.223	0.710	-0.024	-0.192	-0.111	0.346	0.484	0.428
	Mgmt by Exception Active	0.223	1.000	0.845	0.223	0.172	0.225	0.032	-0.036	-0.044
	Transactional	0.710	0.845	1.000	0.148	0.019	0.101	0.213	0.238	0.203
	Mgmt by Exception Passive	-0.024	0.223	0.148	1.000	0.580	0.912	-0.205	-0.223	-0.204
	Laissez-Faire	-0.192	0.172	0.019	0.580	1.000	0.863	-0.271	-0.321	-0.351
	Passive Avoidant	-0.111	0.225	0.101	0.912	0.863	1.000	-0.264	-0.300	-0.303
	Extra Effort	0.346	0.032	0.213	-0.205	-0.271	-0.264	1.000	0.542	0.527
	Effectiveness	0.484	-0.036	0.238	-0.223	-0.321	-0.300	0.542	1.000	0.678
	Satisfaction	0.428	-0.044	0.203	-0.204	-0.351	-0.303	0.527	0.678	1.000

APPENDIX G. ROCI-II B OBLIGING POOLED WITHIN-GROUPS MATRICES

Measure	Correlation	Trait Emotional Intelligence Questionnaire					Multifactor Leadership Questionnaire					
							Transformational Leadership					
		Well-being	Self-Control	Emotionality	Sociability	Global	Idealized Attributes	Idealized Behaviors	Inspirational Motivation	Intellectual Stimulation	Individual Consideration	Transformational
TEIQue												
	Well-being	1.000	0.476	0.422	0.287	0.686	-0.292	-0.307	-0.431	-0.123	-0.241	-0.363
	Self-Control	0.476	1.000	0.471	0.339	0.723	-0.139	-0.211	-0.304	-0.095	-0.101	-0.223
	Emotionality	0.422	0.471	1.000	0.432	0.837	-0.222	-0.349	-0.470	-0.324	-0.294	-0.429
	Sociability	0.287	0.339	0.432	1.000	0.684	-0.326	-0.320	-0.432	-0.222	-0.165	-0.382
	Global	0.686	0.723	0.837	0.684	1.000	-0.343	-0.405	-0.568	-0.288	-0.287	-0.491
MLQ												
	Idealized Attributes	-0.292	-0.139	-0.222	-0.326	-0.343	1.000	0.461	0.569	0.341	0.452	0.725
	Idealized Behaviors	-0.307	-0.211	-0.349	-0.320	-0.405	0.461	1.000	0.596	0.460	0.480	0.789
	Inspirational Motivation	-0.431	-0.304	-0.470	-0.432	-0.568	0.569	0.596	1.000	0.544	0.546	0.841
	Intellectual Stimulation	-0.123	-0.095	-0.324	-0.222	-0.288	0.341	0.460	0.544	1.000	0.591	0.748
	Individual Consideration	-0.241	-0.101	-0.294	-0.165	-0.287	0.452	0.480	0.546	0.591	1.000	0.778
	Transformational	-0.363	-0.223	-0.429	-0.382	-0.491	0.725	0.789	0.841	0.748	0.778	1.000
	Contingent Reward	-0.304	-0.118	-0.284	-0.215	-0.320	0.583	0.540	0.501	0.396	0.492	0.649
	Mgmt by Exception Active	0.114	-0.005	0.129	0.086	0.104	0.143	0.058	-0.004	-0.090	-0.008	0.028
	Transactional	-0.084	-0.068	-0.062	-0.054	-0.099	0.423	0.338	0.271	0.150	0.263	0.375
	Mgmt by Exception Passive	0.236	0.162	0.336	0.455	0.412	-0.122	-0.179	-0.338	-0.153	-0.326	-0.286
	Laissez-Faire	0.211	0.223	0.400	0.416	0.431	-0.186	-0.277	-0.308	-0.170	-0.312	-0.324
	Passive Avoidant	0.251	0.212	0.407	0.489	0.471	-0.168	-0.249	-0.363	-0.180	-0.357	-0.339
	Extra Effort	-0.246	-0.165	-0.137	-0.293	-0.268	0.458	0.429	0.414	0.290	0.355	0.504
	Effectiveness	-0.437	-0.320	-0.331	-0.385	-0.488	0.533	0.470	0.608	0.433	0.535	0.663
	Satisfaction	-0.366	-0.305	-0.367	-0.293	-0.452	0.599	0.469	0.535	0.420	0.473	0.643

Appendix G (cont'd)

ROCI-II B Obliging Pooled Within-Groups Matrices

Measure	Correlation	Multifactor Leadership Questionnaire								
		Transactional Leadership			Passive Avoidant			Outcomes of Leadership		
		Contingent Reward	Mgmt by Exception Active	Transactional	Mgmt by Exception Passive	Laissez-Faire	Passive Avoidant	Extra Effort	Effectiveness	Satisfaction
TEIQue										
	Well-being	-0.304	0.114	-0.084	0.236	0.211	0.251	-0.246	-0.437	-0.366
	Self-Control	-0.118	-0.005	-0.068	0.162	0.223	0.212	-0.165	-0.320	-0.305
	Emotionality	-0.284	0.129	-0.062	0.336	0.400	0.407	-0.137	-0.331	-0.367
	Sociability	-0.215	0.086	-0.054	0.455	0.416	0.489	-0.293	-0.385	-0.293
	Global	-0.320	0.104	-0.099	0.412	0.431	0.471	-0.268	-0.488	-0.452
MLQ										
	Idealized Attributes	0.583	0.143	0.423	-0.122	-0.186	-0.168	0.458	0.533	0.599
	Idealized Behaviors	0.540	0.058	0.338	-0.179	-0.277	-0.249	0.429	0.470	0.469
	Inspirational Motivation	0.501	-0.004	0.271	-0.338	-0.308	-0.363	0.414	0.608	0.535
	Intellectual Stimulation	0.396	-0.090	0.150	-0.153	-0.170	-0.180	0.290	0.433	0.420
	Individual Consideration	0.492	-0.008	0.263	-0.326	-0.312	-0.357	0.355	0.535	0.473
	Transformational	0.649	0.028	0.375	-0.286	-0.324	-0.339	0.504	0.663	0.643
	Contingent Reward	1.000	0.222	0.709	-0.019	-0.207	-0.115	0.344	0.484	0.430
	Mgmt by Exception Active	0.222	1.000	0.845	0.221	0.174	0.223	0.023	-0.060	-0.062
	Transactional	0.709	0.845	1.000	0.149	0.012	0.098	0.205	0.221	0.191
	Mgmt by Exception Passive	-0.019	0.221	0.149	1.000	0.595	0.916	-0.211	-0.234	-0.215
	Laissez-Faire	-0.207	0.174	0.012	0.595	1.000	0.868	-0.277	-0.350	-0.362
	Passive Avoidant	-0.115	0.223	0.098	0.916	0.868	1.000	-0.269	-0.320	-0.314
	Extra Effort	0.344	0.023	0.205	-0.211	-0.277	-0.269	1.000	0.536	0.519
	Effectiveness	0.484	-0.060	0.221	-0.234	-0.350	-0.320	0.536	1.000	0.668
	Satisfaction	0.430	-0.062	0.191	-0.215	-0.362	-0.314	0.519	0.668	1.000

APPENDIX H. ROCI-II B DOMINATING POOLED WITHIN-GROUPS MATRICES

Measure	Correlation	Trait Emotional Intelligence Questionnaire					Multifactor Leadership Questionnaire					
							Transformational Leadership					
		Well-being	Self-Control	Emotionality	Sociability	Global	Idealized Attributes	Idealized Behaviors	Inspirational Motivation	Intellectual Stimulation	Individual Consideration	Transformational
TEIQue												
	Well-being	1.000	0.488	0.409	0.302	0.686	-0.311	-0.283	-0.422	-0.095	-0.211	-0.344
	Self-Control	0.488	1.000	0.476	0.334	0.723	-0.151	-0.184	-0.303	-0.078	-0.090	-0.211
	Emotionality	0.409	0.476	1.000	0.473	0.841	-0.255	-0.353	-0.465	-0.295	-0.265	-0.423
	Sociability	0.302	0.334	0.473	1.000	0.700	-0.322	-0.330	-0.451	-0.249	-0.204	-0.403
	Global	0.686	0.723	0.841	0.700	1.000	-0.363	-0.392	-0.566	-0.269	-0.274	-0.483
MLQ												
	Idealized Attributes	-0.311	-0.151	-0.255	-0.322	-0.363	1.000	0.456	0.585	0.366	0.481	0.737
	Idealized Behaviors	-0.283	-0.184	-0.353	-0.330	-0.392	0.456	1.000	0.589	0.466	0.506	0.794
	Inspirational Motivation	-0.422	-0.303	-0.465	-0.451	-0.566	0.585	0.589	1.000	0.538	0.540	0.836
	Intellectual Stimulation	-0.095	-0.078	-0.295	-0.249	-0.269	0.366	0.466	0.538	1.000	0.579	0.746
	Individual Consideration	-0.211	-0.090	-0.265	-0.204	-0.274	0.481	0.506	0.540	0.579	1.000	0.784
	Transformational	-0.344	-0.211	-0.423	-0.403	-0.483	0.737	0.794	0.836	0.746	0.784	1.000
	Contingent Reward	-0.306	-0.104	-0.315	-0.208	-0.325	0.574	0.548	0.514	0.429	0.533	0.668
	Mgmt by Exception Active	0.087	-0.008	0.070	0.113	0.080	0.123	0.085	0.025	-0.041	0.062	0.067
	Transactional	-0.109	-0.063	-0.126	-0.034	-0.124	0.411	0.369	0.307	0.210	0.343	0.423
	Mgmt by Exception Passive	0.214	0.154	0.310	0.478	0.399	-0.133	-0.174	-0.326	-0.135	-0.300	-0.272
	Laissez-Faire	0.213	0.230	0.381	0.423	0.424	-0.209	-0.241	-0.299	-0.134	-0.278	-0.299
	Passive Avoidant	0.240	0.211	0.384	0.509	0.461	-0.188	-0.229	-0.353	-0.151	-0.326	-0.319
	Extra Effort	-0.257	-0.162	-0.166	-0.290	-0.280	0.456	0.440	0.429	0.312	0.394	0.523
	Effectiveness	-0.409	-0.304	-0.334	-0.404	-0.481	0.526	0.507	0.597	0.435	0.553	0.671
	Satisfaction	-0.350	-0.309	-0.358	-0.325	-0.454	0.617	0.490	0.529	0.407	0.471	0.645

Appendix H (cont'd)

ROCI-II B Dominating Pooled Within-Groups Matrices

Measure	Correlation	Multifactor Leadership Questionnaire								
		Transactional Leadership			Passive Avoidant			Outcomes of Leadership		
		Contingent Reward	Mgmt by Exception Active	Transactional	Mgmt by Exception Passive	Laissez-Faire	Passive Avoidant	Extra Effort	Effectiveness	Satisfaction
TEIQue										
	Well-being	-0.306	0.087	-0.109	0.214	0.213	0.240	-0.257	-0.409	-0.350
	Self-Control	-0.104	-0.008	-0.063	0.154	0.230	0.211	-0.162	-0.304	-0.309
	Emotionality	-0.315	0.070	-0.126	0.310	0.381	0.384	-0.166	-0.334	-0.358
	Sociability	-0.208	0.113	-0.034	0.478	0.423	0.509	-0.290	-0.404	-0.325
	Global	-0.325	0.080	-0.124	0.399	0.424	0.461	-0.280	-0.481	-0.454
MLQ										
	Idealized Attributes	0.574	0.123	0.411	-0.133	-0.209	-0.188	0.456	0.526	0.617
	Idealized Behaviors	0.548	0.085	0.369	-0.174	-0.241	-0.229	0.440	0.507	0.490
	Inspirational Motivation	0.514	0.025	0.307	-0.326	-0.299	-0.353	0.429	0.597	0.529
	Intellectual Stimulation	0.429	-0.041	0.210	-0.135	-0.134	-0.151	0.312	0.435	0.407
	Individual Consideration	0.533	0.062	0.343	-0.300	-0.278	-0.326	0.394	0.553	0.471
	Transformational	0.668	0.067	0.423	-0.272	-0.299	-0.319	0.523	0.671	0.645
	Contingent Reward	1.000	0.206	0.710	-0.040	-0.202	-0.126	0.340	0.494	0.449
	Mgmt by Exception Active	0.206	1.000	0.835	0.192	0.153	0.196	0.009	-0.021	-0.010
	Transactional	0.710	0.835	1.000	0.116	-0.004	0.070	0.197	0.261	0.245
	Mgmt by Exception Passive	-0.040	0.192	0.116	1.000	0.580	0.912	-0.223	-0.216	-0.187
	Laissez-Faire	-0.202	0.153	-0.004	0.580	1.000	0.863	-0.280	-0.322	-0.349
	Passive Avoidant	-0.126	0.196	0.070	0.912	0.863	1.000	-0.279	-0.296	-0.291
	Extra Effort	0.340	0.009	0.197	-0.223	-0.280	-0.279	1.000	0.553	0.549
	Effectiveness	0.494	-0.021	0.261	-0.216	-0.322	-0.296	0.553	1.000	0.677
	Satisfaction	0.449	-0.010	0.245	-0.187	-0.349	-0.291	0.549	0.677	1.000

APPENDIX I. ROCI-II B AVOIDING POOLED WITHIN-GROUPS MATRICES

Measure	Correlation	Trait Emotional Intelligence Questionnaire					Multifactor Leadership Questionnaire					
							Transformational Leadership					
		Well-being	Self-Control	Emotionality	Sociability	Global	Idealized Attributes	Idealized Behaviors	Inspirational Motivation	Intellectual Stimulation	Individual Consideration	Transformational
TEIQue												
	Well-being	1.000	0.485	0.426	0.288	0.714	-0.292	-0.282	-0.435	-0.104	-0.226	-0.353
	Self-Control	0.485	1.000	0.438	0.294	0.712	-0.119	-0.149	-0.262	-0.044	-0.057	-0.168
	Emotionality	0.426	0.438	1.000	0.373	0.819	-0.182	-0.302	-0.420	-0.278	-0.267	-0.380
	Sociability	0.288	0.294	0.373	1.000	0.645	-0.292	-0.266	-0.373	-0.165	-0.125	-0.323
	Global	0.714	0.712	0.819	0.645	1.000	-0.314	-0.343	-0.522	-0.229	-0.245	-0.435
MLQ												
	Idealized Attributes	-0.292	-0.119	-0.182	-0.292	-0.314	1.000	0.423	0.549	0.304	0.436	0.707
	Idealized Behaviors	-0.282	-0.149	-0.302	-0.266	-0.343	0.423	1.000	0.556	0.436	0.481	0.778
	Inspirational Motivation	-0.435	-0.262	-0.420	-0.373	-0.522	0.549	0.556	1.000	0.511	0.531	0.822
	Intellectual Stimulation	-0.104	-0.044	-0.278	-0.165	-0.229	0.304	0.436	0.511	1.000	0.591	0.734
	Individual Consideration	-0.226	-0.057	-0.267	-0.125	-0.245	0.436	0.481	0.531	0.591	1.000	0.784
	Transformational	-0.353	-0.168	-0.380	-0.323	-0.435	0.707	0.778	0.822	0.734	0.784	1.000
	Contingent Reward	-0.289	-0.090	-0.270	-0.199	-0.303	0.569	0.538	0.496	0.391	0.496	0.654
	Mgmt by Exception Active	0.107	-0.024	0.096	0.051	0.072	0.174	0.102	0.035	-0.058	0.013	0.073
	Transactional	-0.081	-0.065	-0.078	-0.071	-0.112	0.436	0.367	0.296	0.171	0.279	0.409
	Mgmt by Exception Passive	0.224	0.124	0.305	0.430	0.379	-0.097	-0.144	-0.311	-0.134	-0.303	-0.255
	Laissez-Faire	0.222	0.199	0.357	0.364	0.390	-0.171	-0.204	-0.262	-0.125	-0.255	-0.266
	Passive Avoidant	0.252	0.177	0.370	0.452	0.433	-0.146	-0.192	-0.326	-0.146	-0.317	-0.293
	Extra Effort	-0.243	-0.149	-0.125	-0.287	-0.258	0.459	0.431	0.414	0.288	0.352	0.511
	Effectiveness	-0.412	-0.281	-0.317	-0.373	-0.467	0.514	0.493	0.597	0.429	0.540	0.672
	Satisfaction	-0.357	-0.288	-0.357	-0.281	-0.445	0.586	0.474	0.526	0.402	0.479	0.645

Appendix I (cont'd)

ROCI-II B Avoiding Pooled Within-Groups Matrices

		Multifactor Leadership Questionnaire								
		Transactional Leadership			Passive Avoidant			Outcomes of Leadership		
Measure	Correlation	Contingent Reward	Mgmt by Exception Active	Transactional	Mgmt by Exception Passive	Laissez-Faire	Passive Avoidant	Extra Effort	Effectiveness	Satisfaction
TEIQue										
	Well-being	-0.289	0.107	-0.081	0.224	0.222	0.252	-0.243	-0.412	-0.357
	Self-Control	-0.090	-0.024	-0.065	0.124	0.199	0.177	-0.149	-0.281	-0.288
	Emotionality	-0.270	0.096	-0.078	0.305	0.357	0.370	-0.125	-0.317	-0.357
	Sociability	-0.199	0.051	-0.071	0.430	0.364	0.452	-0.287	-0.373	-0.281
	Global	-0.303	0.072	-0.112	0.379	0.390	0.433	-0.258	-0.467	-0.445
MLQ										
	Idealized Attributes	0.569	0.174	0.436	-0.097	-0.171	-0.146	0.459	0.514	0.586
	Idealized Behaviors	0.538	0.102	0.367	-0.144	-0.204	-0.192	0.431	0.493	0.474
	Inspirational Motivation	0.496	0.035	0.296	-0.311	-0.262	-0.326	0.414	0.597	0.526
	Intellectual Stimulation	0.391	-0.058	0.171	-0.134	-0.125	-0.146	0.288	0.429	0.402
	Individual Consideration	0.496	0.013	0.279	-0.303	-0.255	-0.317	0.352	0.540	0.479
	Transformational	0.654	0.073	0.409	-0.255	-0.266	-0.293	0.511	0.672	0.645
	Contingent Reward	1.000	0.241	0.719	-0.012	-0.185	-0.099	0.344	0.482	0.421
	Mgmt by Exception Active	0.241	1.000	0.848	0.218	0.174	0.223	0.035	-0.031	-0.028
	Transactional	0.719	0.848	1.000	0.149	0.023	0.105	0.213	0.240	0.209
	Mgmt by Exception Passive	-0.012	0.218	0.149	1.000	0.568	0.913	-0.192	-0.206	-0.192
	Laissez-Faire	-0.185	0.174	0.023	0.568	1.000	0.855	-0.252	-0.296	-0.347
	Passive Avoidant	-0.099	0.223	0.105	0.913	0.855	1.000	-0.246	-0.277	-0.294
	Extra Effort	0.344	0.035	0.213	-0.192	-0.252	-0.246	1.000	0.535	0.527
	Effectiveness	0.482	-0.031	0.240	-0.206	-0.296	-0.277	0.535	1.000	0.679
	Satisfaction	0.421	-0.028	0.209	-0.192	-0.347	-0.294	0.527	0.679	1.000

APPENDIX J. ROCI-II B COMPROMISING POOLED WITHIN-GROUPS MATRICES

Measure	Correlation	Trait Emotional Intelligence Questionnaire					Multifactor Leadership Questionnaire					
							Transformational Leadership					
		Well-being	Self-Control	Emotionality	Sociability	Global	Idealized Attributes	Idealized Behaviors	Inspirational Motivation	Intellectual Stimulation	Individual Consideration	Transformational
TEIQue												
	Well-being	1.000	0.483	0.420	0.285	0.687	-0.296	-0.284	-0.428	-0.112	-0.228	-0.351
	Self-Control	0.483	1.000	0.466	0.335	0.722	-0.145	-0.188	-0.301	-0.081	-0.089	-0.211
	Emotionality	0.420	0.466	1.000	0.435	0.836	-0.223	-0.353	-0.471	-0.325	-0.299	-0.433
	Sociability	0.285	0.335	0.435	1.000	0.684	-0.327	-0.326	-0.435	-0.225	-0.174	-0.388
	Global	0.687	0.722	0.836	0.684	1.000	-0.347	-0.396	-0.568	-0.282	-0.285	-0.488
MLQ												
	Idealized Attributes	-0.296	-0.145	-0.223	-0.327	-0.347	1.000	0.445	0.569	0.335	0.445	0.717
	Idealized Behaviors	-0.284	-0.188	-0.353	-0.326	-0.396	0.445	1.000	0.588	0.465	0.500	0.792
	Inspirational Motivation	-0.428	-0.301	-0.471	-0.435	-0.568	0.569	0.588	1.000	0.543	0.545	0.837
	Intellectual Stimulation	-0.112	-0.081	-0.325	-0.225	-0.282	0.335	0.465	0.543	1.000	0.595	0.748
	Individual Consideration	-0.228	-0.089	-0.299	-0.174	-0.285	0.445	0.500	0.545	0.595	1.000	0.784
	Transformational	-0.351	-0.211	-0.433	-0.388	-0.488	0.717	0.792	0.837	0.748	0.784	1.000
	Contingent Reward	-0.292	-0.105	-0.285	-0.218	-0.315	0.576	0.542	0.501	0.403	0.497	0.651
	Mgmt by Exception Active	0.111	-0.008	0.121	0.079	0.098	0.145	0.074	0.000	-0.086	0.004	0.038
	Transactional	-0.079	-0.062	-0.068	-0.061	-0.101	0.421	0.351	0.274	0.158	0.274	0.384
	Mgmt by Exception Passive	0.227	0.150	0.331	0.450	0.403	-0.116	-0.174	-0.335	-0.157	-0.322	-0.282
	Laissez-Faire	0.220	0.236	0.395	0.409	0.433	-0.190	-0.247	-0.304	-0.155	-0.292	-0.307
	Passive Avoidant	0.252	0.211	0.404	0.485	0.468	-0.168	-0.232	-0.361	-0.175	-0.346	-0.330
	Extra Effort	-0.244	-0.164	-0.144	-0.299	-0.272	0.458	0.437	0.417	0.292	0.364	0.509
	Effectiveness	-0.412	-0.299	-0.336	-0.391	-0.479	0.517	0.504	0.599	0.435	0.552	0.671
	Satisfaction	-0.360	-0.302	-0.374	-0.302	-0.455	0.595	0.485	0.534	0.418	0.484	0.648

Appendix J (cont'd)

ROCI-II B Compromising Pooled Within-Groups Matrices

		Multifactor Leadership Questionnaire								
		Transactional Leadership			Passive Avoidant			Outcomes of Leadership		
Measure	Correlation	Contingent Reward	Mgmt by Exception Active	Transactional	Mgmt by Exception Passive	Laissez-Faire	Passive Avoidant	Extra Effort	Effectiveness	Satisfaction
TEIQue										
	Well-being	-0.292	0.111	-0.079	0.227	0.220	0.252	-0.244	-0.412	-0.360
	Self-Control	-0.105	-0.008	-0.062	0.150	0.236	0.211	-0.164	-0.299	-0.302
	Emotionality	-0.285	0.121	-0.068	0.331	0.395	0.404	-0.144	-0.336	-0.374
	Sociability	-0.218	0.079	-0.061	0.450	0.409	0.485	-0.299	-0.391	-0.302
	Global	-0.315	0.098	-0.101	0.403	0.433	0.468	-0.272	-0.479	-0.455
MLQ										
	Idealized Attributes	0.576	0.145	0.421	-0.116	-0.190	-0.168	0.458	0.517	0.595
	Idealized Behaviors	0.542	0.074	0.351	-0.174	-0.247	-0.232	0.437	0.504	0.485
	Inspirational Motivation	0.501	0.000	0.274	-0.335	-0.304	-0.361	0.417	0.599	0.534
	Intellectual Stimulation	0.403	-0.086	0.158	-0.157	-0.155	-0.175	0.292	0.435	0.418
	Individual Consideration	0.497	0.004	0.274	-0.322	-0.292	-0.346	0.364	0.552	0.484
	Transformational	0.651	0.038	0.384	-0.282	-0.307	-0.330	0.509	0.671	0.648
	Contingent Reward	1.000	0.223	0.710	-0.024	-0.192	-0.111	0.346	0.484	0.428
	Mgmt by Exception Active	0.223	1.000	0.845	0.223	0.172	0.225	0.032	-0.036	-0.044
	Transactional	0.710	0.845	1.000	0.148	0.019	0.101	0.213	0.238	0.203
	Mgmt by Exception Passive	-0.024	0.223	0.148	1.000	0.580	0.912	-0.205	-0.223	-0.204
	Laissez-Faire	-0.192	0.172	0.019	0.580	1.000	0.863	-0.271	-0.321	-0.351
	Passive Avoidant	-0.111	0.225	0.101	0.912	0.863	1.000	-0.264	-0.300	-0.303
	Extra Effort	0.346	0.032	0.213	-0.205	-0.271	-0.264	1.000	0.542	0.527
	Effectiveness	0.484	-0.036	0.238	-0.223	-0.321	-0.300	0.542	1.000	0.678
	Satisfaction	0.428	-0.044	0.203	-0.204	-0.351	-0.303	0.527	0.678	1.000

APPENDIX K. ROCI-II C INTEGRATING POOLED WITHIN-GROUPS MATRICES

Measure	Correlation	Trait Emotional Intelligence Questionnaire					Multifactor Leadership Questionnaire					
							Transformational Leadership					
		Well-being	Self-Control	Emotionality	Sociability	Global	Idealized Attributes	Idealized Behaviors	Inspirational Motivation	Intellectual Stimulation	Individual Consideration	Transformational
TEIQue												
	Well-being	1.000	0.482	0.424	0.262	0.681	-0.289	-0.274	-0.444	-0.112	-0.230	-0.350
	Self-Control	0.482	1.000	0.467	0.331	0.721	-0.137	-0.173	-0.296	-0.077	-0.083	-0.201
	Emotionality	0.424	0.467	1.000	0.447	0.843	-0.222	-0.359	-0.476	-0.324	-0.302	-0.436
	Sociability	0.262	0.331	0.447	1.000	0.680	-0.321	-0.308	-0.450	-0.228	-0.171	-0.385
	Global	0.681	0.721	0.843	0.680	1.000	-0.339	-0.385	-0.577	-0.282	-0.284	-0.485
MLQ												
	Idealized Attributes	-0.289	-0.137	-0.222	-0.321	-0.339	1.000	0.441	0.573	0.334	0.444	0.716
	Idealized Behaviors	-0.274	-0.173	-0.359	-0.308	-0.385	0.441	1.000	0.589	0.469	0.498	0.790
	Inspirational Motivation	-0.444	-0.296	-0.476	-0.450	-0.577	0.573	0.589	1.000	0.545	0.543	0.838
	Intellectual Stimulation	-0.112	-0.077	-0.324	-0.228	-0.282	0.334	0.469	0.545	1.000	0.596	0.751
	Individual Consideration	-0.230	-0.083	-0.302	-0.171	-0.284	0.444	0.498	0.543	0.596	1.000	0.783
	Transformational	-0.350	-0.201	-0.436	-0.385	-0.485	0.716	0.790	0.838	0.751	0.783	1.000
	Contingent Reward	-0.301	-0.083	-0.285	-0.229	-0.313	0.584	0.544	0.501	0.407	0.508	0.657
	Mgmt by Exception Active	0.115	0.010	0.130	0.080	0.110	0.140	0.058	-0.017	-0.095	-0.003	0.024
	Transactional	-0.081	-0.038	-0.060	-0.066	-0.090	0.425	0.343	0.263	0.153	0.277	0.379
	Mgmt by Exception Passive	0.243	0.149	0.336	0.471	0.416	-0.119	-0.173	-0.327	-0.158	-0.319	-0.280
	Laissez-Faire	0.226	0.237	0.393	0.426	0.439	-0.191	-0.255	-0.307	-0.154	-0.295	-0.311
	Passive Avoidant	0.264	0.211	0.405	0.506	0.478	-0.170	-0.235	-0.357	-0.175	-0.346	-0.330
	Extra Effort	-0.251	-0.159	-0.150	-0.299	-0.275	0.462	0.430	0.410	0.295	0.358	0.506
	Effectiveness	-0.404	-0.287	-0.338	-0.379	-0.469	0.512	0.492	0.603	0.435	0.552	0.668
	Satisfaction	-0.349	-0.297	-0.376	-0.286	-0.447	0.592	0.479	0.542	0.419	0.484	0.648

Appendix K (cont'd)

ROCI-II C Integrating Pooled Within Groups Matrices

Measure	Correlation	Multifactor Leadership Questionnaire								
		Transactional Leadership			Passive Avoidant			Outcomes of Leadership		
		Contingent Reward	Mgmt by Exception Active	Transactional	Mgmt by Exception Passive	Laissez-Faire	Passive Avoidant	Extra Effort	Effectiveness	Satisfaction
TEIQue										
	Well-being	-0.301	0.115	-0.081	0.243	0.226	0.264	-0.251	-0.404	-0.349
	Self-Control	-0.083	0.010	-0.038	0.149	0.237	0.211	-0.159	-0.287	-0.297
	Emotionality	-0.285	0.130	-0.060	0.336	0.393	0.405	-0.150	-0.338	-0.376
	Sociability	-0.229	0.080	-0.066	0.471	0.426	0.506	-0.299	-0.379	-0.286
	Global	-0.313	0.110	-0.090	0.416	0.439	0.478	-0.275	-0.469	-0.447
MLQ										
	Idealized Attributes	0.584	0.140	0.425	-0.119	-0.191	-0.170	0.462	0.512	0.592
	Idealized Behaviors	0.544	0.058	0.343	-0.173	-0.255	-0.235	0.430	0.492	0.479
	Inspirational Motivation	0.501	-0.017	0.263	-0.327	-0.307	-0.357	0.410	0.603	0.542
	Intellectual Stimulation	0.407	-0.095	0.153	-0.158	-0.154	-0.175	0.295	0.435	0.419
	Individual Consideration	0.508	-0.003	0.277	-0.319	-0.295	-0.346	0.358	0.552	0.484
	Transformational	0.657	0.024	0.379	-0.280	-0.311	-0.330	0.506	0.668	0.648
	Contingent Reward	1.000	0.186	0.689	-0.018	-0.189	-0.106	0.356	0.480	0.440
	Mgmt by Exception Active	0.186	1.000	0.841	0.236	0.182	0.237	0.027	-0.054	-0.047
	Transactional	0.689	0.841	1.000	0.164	0.030	0.116	0.216	0.223	0.207
	Mgmt by Exception Passive	-0.018	0.236	0.164	1.000	0.586	0.913	-0.195	-0.228	-0.211
	Laissez-Faire	-0.189	0.182	0.030	0.586	1.000	0.866	-0.280	-0.325	-0.357
	Passive Avoidant	-0.106	0.237	0.116	0.913	0.866	1.000	-0.262	-0.304	-0.310
	Extra Effort	0.356	0.027	0.216	-0.195	-0.280	-0.262	1.000	0.545	0.531
	Effectiveness	0.480	-0.054	0.223	-0.228	-0.325	-0.304	0.545	1.000	0.676
	Satisfaction	0.440	-0.047	0.207	-0.211	-0.357	-0.310	0.531	0.676	1.000

APPENDIX L. ROCI-II C OBLIGING POOLED WITHIN-GROUPS MATRICES

Measure	Correlation	Trait Emotional Intelligence Questionnaire					Multifactor Leadership Questionnaire					
							Transformational Leadership					
		Well-being	Self-Control	Emotionality	Sociability	Global	Idealized Attributes	Idealized Behaviors	Inspirational Motivation	Intellectual Stimulation	Individual Consideration	Transformational
TEIQue												
	Well-being	1.000	0.480	0.421	0.257	0.681	-0.290	-0.272	-0.440	-0.108	-0.226	-0.347
	Self-Control	0.480	1.000	0.458	0.316	0.714	-0.140	-0.168	-0.283	-0.067	-0.069	-0.191
	Emotionality	0.421	0.458	1.000	0.438	0.841	-0.225	-0.357	-0.468	-0.318	-0.293	-0.430
	Sociability	0.257	0.316	0.438	1.000	0.672	-0.326	-0.305	-0.440	-0.220	-0.159	-0.378
	Global	0.681	0.714	0.841	0.672	1.000	-0.345	-0.383	-0.569	-0.274	-0.273	-0.479
MLQ												
	Idealized Attributes	-0.290	-0.140	-0.225	-0.326	-0.345	1.000	0.442	0.579	0.336	0.448	0.720
	Idealized Behaviors	-0.272	-0.168	-0.357	-0.305	-0.383	0.442	1.000	0.588	0.468	0.496	0.790
	Inspirational Motivation	-0.440	-0.283	-0.468	-0.440	-0.569	0.579	0.588	1.000	0.542	0.537	0.837
	Intellectual Stimulation	-0.108	-0.067	-0.318	-0.220	-0.274	0.336	0.468	0.542	1.000	0.593	0.749
	Individual Consideration	-0.226	-0.069	-0.293	-0.159	-0.273	0.448	0.496	0.537	0.593	1.000	0.781
	Transformational	-0.347	-0.191	-0.430	-0.378	-0.479	0.720	0.790	0.837	0.749	0.781	1.000
	Contingent Reward	-0.300	-0.079	-0.283	-0.227	-0.311	0.585	0.544	0.500	0.405	0.507	0.657
	Mgmt by Exception Active	0.110	-0.005	0.120	0.067	0.096	0.140	0.063	-0.005	-0.088	0.008	0.033
	Transactional	-0.085	-0.047	-0.067	-0.075	-0.100	0.426	0.347	0.272	0.158	0.284	0.386
	Mgmt by Exception Passive	0.240	0.141	0.331	0.467	0.411	-0.120	-0.170	-0.322	-0.154	-0.314	-0.276
	Laissez-Faire	0.219	0.218	0.381	0.413	0.424	-0.195	-0.251	-0.294	-0.144	-0.284	-0.302
	Passive Avoidant	0.259	0.197	0.396	0.497	0.468	-0.172	-0.232	-0.347	-0.168	-0.337	-0.323
	Extra Effort	-0.253	-0.165	-0.154	-0.305	-0.282	0.462	0.432	0.415	0.297	0.362	0.509
	Effectiveness	-0.401	-0.262	-0.320	-0.359	-0.450	0.529	0.496	0.595	0.431	0.546	0.669
	Satisfaction	-0.344	-0.278	-0.364	-0.268	-0.431	0.602	0.479	0.533	0.413	0.476	0.645

Appendix L (cont'd)

ROCI-II C Obliging Pooled Within Groups Matrices

		Multifactor Leadership Questionnaire								
		Transactional Leadership			Passive Avoidant			Outcomes of Leadership		
Measure	Correlation	Contingent Reward	Mgmt by Exception Active	Transactional	Mgmt by Exception Passive	Laissez-Faire	Passive Avoidant	Extra Effort	Effectiveness	Satisfaction
TEIQue										
	Well-being	-0.300	0.110	-0.085	0.240	0.219	0.259	-0.253	-0.401	-0.344
	Self-Control	-0.079	-0.005	-0.047	0.141	0.218	0.197	-0.165	-0.262	-0.278
	Emotionality	-0.283	0.120	-0.067	0.331	0.381	0.396	-0.154	-0.320	-0.364
	Sociability	-0.227	0.067	-0.075	0.467	0.413	0.497	-0.305	-0.359	-0.268
	Global	-0.311	0.096	-0.100	0.411	0.424	0.468	-0.282	-0.450	-0.431
MLQ										
	Idealized Attributes	0.585	0.140	0.426	-0.120	-0.195	-0.172	0.462	0.529	0.602
	Idealized Behaviors	0.544	0.063	0.347	-0.170	-0.251	-0.232	0.432	0.496	0.479
	Inspirational Motivation	0.500	-0.005	0.272	-0.322	-0.294	-0.347	0.415	0.595	0.533
	Intellectual Stimulation	0.405	-0.088	0.158	-0.154	-0.144	-0.168	0.297	0.431	0.413
	Individual Consideration	0.507	0.008	0.284	-0.314	-0.284	-0.337	0.362	0.546	0.476
	Transformational	0.657	0.033	0.386	-0.276	-0.302	-0.323	0.509	0.669	0.645
	Contingent Reward	1.000	0.191	0.692	-0.015	-0.186	-0.103	0.357	0.486	0.441
	Mgmt by Exception Active	0.191	1.000	0.840	0.231	0.169	0.228	0.025	-0.032	-0.031
	Transactional	0.692	0.840	1.000	0.161	0.021	0.111	0.215	0.244	0.220
	Mgmt by Exception Passive	-0.015	0.231	0.161	1.000	0.584	0.914	-0.197	-0.218	-0.202
	Laissez-Faire	-0.186	0.169	0.021	0.584	1.000	0.864	-0.287	-0.300	-0.339
	Passive Avoidant	-0.103	0.228	0.111	0.914	0.864	1.000	-0.266	-0.285	-0.295
	Extra Effort	0.357	0.025	0.215	-0.197	-0.287	-0.266	1.000	0.567	0.543
	Effectiveness	0.486	-0.032	0.244	-0.218	-0.300	-0.285	0.567	1.000	0.663
	Satisfaction	0.441	-0.031	0.220	-0.202	-0.339	-0.295	0.543	0.663	1.000

APPENDIX M. ROCI-II C DOMINATING POOLED WITHIN-GROUPS MATRICES

Measure	Correlation	Trait Emotional Intelligence Questionnaire					Multifactor Leadership Questionnaire					
							Transformational Leadership					
		Well-being	Self-Control	Emotionality	Sociability	Global	Idealized Attributes	Idealized Behaviors	Inspirational Motivation	Intellectual Stimulation	Individual Consideration	Transformational
TEIQue												
	Well-being	1.000	0.474	0.430	0.260	0.679	-0.297	-0.274	-0.442	-0.105	-0.230	-0.350
	Self-Control	0.474	1.000	0.485	0.313	0.717	-0.139	-0.179	-0.297	-0.079	-0.092	-0.206
	Emotionality	0.430	0.485	1.000	0.479	0.858	-0.230	-0.355	-0.475	-0.318	-0.294	-0.433
	Sociability	0.260	0.313	0.479	1.000	0.680	-0.317	-0.334	-0.468	-0.253	-0.202	-0.409
	Global	0.679	0.717	0.858	0.680	1.000	-0.342	-0.391	-0.580	-0.286	-0.293	-0.491
MLQ												
	Idealized Attributes	-0.297	-0.139	-0.230	-0.317	-0.342	1.000	0.452	0.582	0.348	0.461	0.728
	Idealized Behaviors	-0.274	-0.179	-0.355	-0.334	-0.391	0.452	1.000	0.587	0.464	0.492	0.789
	Inspirational Motivation	-0.442	-0.297	-0.475	-0.468	-0.580	0.582	0.587	1.000	0.543	0.542	0.838
	Intellectual Stimulation	-0.105	-0.079	-0.318	-0.253	-0.286	0.348	0.464	0.543	1.000	0.590	0.749
	Individual Consideration	-0.230	-0.092	-0.294	-0.202	-0.293	0.461	0.492	0.542	0.590	1.000	0.782
	Transformational	-0.350	-0.206	-0.433	-0.409	-0.491	0.728	0.789	0.838	0.749	0.782	1.000
	Contingent Reward	-0.300	-0.075	-0.292	-0.221	-0.309	0.584	0.552	0.504	0.415	0.520	0.664
	Mgmt by Exception Active	0.116	0.025	0.117	0.123	0.123	0.128	0.076	-0.008	-0.076	0.022	0.039
	Transactional	-0.082	-0.023	-0.076	-0.032	-0.080	0.420	0.364	0.274	0.174	0.305	0.398
	Mgmt by Exception Passive	0.234	0.144	0.333	0.494	0.417	-0.130	-0.165	-0.322	-0.147	-0.311	-0.274
	Laissez-Faire	0.220	0.235	0.392	0.442	0.440	-0.197	-0.252	-0.304	-0.147	-0.291	-0.307
	Passive Avoidant	0.256	0.208	0.404	0.529	0.479	-0.180	-0.229	-0.352	-0.165	-0.339	-0.325
	Extra Effort	-0.242	-0.141	-0.158	-0.285	-0.264	0.465	0.439	0.412	0.300	0.370	0.513
	Effectiveness	-0.392	-0.271	-0.344	-0.379	-0.462	0.524	0.496	0.604	0.436	0.560	0.673
	Satisfaction	-0.361	-0.316	-0.374	-0.312	-0.460	0.599	0.480	0.545	0.421	0.484	0.650

Appendix M (cont'd)

ROCI-II C Dominating Pooled Within-Groups Matrices

Measure	Correlation	Multifactor Leadership Questionnaire								
		Transactional Leadership			Passive Avoidant			Outcomes of Leadership		
		Contingent Reward	Mgmt by Exception Active	Transactional	Mgmt by Exception Passive	Laissez-Faire	Passive Avoidant	Extra Effort	Effectiveness	Satisfaction
TEIQue										
	Well-being	-0.300	0.116	-0.082	0.234	0.220	0.256	-0.242	-0.392	-0.361
	Self-Control	-0.075	0.025	-0.023	0.144	0.235	0.208	-0.141	-0.271	-0.316
	Emotionality	-0.292	0.117	-0.076	0.333	0.392	0.404	-0.158	-0.344	-0.374
	Sociability	-0.221	0.123	-0.032	0.494	0.442	0.529	-0.285	-0.379	-0.312
	Global	-0.309	0.123	-0.080	0.417	0.440	0.479	-0.264	-0.462	-0.460
MLQ										
	Idealized Attributes	0.584	0.128	0.420	-0.130	-0.197	-0.180	0.465	0.524	0.599
	Idealized Behaviors	0.552	0.076	0.364	-0.165	-0.252	-0.229	0.439	0.496	0.480
	Inspirational Motivation	0.504	-0.008	0.274	-0.322	-0.304	-0.352	0.412	0.604	0.545
	Intellectual Stimulation	0.415	-0.076	0.174	-0.147	-0.147	-0.165	0.300	0.436	0.421
	Individual Consideration	0.520	0.022	0.305	-0.311	-0.291	-0.339	0.370	0.560	0.484
	Transformational	0.664	0.039	0.398	-0.274	-0.307	-0.325	0.513	0.673	0.650
	Contingent Reward	1.000	0.179	0.690	-0.019	-0.190	-0.108	0.352	0.481	0.448
	Mgmt by Exception Active	0.179	1.000	0.836	0.227	0.177	0.229	0.015	-0.056	-0.038
	Transactional	0.690	0.836	1.000	0.156	0.024	0.108	0.208	0.226	0.222
	Mgmt by Exception Passive	-0.019	0.227	0.156	1.000	0.583	0.912	-0.193	-0.218	-0.214
	Laissez-Faire	-0.190	0.177	0.024	0.583	1.000	0.865	-0.280	-0.321	-0.360
	Passive Avoidant	-0.108	0.229	0.108	0.912	0.865	1.000	-0.261	-0.297	-0.314
	Extra Effort	0.352	0.015	0.208	-0.193	-0.280	-0.261	1.000	0.540	0.547
	Effectiveness	0.481	-0.056	0.226	-0.218	-0.321	-0.297	0.540	1.000	0.695
	Satisfaction	0.448	-0.038	0.222	-0.214	-0.360	-0.314	0.547	0.695	1.000

APPENDIX N. ROCI-II C AVOIDING POOLED WITHIN-GROUPS MATRICES

Measure	Correlation	Trait Emotional Intelligence Questionnaire					Multifactor Leadership Questionnaire					
							Transformational Leadership					
		Well-being	Self-Control	Emotionality	Sociability	Global	Idealized Attributes	Idealized Behaviors	Inspirational Motivation	Intellectual Stimulation	Individual Consideration	Transformational
TEIQue												
	Well-being	1.000	0.487	0.429	0.272	0.699	-0.290	-0.275	-0.444	-0.099	-0.226	-0.348
	Self-Control	0.487	1.000	0.454	0.307	0.716	-0.113	-0.156	-0.282	-0.078	-0.075	-0.185
	Emotionality	0.429	0.454	1.000	0.421	0.838	-0.191	-0.343	-0.460	-0.327	-0.293	-0.419
	Sociability	0.272	0.307	0.421	1.000	0.658	-0.281	-0.283	-0.430	-0.240	-0.159	-0.363
	Global	0.699	0.716	0.838	0.658	1.000	-0.305	-0.365	-0.562	-0.286	-0.275	-0.467
MLQ												
	Idealized Attributes	-0.290	-0.113	-0.191	-0.281	-0.305	1.000	0.425	0.557	0.332	0.438	0.707
	Idealized Behaviors	-0.275	-0.156	-0.343	-0.283	-0.365	0.425	1.000	0.581	0.478	0.494	0.789
	Inspirational Motivation	-0.444	-0.282	-0.460	-0.430	-0.562	0.557	0.581	1.000	0.542	0.537	0.832
	Intellectual Stimulation	-0.099	-0.078	-0.327	-0.240	-0.286	0.332	0.478	0.542	1.000	0.596	0.755
	Individual Consideration	-0.226	-0.075	-0.293	-0.159	-0.275	0.438	0.494	0.537	0.596	1.000	0.783
	Transformational	-0.348	-0.185	-0.419	-0.363	-0.467	0.707	0.789	0.832	0.755	0.783	1.000
	Contingent Reward	-0.301	-0.076	-0.280	-0.222	-0.308	0.587	0.543	0.500	0.414	0.507	0.661
	Mgmt by Exception Active	0.100	0.015	0.134	0.097	0.116	0.159	0.062	0.006	-0.043	0.014	0.053
	Transactional	-0.096	-0.031	-0.058	-0.053	-0.087	0.444	0.350	0.284	0.199	0.293	0.408
	Mgmt by Exception Passive	0.235	0.141	0.326	0.475	0.409	-0.095	-0.161	-0.306	-0.126	-0.308	-0.256
	Laissez-Faire	0.216	0.234	0.388	0.433	0.437	-0.170	-0.248	-0.285	-0.115	-0.283	-0.287
	Passive Avoidant	0.256	0.206	0.398	0.514	0.475	-0.145	-0.226	-0.335	-0.136	-0.335	-0.304
	Extra Effort	-0.249	-0.155	-0.143	-0.299	-0.271	0.461	0.428	0.406	0.293	0.354	0.504
	Effectiveness	-0.404	-0.284	-0.336	-0.384	-0.473	0.515	0.492	0.607	0.443	0.552	0.673
	Satisfaction	-0.346	-0.287	-0.364	-0.269	-0.435	0.584	0.472	0.531	0.414	0.478	0.640

Appendix N (cont'd)

ROCI-II C Avoiding Pooled Withing-Groups Matrices

		Multifactor Leadership Questionnaire								
		Transactional Leadership			Passive Avoidant			Outcomes of Leadership		
Measure	Correlation	Contingent Reward	Mgmt by Exception Active	Transactional	Mgmt by Exception Passive	Laissez-Faire	Passive Avoidant	Extra Effort	Effectiveness	Satisfaction
TEIQue										
	Well-being	-0.301	0.100	-0.096	0.235	0.216	0.256	-0.249	-0.404	-0.346
	Self-Control	-0.076	0.015	-0.031	0.141	0.234	0.206	-0.155	-0.284	-0.287
	Emotionality	-0.280	0.134	-0.058	0.326	0.388	0.398	-0.143	-0.336	-0.364
	Sociability	-0.222	0.097	-0.053	0.475	0.433	0.514	-0.299	-0.384	-0.269
	Global	-0.308	0.116	-0.087	0.409	0.437	0.475	-0.271	-0.473	-0.435
MLQ										
	Idealized Attributes	0.587	0.159	0.444	-0.095	-0.170	-0.145	0.461	0.515	0.584
	Idealized Behaviors	0.543	0.062	0.350	-0.161	-0.248	-0.226	0.428	0.492	0.472
	Inspirational Motivation	0.500	0.006	0.284	-0.306	-0.285	-0.335	0.406	0.607	0.531
	Intellectual Stimulation	0.414	-0.043	0.199	-0.126	-0.115	-0.136	0.293	0.443	0.414
	Individual Consideration	0.507	0.014	0.293	-0.308	-0.283	-0.335	0.354	0.552	0.478
	Transformational	0.661	0.053	0.408	-0.256	-0.287	-0.304	0.504	0.673	0.640
	Contingent Reward	1.000	0.194	0.701	-0.011	-0.187	-0.101	0.354	0.479	0.438
	Mgmt by Exception Active	0.194	1.000	0.835	0.206	0.143	0.200	0.037	-0.054	-0.033
	Transactional	0.701	0.835	1.000	0.143	-0.002	0.088	0.226	0.228	0.221
	Mgmt by Exception Passive	-0.011	0.206	0.143	1.000	0.570	0.910	-0.188	-0.226	-0.193
	Laissez-Faire	-0.187	0.143	-0.002	0.570	1.000	0.859	-0.276	-0.327	-0.344
	Passive Avoidant	-0.101	0.200	0.088	0.910	0.859	1.000	-0.256	-0.306	-0.294
	Extra Effort	0.354	0.037	0.226	-0.188	-0.276	-0.256	1.000	0.545	0.529
	Effectiveness	0.479	-0.054	0.228	-0.226	-0.327	-0.306	0.545	1.000	0.677
	Satisfaction	0.438	-0.033	0.221	-0.193	-0.344	-0.294	0.529	0.677	1.000

APPENDIX O. ROCI-II C COMPROMISING POOLED WITHIN-GROUPS MATRICES

Measure	Correlation	Trait Emotional Intelligence Questionnaire					Multifactor Leadership Questionnaire					
							Transformational Leadership					
		Well-being	Self-Control	Emotionality	Sociability	Global	Idealized Attributes	Idealized Behaviors	Inspirational Motivation	Intellectual Stimulation	Individual Consideration	Transformational
TEIQue												
	Well-being	1.000	0.482	0.424	0.262	0.681	-0.289	-0.274	-0.444	-0.112	-0.230	-0.350
	Self-Control	0.482	1.000	0.467	0.331	0.721	-0.137	-0.173	-0.296	-0.077	-0.083	-0.201
	Emotionality	0.424	0.467	1.000	0.447	0.843	-0.222	-0.359	-0.476	-0.324	-0.302	-0.436
	Sociability	0.262	0.331	0.447	1.000	0.680	-0.321	-0.308	-0.450	-0.228	-0.171	-0.385
	Global	0.681	0.721	0.843	0.680	1.000	-0.339	-0.385	-0.577	-0.282	-0.284	-0.485
MLQ												
	Idealized Attributes	-0.289	-0.137	-0.222	-0.321	-0.339	1.000	0.441	0.573	0.334	0.444	0.716
	Idealized Behaviors	-0.274	-0.173	-0.359	-0.308	-0.385	0.441	1.000	0.589	0.469	0.498	0.790
	Inspirational Motivation	-0.444	-0.296	-0.476	-0.450	-0.577	0.573	0.589	1.000	0.545	0.543	0.838
	Intellectual Stimulation	-0.112	-0.077	-0.324	-0.228	-0.282	0.334	0.469	0.545	1.000	0.596	0.751
	Individual Consideration	-0.230	-0.083	-0.302	-0.171	-0.284	0.444	0.498	0.543	0.596	1.000	0.783
	Transformational	-0.350	-0.201	-0.436	-0.385	-0.485	0.716	0.790	0.838	0.751	0.783	1.000
	Contingent Reward	-0.301	-0.083	-0.285	-0.229	-0.313	0.584	0.544	0.501	0.407	0.508	0.657
	Mgmt by Exception Active	0.115	0.010	0.130	0.080	0.110	0.140	0.058	-0.017	-0.095	-0.003	0.024
	Transactional	-0.081	-0.038	-0.060	-0.066	-0.090	0.425	0.343	0.263	0.153	0.277	0.379
	Mgmt by Exception Passive	0.243	0.149	0.336	0.471	0.416	-0.119	-0.173	-0.327	-0.158	-0.319	-0.280
	Laissez-Faire	0.226	0.237	0.393	0.426	0.439	-0.191	-0.255	-0.307	-0.154	-0.295	-0.311
	Passive Avoidant	0.264	0.211	0.405	0.506	0.478	-0.170	-0.235	-0.357	-0.175	-0.346	-0.330
	Extra Effort	-0.251	-0.159	-0.150	-0.299	-0.275	0.462	0.430	0.410	0.295	0.358	0.506
	Effectiveness	-0.404	-0.287	-0.338	-0.379	-0.469	0.512	0.492	0.603	0.435	0.552	0.668
	Satisfaction	-0.349	-0.297	-0.376	-0.286	-0.447	0.592	0.479	0.542	0.419	0.484	0.648

Appendix O (cont'd)

ROCI-II C Compromising Pooled Within-Groups Matrices

Measure	Correlation	Multifactor Leadership Questionnaire								
		Transactional Leadership			Passive Avoidant			Outcomes of Leadership		
		Contingent Reward	Mgmt by Exception Active	Transactional	Mgmt by Exception Passive	Laissez-Faire	Passive Avoidant	Extra Effort	Effectiveness	Satisfaction
TEIQue										
	Well-being	-0.301	0.115	-0.081	0.243	0.226	0.264	-0.251	-0.404	-0.349
	Self-Control	-0.083	0.010	-0.038	0.149	0.237	0.211	-0.159	-0.287	-0.297
	Emotionality	-0.285	0.130	-0.060	0.336	0.393	0.405	-0.150	-0.338	-0.376
	Sociability	-0.229	0.080	-0.066	0.471	0.426	0.506	-0.299	-0.379	-0.286
	Global	-0.313	0.110	-0.090	0.416	0.439	0.478	-0.275	-0.469	-0.447
MLQ										
	Idealized Attributes	0.584	0.140	0.425	-0.119	-0.191	-0.170	0.462	0.512	0.592
	Idealized Behaviors	0.544	0.058	0.343	-0.173	-0.255	-0.235	0.430	0.492	0.479
	Inspirational Motivation	0.501	-0.017	0.263	-0.327	-0.307	-0.357	0.410	0.603	0.542
	Intellectual Stimulation	0.407	-0.095	0.153	-0.158	-0.154	-0.175	0.295	0.435	0.419
	Individual Consideration	0.508	-0.003	0.277	-0.319	-0.295	-0.346	0.358	0.552	0.484
	Transformational	0.657	0.024	0.379	-0.280	-0.311	-0.330	0.506	0.668	0.648
	Contingent Reward	1.000	0.186	0.689	-0.018	-0.189	-0.106	0.356	0.480	0.440
	Mgmt by Exception Active	0.186	1.000	0.841	0.236	0.182	0.237	0.027	-0.054	-0.047
	Transactional	0.689	0.841	1.000	0.164	0.030	0.116	0.216	0.223	0.207
	Mgmt by Exception Passive	-0.018	0.236	0.164	1.000	0.586	0.913	-0.195	-0.228	-0.211
	Laissez-Faire	-0.189	0.182	0.030	0.586	1.000	0.866	-0.280	-0.325	-0.357
	Passive Avoidant	-0.106	0.237	0.116	0.913	0.866	1.000	-0.262	-0.304	-0.310
	Extra Effort	0.356	0.027	0.216	-0.195	-0.280	-0.262	1.000	0.545	0.531
	Effectiveness	0.480	-0.054	0.223	-0.228	-0.325	-0.304	0.545	1.000	0.676
	Satisfaction	0.440	-0.047	0.207	-0.211	-0.357	-0.310	0.531	0.676	1.000