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Age and Experience as Factors for Predicting Emotional Intelligence in Nurse Managers

PATRICIA GURSKY
Walden University

Walden University

College of Health Professions

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Patricia Gursky

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Review Committee
Dr. Leslie Hussey, Committee Chairperson, Nursing Faculty
Dr. Janice Long, Committee Member, Nursing Faculty
Dr. Carolyn Sipes, University Reviewer, Nursing Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

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Abstract

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MSN, Walden University, 2014

Dissertation Submitted in Partial Fulfillment

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Abstract

Emotional intelligence (EI) is defined as the capacity to recognize and manage emotions and feelings to guide behaviors which is an ability that is crucial for nurse mangers to possess. Understanding the key factors for predicting emotional intelligence in nurse managers may influence hiring practices and the appointment of managers who will influence job satisfaction, employee engagement, retention, and turnover. The purpose of this quantitative predictive correlational study, guided by King's theory of goal attainment and Mayer and Salovey's four-branch ability model of EI, was to determine whether age, years of experience as a nurse, and years of experience as a nurse manager predict the EI scores of nurse managers. The participant sample was a group of 77 nurse managers with at least five direct reports. The instrument used to assess the nurse managers' EI was the Self-Rated Emotional Intelligence Scale. Pearson's correlation test was performed for all three independent variables and the EI scores along with multiple regression and analysis of variance testing. The results demonstrated no statistical significance and a limited (3.4%) influence of age, years of experience as a nurse, and years of experience as a manager on the EI scores of nurse managers. However, years of experience as a nurse and whether leadership styles of nurse managers predict EI scores warrants further investigation. Understanding the key factors for predicting EI in nurse managers could result in positive social change by improving job performance and satisfaction at the individual level and influencing hiring practices at the organizational level.

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Dedication

I dedicate this manuscript to my husband, Don. Hour after hour he would check on me while I conducted what seemed like an endless literature review and subsequent rewrites and never once passed judgement that I was missing out on some fun times. Additionally, Don ensured I would take occasional breaks to get out of my office for some fresh air and down time to allow me to reengage and reinvigorate. Through 34 years of marriage, this man has been my biggest fan and never more so than throughout this dissertation journey. Thank you, my love. I have finally made it!

Acknowledgments

The accomplishment of completing my dissertation requires the acknowledgement of many individuals. First, I must thank my faculty chair, Dr. Leslie Hussey, who provided me with the style of guidance I needed to move forward through the complex process. Next, I would like to thank Dr. Janice Long for giving me that extra insight to a document that sometimes gets murky after too many reviews. My entire dissertation committee deserves much appreciation for guiding me through to the end. Additionally, I must acknowledge the guidance and support of Dr. Paul Dougherty who served as my mentor at the partner organization through the data collection process.

Throughout this dissertation journey, I have had much support and understanding from my family, friends, and coworkers; you know who you are. Each of you provided me with exactly the right amount of tough love when I needed it most, and for that I am forever grateful. By name I must sincerely thank my daughter, Laura; her husband, Seth; and my two grandchildren, Michael and Freyja, who were often neglected as I plodded along the path. I am forever grateful that they never once made me feel guilty for wanting to pursue this dream.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

Emotional intelligence (EI) is not a new concept; however, it remains a topic of interest in the literature. An abundance of research has been conducted to associate EI with academic performance, educational level, gender, competency, retention, and job satisfaction (Anderson, 2016; Cabello et al., 2016; Jafferian, 2002; Phillips & Harris, 2017; Reemts, 2015). Historically, managers have been assessed by a set of cognitive and technical skills yet were not necessarily successful in their role (Mayur, 2016). Mayur (2016) concluded a significant relationship may exist between a manager's performance and their EI level.

Nursing leaders are a vital component of the future of health care. They are in a position of influence to affect positive patient outcomes and overall organizational success (Institute of Medicine & Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing, 2011). Further study is necessary to understand additional key factors for predicting EI, particularly in nursing leaders. Lopes (2016) suggested EI should be categorized as an ability, rather than a collection of behaviors, that can be developed and predicted.

The potential for positive social change resulting from understanding the key factors for predicting EI in nurse managers is to influence hiring practices. From the demographic information on a resume, I would like to know that I can predict whether an applicant will have a high EI level. In that case, I may be placing managers who will influence job satisfaction, employee engagement, retention, and turnover as previously

described in the literature. In Chapter 1, I present the study's background, problem statement, purpose, research questions and hypotheses, theoretical framework, nature, definitions, assumptions, scope, limitations, and significance.

Background

As early as the 1970s, research was conducted into what differentiated an exceptional employee from a mediocre one (McClelland, 1973). In the mid 1990s, researchers continued to define EI further. Mayer and Salovey (1995) provided a criterion for EI construction and regulation based on certain assumptions: Pleasure is good, pain is bad, and people are happiest when those around them are happy. EI was later operationalized into meeting the three criteria required to be considered intelligence and gained ground in being given serious consideration (Mayer et al., 1999). In the early 2000s, Mayer et al. (2008) described EI as an ability and not merely a group of eclectic traits that can be developed through training.

EI encompasses traits and abilities independently and mixed combinations of both traits and abilities, all of which can be measured (Joseph et al., 2015). EI's ability model was introduced in 1990 as three branches that include emotion appraisal, emotion regulation, and emotion utilization (Salovey & Mayer, 1990). In the late 1990s, Mayer and Salovey (1997) revised their EI concepts to become the four-branch ability model: perception of emotion, thought facilitation, understanding emotions, and emotion management.

A literature gap existed regarding the key factors for predicting EI, particularly in nursing leaders. The purpose of this study was to determine whether age, years of experience as a nurse, and years of experience as a nurse manager predict the EI score in nurse managers. Because EI had already been linked to nursing performance and job satisfaction (Ljungholm, 2014), hiring nurse managers with high EI scores impacted the initiatives for improved performance of those they led.

Problem Statement

EI is defined as the capacity to recognize and manage emotions and feelings to guide behaviors (Wicks et al., 2014). EI is divided into five fundamental traits: self-awareness, self-regulation, motivation, empathy, and social skills (Clancy, 2014). Managers who routinely display EI improve employee engagement scores and retention rates in their units (Prufeta, 2017). Conversely, Wallis and Kennedy (2013) found that nurse managers with low EI scores had employees with low engagement scores and retention rates. If health care leaders could identify what key factors predict EI scores, they would be better equipped to hire more effective nurse managers (Spano-Szekely et al., 2016).

Codier (2014) stated that nurse leaders with EI demonstrated improved organizational outcomes including higher employee satisfaction, retention, and team performance. Nurse managers with high EI scores affect nurse performance and patient outcomes (Spano-Szekely et al., 2016). Echevarria et al. (2017) and Prufeta (2017) conducted research that included leadership experience as a demographic variable, which

resulted in higher EI scores; however, this research did not indicate a relationship to any other key factors such as age, years of experience as a nurse, and years of experiences as a nurse manager. There was a gap in the literature regarding whether the variables of age, years of experience as a nurse, or years of experience as a nurse manager have a predictive relationship to EI. Further study was needed to determine whether these key factors influence EI scores in nurse managers.

Purpose of the Study

The purpose of this quantitative predictive correlational study was to determine whether age, years of experience as a nurse, and years of experience as a nurse manager predict the EI score in nurse managers.

Research Questions and Hypotheses

RQ1: What is the relationship between age and EI scores of nurse managers?

H_o1: There is no relationship between age and EI scores of nurse managers.

H_a1: There is a relationship between age and EI scores of nurse managers.

RQ2: What is the relationship between years of experience as a nurse and EI scores of nurse managers?

H_o2: There is no relationship between years of experience as a nurse and EI scores of nurse managers.

H_a2: There is a relationship between years of experience as a nurse and EI scores of nurse managers.

RQ3: What is the relationship between years of experience as a manager and nurse managers' EI scores?

H_o3: There is no relationship between years of experience as a manager and nurse managers' EI scores.

H_a3: There is a relationship between years of experience as a manager and nurse managers' EI scores.

The variables of age, years of experience as a nurse, and years of experience as a nurse manager were measured in 5-year increments. The EI survey was conducted using a self-reported Likert-type scale.

Theoretical Framework

I used King's (1999) theory of goal attainment to guide my study, which includes the traits of "self, perception, role, communication, interaction, transaction, growth and development, time, space, and stress" (p. 293). Because EI can be divided into similar traits that include self-awareness, self-regulation, motivation, empathy, and social skills (Clancy, 2014), the theory of goal attainment was well suited to my study of key factors for predicting EI in nurse managers.

King (1999) defined a theory as that which takes an interrelated group of concepts and applies them to observable phenomena. A theoretical framework is used to expand knowledge and broaden the world's understanding (King, 1999). In a study conducted by Echevarria et al. (2017), EI in the transformational leader was guided by the theory of goal attainment and its link to guiding nursing practice, administration, and education.

Nature of the Study

I conducted a correlational study with a predictive design. This predictive design warranted a quantitative approach using multiple regression with three variables. The G*Power tool was used to determine the minimum sample size of 77 participants to be statistically significant with three variables. The intent was to determine whether any of the three variables, alone or together, predicted a higher EI score in nurse managers.

Definitions

For this study, the following operational definitions were used:

Age: The chronological age of an individual in years.

Emotional Intelligence (EI): The aptitude of reasoning about emotions that includes enhancing thinking, perception, and utilization of emotions. The capacity to understand and regulate emotions in self and others. And finally, the ability to apply emotions for growth and understanding (Mayer & Salovey, 1997).

Nurse manager: For this study's purpose, a nurse manager was defined as a registered nurse who has oversight of a minimum of five employees who are primarily other nurses but may include support staff such as nurses' aides and housekeeping staff.

Years of experience as a nurse: The number of years an individual has been practicing as a registered nurse. Any field of practice may be included, not excluding previous years of experience unrelated to the current practice area, as long as the primary duties included a registered nurse's functions.

Assumptions

There were four assumptions for this study: (a) The literature review demonstrating a positive relationship between leadership EI and organizational outcomes was conclusive, (b) the role of a nurse manager is complex, (c) nurse managers have the desire to influence the people in their reporting structure positively, and (d) the managers surveyed would answer honestly on the self-assessment survey for EI.

Scope and Delimitations

The social problem was that managers with EI are needed to support organizational growth and operational outcomes. However, it was not known what key variables might predict a higher level of EI. I conducted a quantitative study with a predictive correlational design using multiple regression with three variables. The dependent variable was the EI score of selected nurse managers as measured by the Self-Rated Emotional Intelligence Scale (SREIS). The independent variables were the nurse manager's age, years of experience as a nurse, and years of experience as a nurse manager. Because I sought to understand the relationship of each of the variables to the SREIS results, the predictive correlational design helped me determine whether there were relationships between the independent predictor variables and the dependent outcome variable. I considered conducting a qualitative study; however, I chose not to do so because the independent variables were discrete and suitable for a survey. The SREIS questionnaire was more appropriate for solitary reflection rather than a face-to-face interview scenario.

This study's scope included nurse managers in an academic health care setting with oversight or five or more employees. Exclusions included assistant nurse managers, clinical quality nurse leaders, and clinical education specialists. I collected additional demographic information including gender and level of education. Although some managers in my reporting structure may have responded to the survey, I was blinded to their identity and without influence.

King's (1999) theory of goal attainment was used to guide my study because it includes the traits of "self, perception, role, communication, interaction, transaction, growth and development, time, space, and stress" (p. 293), which pairs with the similar EI traits of self-awareness, self-regulation, motivation, empathy, and social skills (Clancy, 2014). In addition to the theory of goal attainment, I used EI theory to provide the supporting theoretical framework to guide my understanding of the seminal work as a foundation for this study. I considered using the leader-member exchange theory to guide my research; however, I did not do so because it heavily references the interactions between leader and follower in the vertical dyad of leader and subordinate (Campbell, 2020).

Limitations

One limitation of my chosen design was that I limited my study to three variables of interest, which did not include all possible variables that may influence EI scores. Another limitation was that the survey method used was the SREIS, which is a limited version of the full survey in a self-reporting format. Although instructions indicated the

participant was to score themselves based on how they are at the time of data collection, some may have chosen to answer how they want to be as leaders in the future.

My research method consisted of a survey to ascertain the demographics and required an EI test. The participants chosen were management-level nurses, so there was the possibility they were worried that a low EI score might affect their current position, which posed another possible limitation. As a final limitation, the participant pool was selected from a single institution that, although large, may not have been representative of the entire scope of nurse managers.

Significance

Current research showed that nurse managers with high EI are more effective in leading teams that produce better patient outcomes (Prufeta, 2017). Additional research was needed to determine what key factors may predict EI in nurse managers. This was an original study to examine the three variables of age, years of experience as a nurse, and years of experience as a nurse manager to understand their relationship to nurse managers' EI scores. The literature review in Chapter 2 addresses extensive research covering additional variables such as education and leadership style. I added to the body of knowledge by determining whether my selected variables predicted EI in nurse managers.

Codier (2014) made a case for hiring and retaining emotionally intelligent leaders to optimize performance. Standard hiring practices do not currently include an EI test but include the variables of age, years of experience as a nurse, and years of experience as a

nurse manager. By understanding the relationship among these variables and their prediction of EI scores, health care leaders may be better positioned to hire emotionally intelligent nurse managers. Codier found that EI in nurse leaders fostered EI in nurses, resulting in improved engagement and nurse turnover reduction. The emotionally intelligent nurse leader utilizes the characteristics of self-awareness and creates a favorable work environment (Codier, 2014). My study's results might inform the process by which leaders promote or hire.

Wicks et al. (2014) discussed EI as the ability to manage behaviors and emotions and impact others' behaviors with the use of EI traits. Results from the current research project may influence positive social change through indication of the demographic variables that predict higher EI in nurse managers. Hiring the nurse manager with EI will improve employee engagement scores and retention rates (Prufeta, 2017).

Summary

I explored the relationship among the variables of age, years of experience as a nurse, and years of experience as a nurse manager to EI. In doing so, I posited that hiring practices can be influenced to employ nurse managers with a high EI level to have a positive social change impact on job satisfaction and retention of those in their reporting structure. Chapter 2 presents the literature search strategy performed, the theoretical framework, and EI's relationship to leadership qualities, education, and nurse job satisfaction and performance.

Chapter 2: Literature Review

EI has been defined as the capacity to recognize and manage emotions and feelings to guide behaviors (Wicks et al., 2014). EI is divided into five fundamental traits: self-awareness, self-regulation, motivation, empathy, and social skills (Clancy, 2014). Managers who routinely display EI improve employee engagement scores and retention rates in their units (Prufeta, 2017). Conversely, Wallis and Kennedy (2013) found that nurse managers with low EI scores had employees with low engagement scores and retention rates. If health care leaders could identify what key factors predict EI scores, they would be better equipped to hire more effective nurse managers (Spano-Szekely et al., 2016).

Codier (2014) stated that nurse leaders with EI demonstrated improved organizational outcomes including employee satisfaction, retention, and team performance. Nurse managers with high EI scores affect nurse performance and patient outcomes (Spano-Szekely et al., 2016). Echevarria et al. (2017) and Prufeta (2017) conducted research that included leadership experience as a demographic variable, which resulted in higher EI scores than those leaders with little experience; however, this research did not indicate a relationship to any other key factors such as age, years of experience as a nurse, and years of experiences as a nurse manager. There was a gap in the literature regarding whether the variables of age, years of experience as a nurse, or years of experience as a nurse manager have a predictive relationship to EI. Further study was needed to determine whether these key factors influence EI scores in nurse

managers. The purpose of this study was to determine whether age, years of experience as a nurse, and years of experience as a nurse manager predict the EI score in nurse managers. Chapter 2 includes a discussion of the literature search strategy, the theoretical framework by which the study was guided, the existing literature including the background of EI, and a summary of the current knowledge related to the gap this study addressed.

Literature Search Strategy

The keywords searched included *emotional intelligence*, *nurse manager*, *nurse manager development*, *nursing experience*, *employee engagement*, *employee satisfaction*, *employee retention*, *healthcare*, *intelligence tests*, *emotional intelligence theories*, *gender and emotional intelligence*, and *competence*. I used the Boolean phrases "and", "or," and "not" in searches across multiple databases including Thoreau, ProQuest, PubMed, Sage Journals Online, CINAHL, and ScienceDirect through Walden University library services. I found additional literature through the Borland Library at the University of Florida and Google Scholar searches, as well as professional organization websites. For most of the literature review, I used a filter to select peer-reviewed material with date ranges of 2014–2020. Seminal and foundational literature was searched without filters to formulate the background material. An annotated bibliography of 33 articles was constructed to determine the usefulness of the literature.

Theoretical Foundation

I used King's (1999) theory of goal attainment to guide my study, which includes the traits of "self-perception, role, communication, interaction, transaction, growth and development, time, space, and stress" (p. 293). King's theory of goal attainment was derived from the philosophy of human beings. This theory supports the idea that humans grow from dependency to independence through their physical and social environments (King, 1999). Additionally, King stated that human beings' nature is outcome or goal driven. Because EI can be divided into similar traits that include self-awareness, self-regulation, motivation, empathy, and social skills (Clancy, 2014), the theory of goal attainment was well suited to my study of key factors for predicting EI in nurse managers.

EI theory provided the supporting theoretical framework to guide my understanding of the seminal work as a foundation for this study. Emotional intelligence can be defined as the capacity to process emotional information accurately and efficiently, including that information relevant to the recognition, construction, and regulation of emotion in oneself and others (Salovey & Mayer, 1990). Mayer and Salovey (2004) provided the groundwork for addressing a person's ability to cope with emotional information and make sound decisions when dealing with emotions. Mayer et al. (2008) further defined EI as more than a simple collection of traits, but one of understanding and reasoning in relation to those traits.

Mayer et al. (1999) posited that EI is different from the traditional measure of intelligence in that it encompasses feelings and emotions of self and others. Table 1 provides a comparison of the concepts within King's theory of goal attainment to those of Mayer and Salovey's (2008) four-branch ability model of EI.

Table 1

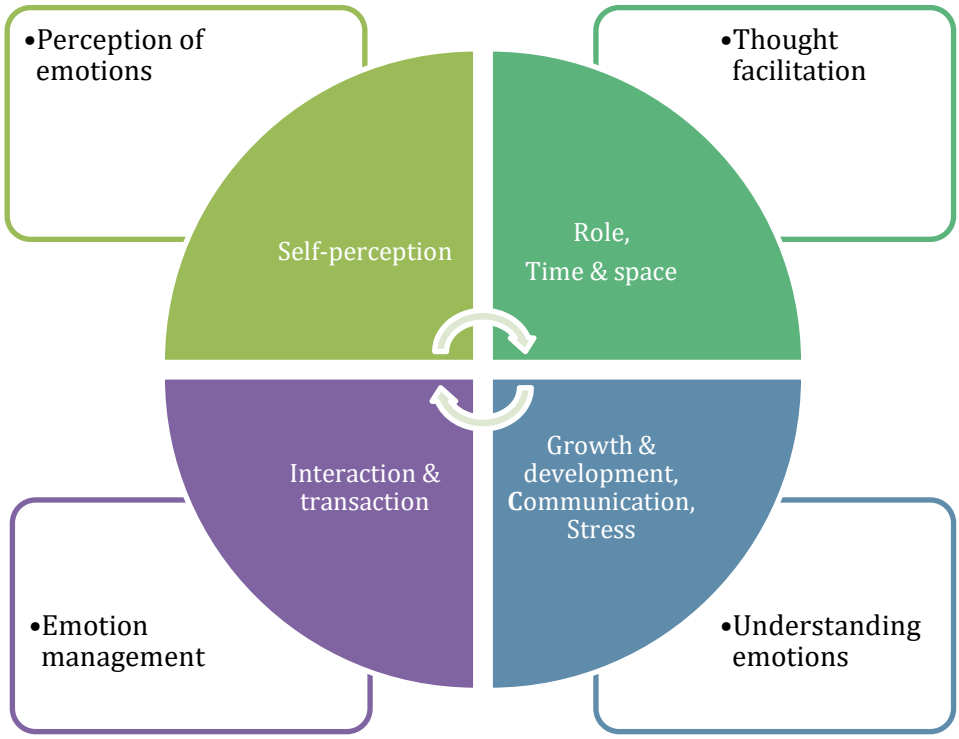
Supporting Theoretical Frameworks

Author and date	Theory	Concept
King (1999)	Goal attainment theory	Self-perception Role Time and space Growth and development Communication Stress Interaction and transaction
Mayer & Salovey (2008)	Four-branch ability model of EI	Perception of emotions Thought facilitation Understanding emotions Emotion management

Researchers use the theoretical framework to guide the research to expand knowledge and broaden the understanding of the world (King, 1999). In a study conducted by Echevarria et al. (2017), EI in the transformational leader was guided by the theory of goal attainment and its link to guiding nursing practice, administration, and education. Figure 1 depicts how King's (1999) theory of goal attainment is the theoretical foundation, while Mayer & Salovey's four-branch ability model of EI provides the supporting framework to support this study.

Figure 1

How King's Theory of Goal Attainment Interacts With Mayer and Salovey's Four-Branch Ability Model of EI



Note. Elements of Mayer and Salovey's four-branch ability model of EI are represented outside of the circle as the linking support to King's theory of goal attainment concepts inside the circle.

Literature Review

This section includes a literature review and synthesis of EI and leadership qualities, EI and education, and EI related to job satisfaction and performance.

Emotional Intelligence and Leadership Qualities

There is a need for relevant leadership practices to serve as the foundation for improving the quality of health care outcomes (Rich & Porter-O'Grady, 2011). In the past decade, scholars have been researching leadership qualities' relationship to EI to understand the combined impact on outcomes better. Echevarria et al. (2017) performed a study that indicated nurse managers with higher EI scores were fluent in the transformational leadership style. Crowne et al. (2017) examined the relationship between EI and transformational leadership and found that nurse managers appeared to show a positive relationship between transformational leadership and EI but could not support their proposal that personal leadership development impacts EI. Although both studies indicated that EI and transformational leadership skills were linked through their improved organizational outcomes, Crowne et al. tried to improve EI scores using a training program.

Codier (2104) stated that recruitment and retention of nurse leaders with the necessary EI skills to drive organizational change and impact fiscal performance and operational outcomes would be critical in the coming years. Vitello-Cicciu (2003) found similar results to Codier that nurse leaders with a high EI score also have a heightened awareness of their emotions and can utilize that to impact the emotions and behaviors of their direct reports for improved outcomes. Walter et al. (2011) supported the results of Vitrello-Cicciu and Codier and found that EI can positively influence a leader's effectiveness in guiding activities toward the achievement of organizational goals.

Brackett et al. (2011) reviewed the four branches of EI abilities (perception, use, understanding, and management of emotions) and applied them to workplace performance. Findings suggested that EI can influence the outcomes and behaviors of surrounding individuals. Similarly, Al-Hamdan et al. (2019) found a significant relationship between EI's influence on the choices of conflict management styles. However, a limitation of this study was that there might have been cultural biases.

Emotional Intelligence and Education

Strickland et al. (2019) determined that nursing graduates must learn competencies in technical skills and critical thinking and develop the ability to manage themselves and others' emotions. A higher nursing education level can facilitate establishing EI abilities necessary to successful nursing practice (Strickland et al., 2019). Reemts (2015) found that graduates of a baccalaureate nursing program scored either competent or high on an EI assessment. Prufeta (2017) continued the research of Reemts with a study that revealed nurse managers with advanced degrees in nursing, master's degree or higher, tended to have a significantly higher EI scores than their counterparts who had advanced degrees in nonnursing fields. Spano-Szekely et al. (2016) found a positive relationship between EI and advanced education. However, Spano-Szekely et al. did not suggest what level of advanced education produced a higher EI level among nurse managers.

Ohlson and Anderson (2015) conducted a study that did not support the results of Reemts (2015), Prufeta (2017), and Spano-Szekely et al. (2016). Ohlson and Anderson

found that a nurse manager's EI score was more dependent on their experience level than their education level. Ohlson and Anderson suggested that a nurse manager's behaviors and abilities can impact, both negatively and positively, on the nurses under their direction and learned EI skills from building professional relationships.

Emotionally Intelligent Leaders' Relationship to Job Satisfaction and Performance

Duffield et al. (2011) found that nurses who reported a high level of job satisfaction had managers who exceled at giving praise and recognition and could participate in decision making for the unit actively. Therefore, the EI level of nurse managers can significantly affect the job satisfaction of their direct reports. Ljungholm (2014) explored the emotional effect leaders had on the employees and found that the ability to handle self and others' emotions resulted in higher levels of job satisfaction and productivity. Similarly, Codier (2014) correlated the EI ability of nurse leaders with clinical nurses' outcomes and performance, while Coladonato and Manning (2017) conducted a descriptive study to understand how clinical nurses' job satisfaction was connected to their leaders' EI ability. Coladonato and Manning found that managers with moderate to high EI had nurses with moderate to high satisfaction scores.

The Gap in Emotionally Intelligent Nurse Managers

The literature review revealed that leaders with high EI scores typically had a high educational level, displayed traits of the transformational leadership style, and led teams that reported higher job satisfaction and productivity (Echevarria et al., 2017). Although this literature review indicated that nurse managers with high EI are more

effective in leading teams that produce better patient outcomes (Prufeta, 2017), additional research was needed to determine what key factors may predict EI in nurse managers.

Summary and Conclusions

The theoretical framework of goal attainment posits that nurses who wish to progress to a higher level of responsibility or become managers are invested in developing their EI skill set. The researchers who have been studying EI in nursing found that leaders with a strong EI foundation have higher education and direct reports who perform better and are more satisfied in their job (Spano-Szekely et al., 2016). The literature gap suggested examining whether age and experience may be contributing factors to EI scores. Chapter 3 outlines the research design used in the study, the rationale for the design selection, the methodology for conducting the study, and any concerns related to ethical procedures.

Chapter 3: Research Method

The purpose of this quantitative study was to determine whether age, years of experience as a nurse, and years of experience as a nurse manager predict the EI score in nurse managers. In Chapter 3, I present the research design and rationale for selection, the selected methodology including the population of participants, the sampling procedures, the process for recruitment and data collection, the instrument chosen to collect EI scores, and operational constructs. Additionally, this chapter presents threats to validity and ethical considerations.

Research Design and Rationale

Creswell and Creswell (2018) stated that a research design should be based on the problem to be addressed and the research questions being asked. I conducted a predictive correlational study with a quantitative design using multiple regression with three variables. A predictive design is one that will predict the value of a dependent (outcome) variable based on the values of the independent (predictor) variables (Grove et al., 2013). A correlational design is used to measure and describe the relationships of two or more variables (Creswell & Creswell, 2018). In the current study, the dependent variable was the EI score of selected nurse managers as measured by the SREIS. The independent variables were the nurse manager's age, the years of experience as a nurse, and the years of experience as a nurse manager. Because I sought to understand the relationship of each of the variables to the SREIS results, the predictive correlational design helped me determine whether there were relationships between the independent predictor variables

and the dependent outcome variable. My selected design was straightforward and not time-consuming because the demographic questions, along with the SREIS questions, were included in a single short survey. Resource constraints consisted of getting the manager email lists from multiple campuses to have a large enough sample size to meet my requirements.

Methodology

Population

The target population was nurse managers who are responsible for managing five or more direct reports. Although listservs exist for registered nurses, there was no accurate way to estimate nurse managers' total population.

Sampling and Sampling Procedures

My study's sampling plan included a nonprobability method with a convenience sampling of the nurse managers in a specific academic medical center. Grove et al. (2013) defined nonprobability sampling as one that does not include everyone in the population and convenience sampling as those participants who happen to be readily available to the researcher. In the current study, it would not have been feasible to survey all nurse managers because of the world's vast number. However, a convenience sample of those working in a large, diverse, academic medical center was expected to increase my results' generalizability. To calculate my sample size, I used the G*Power (see Faul et al., 2007) linear multiple regression statistical test with a fixed model, R2 deviation

from zero, effect size of 0.15, error probability of 0.05, power of .80, and three predictors, which yielded a sample size of 77 participants (see Appendix A).

Procedures for Recruitment, Participation, and Data Collection

The participant pool was selected from nurse managers in a large academic medical center across multiple campuses. The demographic survey (see Appendix B) included the variables of interest: age, years of experience as a nurse, and years of experience as a nurse manager. Additional demographic information was collected at the same time, including gender and level of education.

In collaboration with the Research Council team at the study hospitals, I was able to access the email group of nurse managers employed full-time or part-time in the organization with a minimum of five direct reports. Exclusions included assistant nurse managers, clinical quality nurse leaders, and clinical education specialists. A recruitment email (see Appendix C) was sent to the management group to explain the study's purpose, outline the information to be collected, define anonymity for the research participants, and seek voluntary participation. Accessing the link to the survey constituted consent.

The REDCap tool asked seven demographic questions and moved smoothly into the 19 questions in the SREIS survey. The partner organization had a protected account with REDCap that directly linked the participant within the invitation email utilizing the feature and de-linked the email from the collected data. I gathered the survey results and sorted them into those that met the inclusion criteria. Participants did not need to exit the

study because it was a single survey event that did not require follow-up for secondary information. Because the survey was anonymous, debriefing was not needed.

Instrumentation

The instrument I used to assess the selected nurse manager's EI was the SREIS. This EI scale was developed by Brackett et al. (2006). This scale was appropriate for my study because it allowed the participant to be self-reflective as they answered the assessment questions. Appendix D includes the short survey of 19 questions that assessed the five domains of EI: perceiving emotion, using emotion, understanding emotion, managing emotions of self, and social management. The SREIS was administered via REDCap following a series of demographic questions. Appendix E includes the permissions granted for use in academic research.

Operationalization of Constructs

I examined the predictive relationships among age, years of experience as a nurse, years of experience as a nurse manager, and EI. Age was defined as the chronological age in years at the time of survey measured in 5-year increments. Years of experience as a nurse was defined as how long the participant had been practicing as a registered nurse measured in 5-year increments. Years of experience as a nurse manager was defined as the number of years the participant had been working under the title of manager, with a minimum of five employees, as measured in 5-year increments. EI was self-defined by each participant using the SREIS and was measured on a Likert-type scale ranging from 1 (*very inaccurate*) to 5 (*very accurate*). The measurement scale included nominal data

(gender and race), ordinal data (level of education), and interval data for the continuous level variables of age and years of experience. The survey results and the demographic information were entered into the Statistical Package for the Social Sciences database and analyzed using predictive statistics and correlation ratios to determine the strength of association, Pearson's R correlation, and linear multiple regression.

Data Analysis Plan

I examined the predictive relationship among age, years of experience as a nurse, and years of experience as a nurse manager, and EI. Data obtained from completed surveys that met inclusion criteria were entered into the Statistical Package for the Social Sciences software Version 27 for Windows 10. Surveys were reviewed to only include those whose answer to the question "Are you a nurse manager" was "yes." The "no" answers were discarded as not meeting the selection requirements. Additionally, the second question asking whether the participant had five or more direct reports required an answer of "yes" to be included in the study. Surveys with missing data related to any of the primary variables were discarded.

The research questions and hypotheses for my study were the following:

RQ1: What is the relationship between age and EI scores of nurse managers?

H_o1: There is no relationship between age and EI scores of nurse managers.

H_a1: There is a relationship between age and EI scores of nurse managers.

RQ2: What is the relationship between years of experience as a nurse and EI scores of nurse managers?

H_o2: There is no relationship between years of experience as a nurse and EI scores of nurse managers.

H_a2: There is a relationship between years of experience as a nurse and EI scores of nurse managers.

RQ3: What is the relationship between years of experience as a manager and nurse managers' EI scores?

H_o3: There is no relationship between years of experience as a manager and nurse managers' EI scores.

H_a3: There is a relationship between years of experience as a manager and nurse managers' EI scores.

The statistical analysis included predictive statistics and correlation ratios to determine the strength of association, Pearson's R correlation, and multiple regression.

Threats to Validity

Internal Validity

Creswell and Creswell (2018) defined internal validity threats as anything that threatens the researcher's ability to draw conclusions from the collected data about a population, such as procedures, treatments, and participant experiences. Polit and Beck (2010) described internal validity as rival explanations to determine whether the independent variable is genuinely causing the changes to the dependent variable, such as temporal ambiguity, selection, history, maturation, and attrition.

One possible threat to internal validity in my study was temporal ambiguity. It was impossible to determine whether the independent variables of ages, years of experience as a nurse, and/or years of experience as a nurse manager came before the self-reported measure of EI. Because a convenience sample was used, there was a also selection threat to internal validity. Attrition also presented a threat due to unfinished surveys that were returned and ultimately discarded as incomplete. Maturation did not offer a threat because the data were collected in a single survey and did not require additional information. Surveys that did not meet the selection requirements were discarded.

External Validity

External validity is defined as the extent to which a study's findings can be generalized to a broader population than the study group (Grove et al., 2013). Because nonprobability sampling was used for convenience, population validity posed an external threat to my study. My participant pool was a survey of nurse managers working in a large academic medical center. Results may be generalizable to nurse managers working in locations with similar characteristics but not to nurse managers as an entire population across all practice areas.

Ethical Procedures

Written permission from the chief nursing officer was granted to access the nursing management group in a large academic medical center for survey and assessment. To ensure the protection of participant rights, approval from the Institutional

Review Board (IRB) was obtained from both Walden University (IRB202100536) and the partner organization from which I gathered data. Potential candidates reviewed a consent of participation form and were given a description of how their data would be handled. Survey results were de-linked from the participants' email addresses to ensure anonymity. Incentives for participation were not offered to avoid the appearance of coercion.

Summary

This chapter included the predictive correlation research design that was used in the study, the rationale supporting the design selection, the methodology used for conducting the study, concerns related to internal and external validity, and ethical procedures. Details were outlined relative to the instrumentation used, and references to the survey questionnaire were provided. I present the results in Chapter 4, including the recruitment results and response rates. Any deviation from the proposed plan is discussed along with the collected data's external validity. The statistical analysis results are presented in detail, including tables and figures to illustrate findings.

Chapter 4: Results

The purpose of my study was to determine whether there was a relationship (a) between age and EI scores of nurse managers, (b) between years of experience as a nurse and EI scores of nurse managers, and (c) between years of experience as a manager and nurse managers' EI scores. The research questions and hypotheses for my study were the following:

RQ1: What is the relationship between age and EI scores of nurse managers?

H_o1: There is no relationship between age and EI scores of nurse managers.

H_a1: There is a relationship between age and EI scores of nurse managers.

RQ2: What is the relationship between years of experience as a nurse and EI scores of nurse managers?

H_o2: There is no relationship between years of experience as a nurse and EI scores of nurse managers.

H_a2: There is a relationship between years of experience as a nurse and EI scores of nurse managers.

RQ3: What is the relationship between years of experience as a manager and nurse managers' EI scores?

H_o3: There is no relationship between years of experience as a manager and nurse managers' EI scores.

H_a3: There is a relationship between years of experience as a manager and nurse managers' EI scores.

The variables of age, years of experience as a nurse, and years of experience as a nurse manager were measured in 5-year increments. The EI survey was conducted using a self-reported Likert-type scale. Chapter 4 begins with a review of the data collection procedures including time frames, recruitment, response rates, discrepancies from the proposed plan, relationship to external validity, and sample characteristics. I provide a detailed analysis of the results with tables and figures to illustrate relationships followed by a summary to answer the research questions.

Data Collection

After obtaining IRB approval from Walden University, along with the partner organization, I sent an email to the research administrator of the partner organization requesting that my survey invitation letter be sent to the nurse manager groups at two campuses. The letter provided the background information for the study, a statement regarding voluntary and anonymous participation, and a link to access the survey. At the time of invitation, there were approximately 182 managers in these groups. I collected data over a 3-week period using the REDCap secured platform as a collection site with reminders sent weekly. Because of a lower-than-expected participation rate, I had to make a change to my proposed data collection plan outlined in Chapter 3. After discussion with my advisor, Walden IRB, and the partner organization, I determined that I should expand my data collection using the public access Florida Board of Registered Nurses database. The survey invitation letter was sent to 3,642 Florida registered nurses

listed in the public access database. I collected data over a 3-week period using the REDCap secured platform.

Demographic and Descriptive Characteristics of the Sample

My final sample size was 77. The participant group reported their age as a mean of 48 years (*SD* = 2.22), the years as a nurse as a mean of 22.88 years (*SD* = 2.40), and their years of experience as a nurse manager with a mean of 7.98 years (*SD* = 1.70), which was representative of the general population of nurse manager groups (see Table 2).

Table 2

Descriptive Statistics of Age, Years as a Nurse, and Years as a Nurse Manager

Variable	*N*	Mean	Std. Deviation
Age	77	48.14	2.22
Years as a nurse	77	22.88	2.40
Years as a manager	77	7.98	1.70

Because nonprobability sampling was used for convenience, population validity posed an external threat to my study. Initially, my participant pool was a survey of nurse managers working in a large academic medical center. However, with the need to expand the search to the Florida registered nurse database, the threat to population validity was reduced. Results may be generalizable to nurse managers working in a variety of practice settings instead of exclusively to large academic medical centers.

Results

A total of 91 participants responded to the survey. Of these 91 respondents, 14 did not meet the inclusion criteria of being a nurse manager and having five or more direct reports. These 14 surveys were removed from the data set, leaving 77 valid survey responses. The remaining respondents were representative of the general population of nurse managers in that 66 (85.7%) respondents were female and 11 (14.3%) were male. Three (3.9%) respondents had an associate degree, 20 (26%) held a bachelor's degree, 51 (66.2%) were master's prepared, and three (3.9%) were doctoral nurses, which was representative of the educational level of nurse managers.

The variables of interest (age, years as a nurse, and years as a nurse manager) were collected as ranges. Figure 2 displays the count and percentages of each age range of the respondents. Zero participants were in the lower age ranges of 21–30, three (3.9%) participants were 31–35 years old, 18 (23.3%) were 36–40, 11 (14.3%) were 41–45, four (5.2%) were 46–50, two (2.6%) were 51–55, 20 (26.0%) were 56–60, 13 (16.9%) were 61–65, and six (7.8%) were 66–70 years old.

Figure 2

Graphic Representation of Ranges of Age

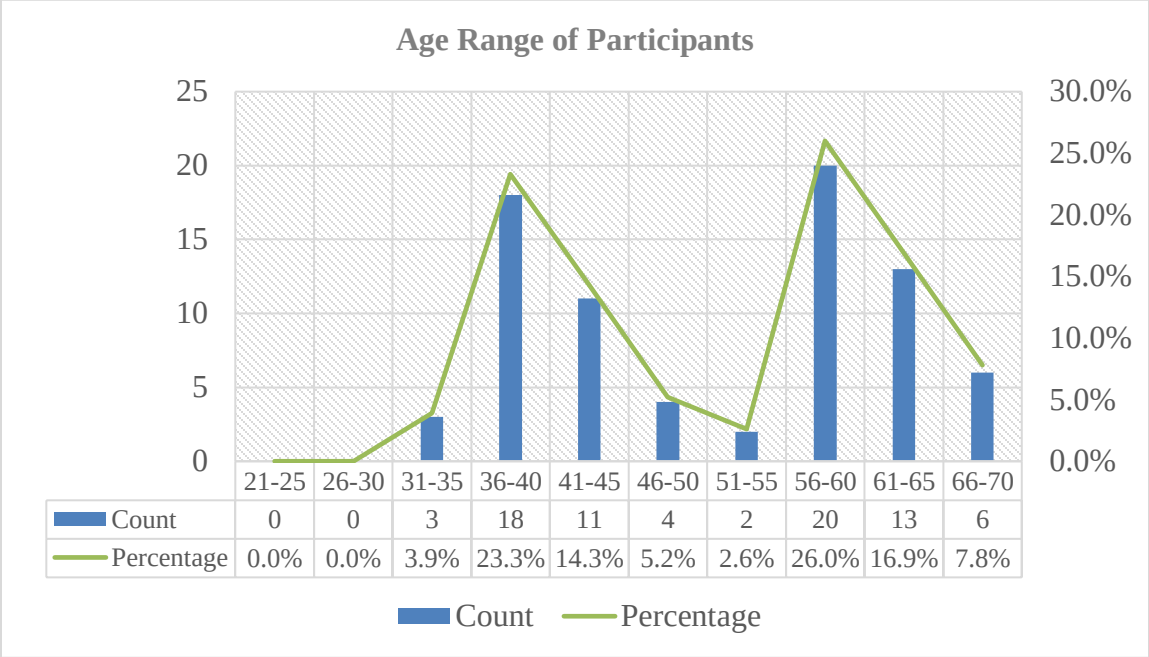


Figure 3 displays the count and percentages of the ranges of years each respondent had been a registered nurse. Two (2.6%) respondents had functioned in the role of nurse for 0–5 years, two (2.6%) for 6–10 years, 20 (26%) for 11–15 years, 14 (18.1%) for 16–20 years, three (3.9%) for 21–25 years, six (7.8%) for 26–30 years, 10 (13%) for 31–35 years, nine (11.7%) for 36–40 years, and 11 (14.3%) for 41–45 years. No respondents were in the highest range of 46–50 years as a registered nurse.

Figure 3

Graphic Representation of Ranges of Years as a Registered Nurse

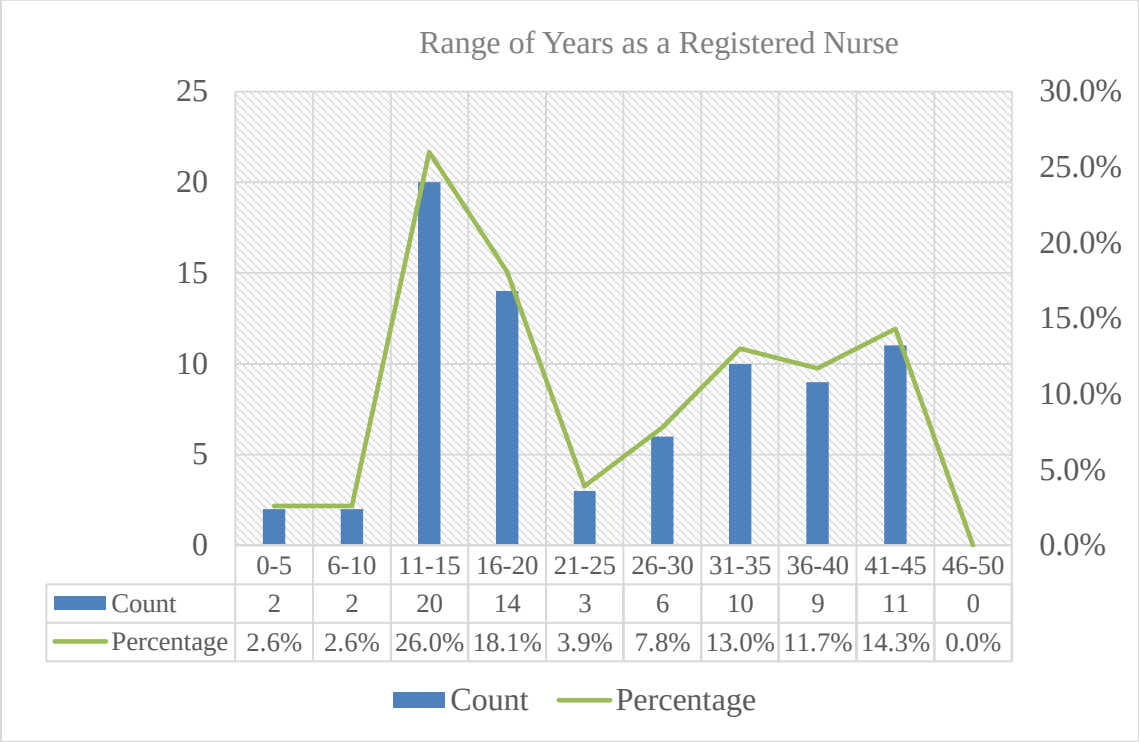
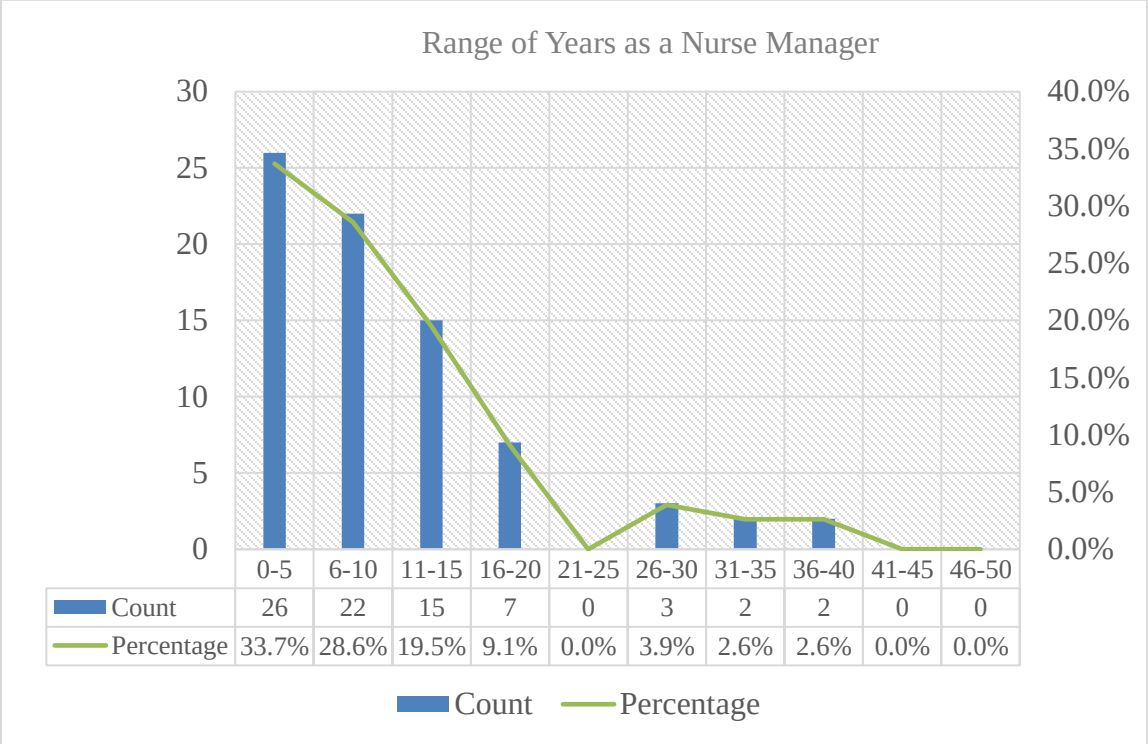


Figure 4 displays the counts and percentages of the ranges of years each respondent had been a nurse manager. Twenty-six (33.7%) respondents had functioned in the role of nurse manager for 0–5 years, 22 (28.6%) for 6–10 years, 15 (19.5%) for 11–15 years, seven (9.1%) for 16–20 years, three (3.9%) for 26–30 years, two (2.6%) for 31–35 years, and two (2.6%) for 36–40 years. Zero respondents were in the middle range of 21–25 or the highest ranges of 41–50 years.

Figure 4

Graphic Representation of Ranges of Years as a Nurse Manager



Reliability and Correlation

I measured four continuous variables: EI score, age, years as a nurse, and years as a nurse manager. The EI survey selected for this study was the SREIS with 19 self-rated questions to understand the participants' emotional intelligence level. The SREIS survey was a Likert-type scale in which the results showed the participants had a minimum score of 3.21 and a maximum score of 4.68 with the median score being 3.89. The survey was sorted into low, middle, and high scores with 31% of participants having a low EI score, 40% having a middle EI range, and 29% scoring in the high EI range. The alpha

coefficient for the SREIS was .813, suggesting that the items had high internal consistency.

Analysis of Research Question 1

To analyze the relationship between age and EI scores of nurse managers, I ran Pearson's correlation test. Pearson's assumptions were met in that both variables were continuous, linear, and without outliers. Table 3 demonstrates that the participants' EI score had no significant relationship with their age, $p = .374$. Therefore, the null hypothesis was retained.

Table 3

Pearson's Correlation Among Nurse Managers with a High EI Score and Their Age

Variable	Pearson correlation	Sig. (2-tailed)	*N*
EI score	1		77
Age	-.103	.374	77

The frequency curve in Figure 5 is bell-shaped and centered without gaps and outliers. The probability-probability plot in Figure 6 displays the cumulative probability of having a normal distribution of age.

Figure 5

Age Distribution of Frequency

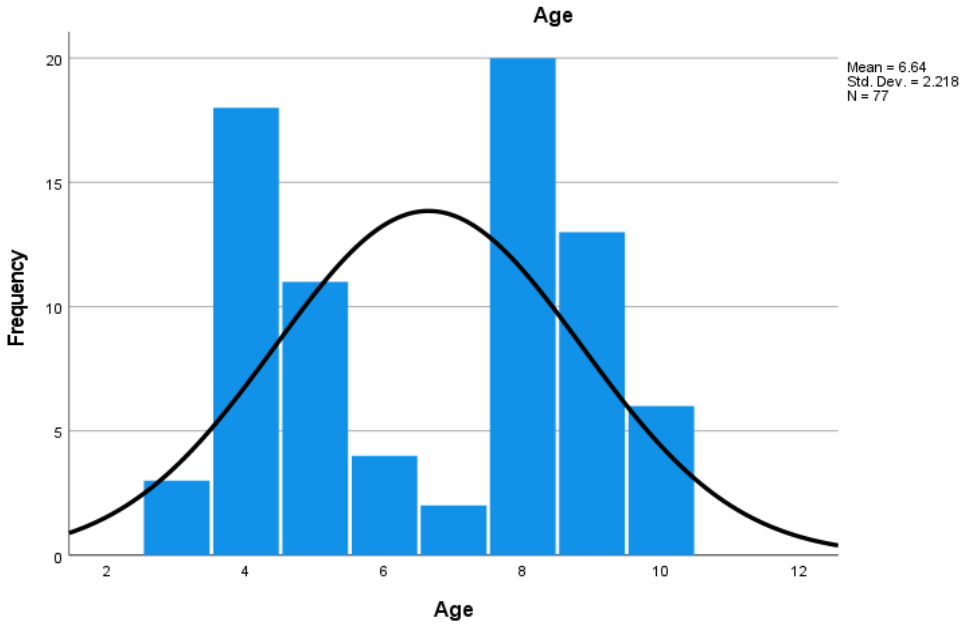
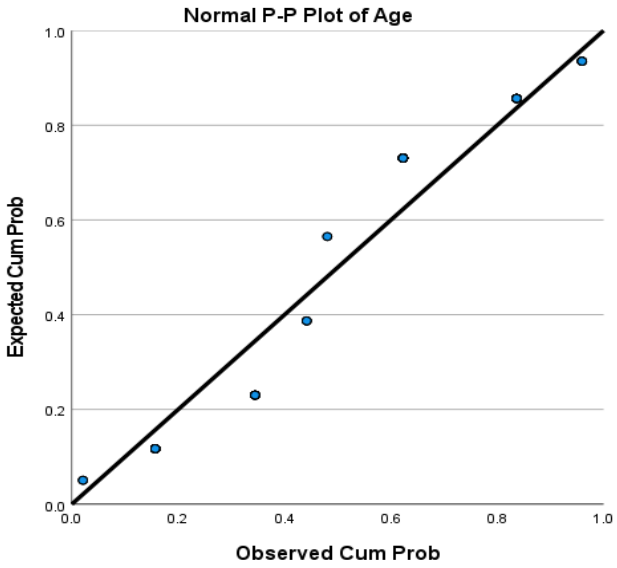


Figure 6

Probability-Probability Plot of Age



Analysis of Research Question 2

To analyze the relationship between years of experience as a nurse and EI scores of nurse managers, I ran Pearson's correlation test. Pearson's assumptions were met in that both variables were continuous, linear, and without outliers. Table 4 demonstrates that the participants' EI score had no significant relationship with their years of experience as a nurse, $p = .063$. Therefore, the null hypothesis was retained.

Table 4

Pearson's Correlation Among Nurse Managers with a High EI Score and Their Years of Experience as a Nurse

Variable	Pearson correlation	Sig. (2-tailed)	*N*
EI score	1		77
Years as a nurse	-.213	.063	77

The frequency curve in Figure 7 is bell-shaped and centered without gaps and outliers. The probability-probability plot in Figure 8 displays the cumulative probability as having a normal distribution of years as a nurse.

Figure 7

Years as a Nurse Distribution of Frequency

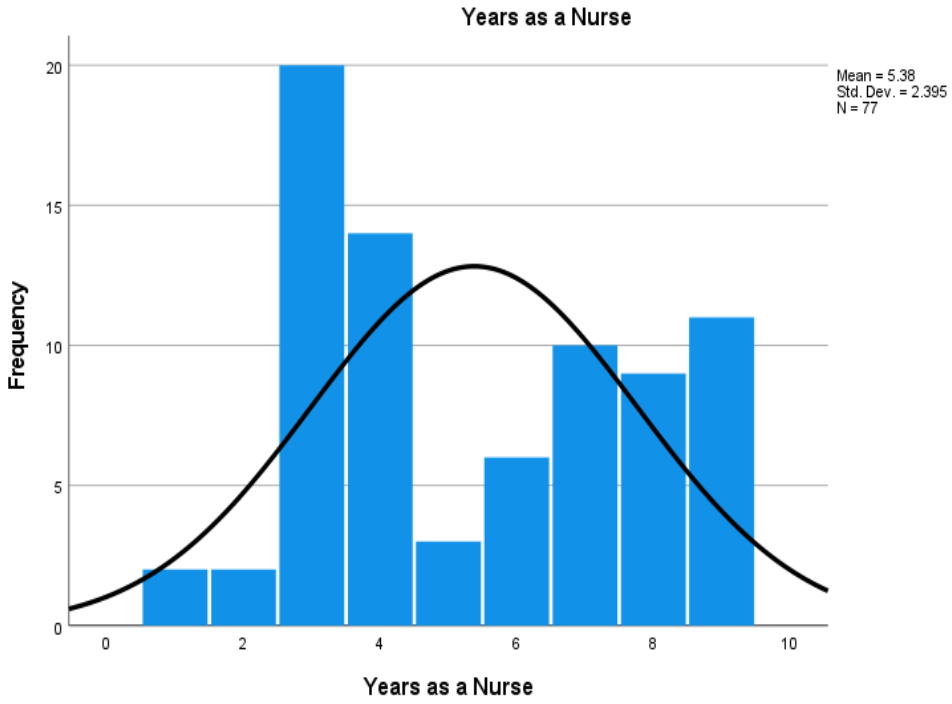
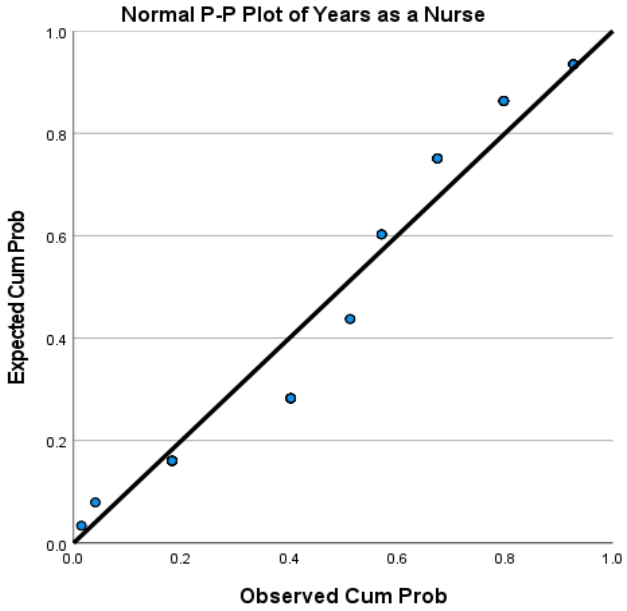


Figure 8

Probability-Probability Plot of Years as a Nurse



Analysis of Research Question 3

To analyze the relationship between years of experience as a manager and nurse managers' EI scores, I ran Pearson's correlation test. Pearson's assumptions were met in that both variables were continuous, linear, and without outliers. Table 5 demonstrates that the participants with a high EI score had no significant relationship with their years of experience as a manager, $p = .792$. Therefore, the null hypothesis was retained.

Table 5

Pearson's Correlation Among Nurse Managers with a High EI Score and Their Years of Experience as a Manager

Variable	Pearson correlation	Sig. (2-tailed)	*N*
EI score	1		77
Years as a manager	-.030	.792	77

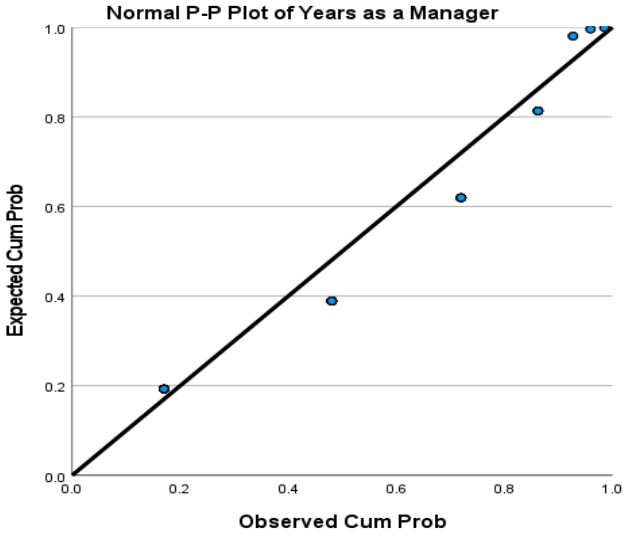
The frequency curve in Figure 9 is bell-shaped but not centered and has a single gap. This indicates the years as nurse manager results were slightly skewed toward the managers with fewer years of experience. The probability-probability plot in Figure 10 displays the cumulative probability as not having a normal distribution of years as a nurse manager.

Figure 9

Years as a Nurse Manager Distribution of Frequency

Figure 10

Probability-Probability Plot of Years as a Nurse Manager



Additional Testing

Tests of normality were performed for the EI scores. The Kolmogorov-Smirnov and Shapiro-Wilk tests are designed to compare a normally distributed sample, containing the same mean and standard deviation, with that of the study's sample set (Razali et al., 2012). Because both tests revealed a statistical significance of $p = .031$ and $p = .035$, the EI scores' results were not considered normally distributed (see Table 6). Although the assumption of normality was not met in this study of 77 participants, the violation of the assumption of normality was not problematic because my sample size exceeded 30 or 40 (see Field, 2013).

Table 6

Normality Tests of EI Scores

Test	Statistic	*df*	Sig.
Kolmogorov-Smirnov[a]	.106	77	.031
Shapiro-Wilk	.966	77	.035

a. Lilliefors Significance Correction

Assumptions of multiple regression were tested for all three research questions to ensure my data did not have Type I (over) or Type II (under) errors in estimation of significance or effect size. The dependent variable (EI) was continuous, I had more than two independent variables (age, years as a nurse, and years as a nurse manager), and the Durbin-Watson test value of 2.629 was in the normal range and without autocorrelation showing an independence of observations. The Adjusted R Square in the model summary (see Table 7) demonstrates that 3.4% of the variance of the EI score could be attributed to the independent variables. The analysis of variance (ANOVA) test (see Table 8) revealed that there was no statistical significance among age, years as a nurse, years as a manager, and the EI score (p = .140).

Table 7

Multiple Regression Model Summary of EI Score and Age, Years as a Nurse, and Years as a Nurse Manager

Model	*R*	*R* square	Adjusted *R* square	Std. error of the estimate	*R* square change	*F* change	df1	df2	Sig. *F* change	Durbin-Watson
1	.268[a]	.072	.034	.380563897680877	.072	1.882	3	73	.140	2.629

a. Predictors: (Constant), Years as a Manager, Years as a Nurse, Age

b. Dependent Variable: EI Score

Table 8

ANOVA Test of EI Score and Age, Years as a Nurse, and Years as a Nurse Manager

Model 1	Sum of squares	*df*	Mean square	*F*	Sig.
Regression	.817	3	.272	1.882	.140[b]
Residual	10.573	73	.145		
Total	11.390	76			

a. Dependent Variable: EI Score

b. Predictors: (Constant), Years as a Manager, Years as a Nurse, Age

Summary

Statistical analysis was conducted to determine whether the age, years as a nurse, or years as a nurse manager predicted the EI scores of nurse managers. The null hypothesis for each of the research questions was retained indicating that age, years as a nurse, or years as a nurse manager did not predict the EI scores of nurse managers. In Chapter 5, I interpret my findings, review the limitations of this study, provide recommendations for further study, and describe the potential for positive social change.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this quantitative predictive correlational study was to determine whether age, years of experience as a nurse, and years of experience as a nurse manager predict the EI score of nurse managers. The literature review indicated that nurse leaders with a high EI score have a positive impact on those they lead through improved job satisfaction, engagement, and patient outcomes. A case has been made for hiring and retaining emotionally intelligent leaders to optimize performance (Codier, 2014); however, hiring practices do not typically include an EI assessment.

The tool used to assess the EI score of the participants proved to be reliable in this setting, and there was a normal distribution of age, years as a nurse, and years as a nurse manager among the range of EI scores of nurse managers. The participants' EI score had no significant relationship with their age, years of experience as a nurse, or years of experience as a nurse manager. However, Pearson's correlation test for years of experience as a nurse resulted in $p = .063$. Multiple regression and ANOVA testing indicated that there was no statistical significance and a limited (3.4%) influence of age, years of experience as a nurse, and years of experience as a manager on the EI scores of nurse managers.

Interpretation of the Findings

Wicks et al. (2019) described EI as the ability to recognize and manage emotions in oneself and others. Echevarria et al. (2017) and Prufeta (2017) researched leadership experience and its relationship to EI and found that experienced leaders resulted in higher

EI scores than leaders with little experience. I sought to build on that knowledge by looking at a group of nurse managers and discovering whether age, years of experience as a nurse, and years of experiences as a nurse manager might play a role in these higher EI scores. The findings in this study showed no relationship among age, years of experience as a nurse, and years of experience as a nurse manager with the EI scores of the nurse manager participant group. My results showed no significant relationship to EI but added to the body of knowledge by providing direction for further study.

Echevarria et al. (2017) and Crowne et al. (2017) studied nurse managers' EI and its relationship to transformational leadership styles and agreed that EI and transformational leadership skills were linked through their improved organizational outcomes. I sought to build on this study by looking for key factors that would predict EI. However, I did not find a statistically significant relationship among EI and the predictor variables of age, years as a nurse, or years as a nurse manager.

Ljungholm (2014), Codier (2014), and Coladonato and Manning (2017) researched mangers' ability to handle their and others' emotions and found that managers with moderate to high EI had nurses with moderate to high satisfaction scores, teams with higher levels of job satisfaction and productivity, and improved clinical nurses' outcomes and performance. My study was unable to add to this body of knowledge by finding the key factors for predicting EI in nurse managers.

King's (1999) theory of goal attainment supports the idea that people will grow from dependency to independence through their physical and social environments and are

primarily outcome or goal driven. EI theory, with its four-branch ability model, paired well with King's theory of goal attainment to provide a support structure for the current study as I looked at a group of nurse managers who would likely have the ability to cope with emotions and make sound decisions when dealing with emotional information. The findings of this study did not support these paired theories as there was no significant relationship among EI and age, years of experience as a nurse, and years of experience as a nurse manager.

Limitations of the Study

My study was limited to three variables of interest, which did not include all possible variables that may influence EI scores. Analysis of the data that revealed that age, years as a nurse, and years as a nurse manager were not reliable predictors of a nurse manager's EI score, which suggests that other variables may require further study. The second limitation was that the survey method used was the SREIS, which is a limited version of the full survey in a self-reporting format. Although instructions indicated the participant was to score themselves based on how they were at the time of data collection, some may have chosen to answer how they want to be as leaders in the future. This limitation remained present throughout data collection and interpretation of the results. A third limitation was the participant pool was selected from a single institution. Although large, this pool may not have been representative of the entire scope of nurse managers. Due to a low participant response rate, my search was expanded to the Florida registered

nurse database, thereby reducing the threat to population validity and creating more generalizable results.

Recommendations

Further research should be conducted to identify key factors for predicting EI scores in nurse managers. The current results demonstrated that the participants' EI scores had no significant relationship with their years of experience as a nurse; however, the years of experience as a nurse warrants additional investigation. Researchers may want to add to the body of knowledge by providing additional investigation into gender, race, education, and lived experiences of nurses as they relate to their level of EI. Another possible avenue of inquiry may be to consider whether leadership styles of nurse managers predict EI scores and the retention rates of these nurse managers among their direct reports. Although the literature review supported that nurse managers with a high level of EI have better retention rates, I propose that additional research be conducted on what leadership style these managers exhibit.

Implications

Understanding the key factors for predicting EI in nurse managers could result in positive social change by improving job performance and satisfaction at the individual level and influencing hiring practices at the organizational level. Prufeta (2017) described a positive impact on job satisfaction, engagement, and retention of nurses led by nurse managers with a high EI score. Although this study did not find a relationship among age, years of experience as a nurse, and years of experience as a nurse manager with the EI

scores of nurse managers, it did provide the groundwork for additional study in narrowing the search for key factors to predict EI. If predictors of EI could be found, it would enable senior leaders to identify nurse managers who are likely to influence those they lead by using EI.

Conclusion

Although the results of this study did not show that the demographic variables of age, years as a nurse, and years as a nurse manager were key factors for predicting EI in nurse managers, they did open avenues for future research. The literature review supported that EI is linked to leadership qualities and higher education and that leaders with a high EI score have a positive effect on those they lead. Health care organizational outcomes are a direct reflection of the caregivers responsible for the overall patient experience, and much has been revealed in the existing literature that caregivers who are satisfied in their job provide a higher level of care to their patients (Codier, 2014). Identifying the factors that predict EI of nurses and nurse managers may promote meaningful social change in health care.

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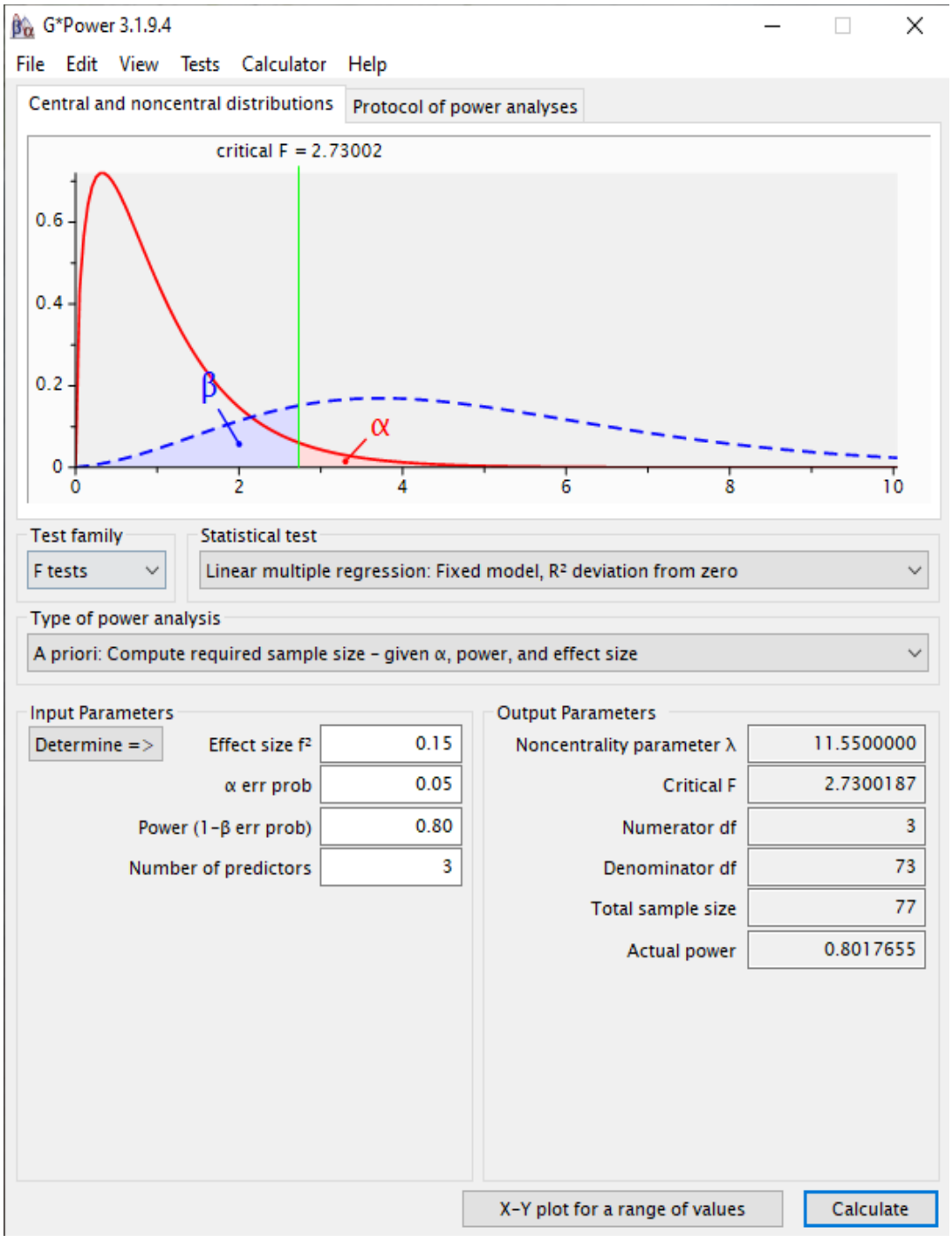
Appendix A: G*Power Analysis



Appendix B: Demographic Data Sheet

Are you a Nurse Manager?

a. Yes

b. No

Do you have five (5) or more direct reports?

a. Yes

b. No

What is your age?

a. 20-25

b. 26-30

c. 31-35

d. 35-40

e. 41-45

f. 46-50

g. 51-55

h. 56-60

i. 61-65

j. 66-70

How many years have you been a nurse?

a. 0-5

b. 6-10

c. 11-15

d. 16-20

e. 21-25

f. 26-30

g. 31-35

h. 36-40

i. 41-45

j. 56-50

How long have you been a nurse manager?

a. 0-5

b. 6-10

c. 11-15

d. 16-20

e. 21-25

f. 26-30

g. 31-35

h. 36-40

i. 41-45

j. 56-50

What is your gender?

a. Male

b. Female

What is your highest level of education?

a. Associate Degree

b. Bachelor’s Degree

c. Master’s Degree

d. Doctoral Degree

Appendix C: Recruitment Email

Dear Nurse Manager,

My name is Patty Gursky, and I am a doctoral candidate in the final stage of the Ph.D. program at Walden University for Nursing Leadership. My Faculty advisors are Dr. Leslie Hussey and Dr. Janice Long. You are receiving this email to consider participating in a study to understand key factors for predicting nurse managers' emotional intelligence (EI). You are being asked to participate in this research study because you are a part of the target population of nurse managers working in a large, diverse, academic medical center.

The purpose of this quantitative study is to determine if age, years of experience as a nurse, and years of experience as a nurse manager can predict the EI score in nurse managers. Suppose we can reliably predict, from the demographic information on a resume, that an applicant has a high emotional intelligence level. In that case, we can engage in more accurate hiring practices to hire managers that will influence job satisfaction, employee engagement, retention, and turnover of the front-line nurses.

The survey will collect some demographic information about you then lead into the Self-Rated Emotional Intelligence Scale. This short questionnaire is designed to understand your insight into your emotions as you are right now, not how you wish to be in the future. Completion time is approximately 15-20 minutes and involves no risk to you. I want to assure you that your name is not included in the survey, and no IP addresses or any identifiable information is collected. Therefore, there is no way to connect you to the information you provide on the survey. There is no cost for participation in this study. Participation is voluntary.

If you decide not to participate in this research study, it will not be held against you. Your responses are anonymous. Information we learn from you in this research study will be handled confidentially, within the limits of the law. This data will be available to the researcher, the Institutional Review Board, and other institutional representatives. All confidential data will be kept securely on an external backup hard drive and personal computer in the researcher's home.

If you have questions, you can contact the principal investigator Patty Gursky at (501) 281-6495 between 7a-7p any day of the week. If you have read the above information and voluntarily agree to participate in this research study, please click on the link:

https://www.surveymonkey.com/r/RJLYV7L

Thank you in advance for your participation,

Patty Gursky, MSN, RN, CNOR
Doctoral Candidate, Walden University

Appendix D: Self-Rated Emotional Intelligence Scale-Revised

The following set of items pertains to your insight into emotions. Please use the rating scale below to describe how accurately each statement describes *you*. Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself in relation to other people you know of the same sex as you are and roughly your same age. Please read each statement carefully, and then write the letter that corresponds to how inaccurately or accurately each statement describes you.

1 = *Very inaccurate*, 2 = *Moderately inaccurate*, 3 = *Neither nor*, 4= *Moderately accurate*, 5 = *Very accurate*

Domain	Items
P	1. By looking at people's facial expressions, I recognize the emotions they are experiencing.
U	2. I am a rational person, and I rarely, if ever, consult my feelings to make a decision (r).
R	3. I have a rich vocabulary to describe my emotions.
M1	4. I have problems dealing with my feelings of anger (r).
M2	5. When someone I know is in a bad mood, I can help the person calm down and feel better quickly.
P	6. I am aware of the nonverbal messages other people send.
U	7. When making decisions, I listen to my feelings to see if the decision feels right.
R	8. I could easily write a lot of synonyms for emotion words like happiness or sadness.
M1	9. I can handle stressful situations without getting too nervous.
M2	10. I know the strategies to make or improve other people's moods.
P	11. I can tell when a person is lying to me by looking at his or her facial expression.
U	12. I am a rational person and don't like to rely on my feelings to make decisions.
R	13. I have the vocabulary to describe how most emotions progress from simple to complex feelings.
M1	14. I am able to handle most upsetting problems.
M2	15. I am not very good at helping others to feel better when they are feeling down or angry (r).
P	16. My quick impressions of what people are feeling are usually wrong (r).
R	17. My "feelings" vocabulary is probably better than most other persons' "feelings" vocabularies. M1 18. I know how to keep calm in difficult or stressful situations.
M2	19. I am the type of person to whom others go when they need help with a

difficult situation.

Note . (r) = reverse scored, P = Perceiving Emotion; U = Use of Emotion; R = Understanding Emotion; M1 = Managing Emotion (self); M2 = Social Management.

Appendix E: Permission to Use the Self-Rated Emotional Intelligence Scale-Revised

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