2019

Emotional Intelligence and Sociodemographic Status in Associate Degree Nursing Students

Melanie Renee Benington
Walden University

Walden University

College of Health Sciences

This is to certify that the doctoral dissertation by

Melanie R. Benington

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Leslie Hussey, Committee Chairperson, Nursing Faculty
Dr. Janice Long, Committee Member, Nursing Faculty
Dr. Mary Martin, University Reviewer, Nursing Faculty

The Office of the Provost

Walden University
2019

Abstract

Emotional Intelligence and Sociodemographic Status in Associate Degree Nursing Students

by

Melanie R. Benington

MSN, Chamberlain College of Nursing, 2013

BSN, Chamberlain College of Nursing, 2008

ADN, Lakeland Community College, 2004

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Nursing

Walden University

November 2019

Abstract

Emotional intelligence (EI) is essential for providing quality and competent care in the nursing profession. Because nurses need to be competent in EI, it is important to determine if inherent factors and academic performance contribute to the development of EI. The purpose of this study, guided by the 4-branch ability model of EI by Mayer and Salovey, was to examine the relationship of EI levels and academic performance, gender, and ethnic background in associate degree nursing (ADN) students who attended a community college. Using convenience sampling, 110 ADN students completed the Schutte Self-Report Emotional Intelligence Test and sociodemographic data. Data were analyzed using an independent *t*-test, and analysis of variances which indicated no statistical significance between EI levels and academic performance, gender, and ethnic background. Although the findings did not show statistical significance, drawing attention to EI among nursing students and nurse educators may increase nurse educators' awareness of the importance of cultivating EI in nurses and the need to incorporate concepts of EI into the nursing curricula. Doing so can effect positive social change because nurses with higher EI may be better able to understand and manage the emotions of others and themselves in stressful situations. The concept of EI is important to incorporate into nursing curricula to provide the nursing student opportunities to practice and apply the concepts learned in an educational setting. Doing so may improve students' preparation to use EI in their nursing careers. Future research could be done to determine if EI levels change throughout a nursing program and to determine if EI skills are taught in nursing programs.

Emotional Intelligence and Sociodemographic Status in Associate Degree Nursing Students

by

Melanie R. Benington

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Nursing

Walden University

November 2019

Acknowledgments

Thank you to my husband, who has supported me throughout the dissertation journey. This accomplishment has only been possible with your love and support. Thank you to my mother, who has always been encouraging and supportive.

The biggest thank you goes to my committee chair, Dr. Leslie Hussey, for your knowledge, guidance, and support throughout this dissertation process. Also, thank you to Dr. Janice Long for being on my committee and giving all your time and energy during this journey.

Table of Contents

List of Tables

List of Figures

Part 1: Overview

Introduction

Emotional intelligence (EI) has recently emerged as a necessary component in nursing education (Faguy, 2012; Freshwater & Stickley, 2004). EI is "the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (Salovey & Mayer, 1990, p. 189). High levels of EI have been correlated with academic performance in medical and nursing students (Cheshire, Strickland, & Carter, 2015; Ibrahim et al., 2017; Moslehi, Samouei, Tayebani, & Kolahduz, 2015; Sharon & Grinberg, 2018; Wijekoon et al., 2017).

The concept of EI involves managing, expressing, and regulating emotions (Mayer & Salovey, 1997; Salovey & Mayer, 1990), which is needed to provide quality and competent care. Health care organizations seek out nurses and other health care professionals who possess high levels of EI to manage the stressful situations health care professionals come across while providing patient care (Cheshire et al., 2015; Jones-Schenk, 2019; Sharon & Grinberg, 2018). There is a correlation between EI levels and nurse retention, work satisfaction, professional achievement, and clinical performance (Faguy, 2012; Gutierrez & Mullen, 2016; Marvos & Hale, 2015; Mullakanda & Dissanayake, 2015; Rice, 2015; Vandewaa, Turnipseed, & Cain, 2016).

The aging population in the United States also creates an increased diversity in needs, treatments, and conditions. Nurses need to care for an aging and more racially and ethnically diverse population. Patients' multiple chronic conditions and comorbid

diseases along with ongoing advancements in technology also create additional challenges inpatient care (Institute of Medicine, 2010). With these changes in health care, previous 20th-century nursing education practices are no longer adequate for training the 21st-century nursing staff (Institute of Medicine, 2010). The patient needs have become more complex; nurses need to have competencies in leadership, health policy, system improvement, research and evidence-based practice, and teamwork (Institute of Medicine, 2010). Furthermore, the advancement in technology and information management systems expand the role of the nurse and allow for collaboration and coordination of care with health care professional. Nurse educators need to not only prepare nursing students to perform nursing care but also understand factors that can influence EI (Cheshire et al., 2015; Jones-Schenk & Harper, 2014; Snowden et al., 2015).

It is important to understand how EI has become a more integral part of nursing education in the United States. Baccalaureate nursing students are taught segments of EI in the classroom regarding leadership development or patient-centered care when discussing interprofessional collaborations, health care outcomes, and patient satisfaction (Carragher & Gormley, 2017; Shanta & Gargiulo, 2014). However, in reviewing the literature, I found few studies of EI levels and associate degree nursing (ADN) students in a community college setting. As Shanta and Gargiulo (2014) observed, nursing students may learn about the definition of EI but not fully understand the theoretical EI concepts enough to apply them to their professional careers.

Health care organizations expect nurses to have high levels of EI and positive professional identity (Cheshire et al., 2015; Sharon & Grinberg, 2018). However, newly

graduated nurses entering the nursing profession may have little knowledge about EI or what expectations health care organizations have for EI (Hutchinson, Hurley, Kozlowski, & Whitehair, 2017). Part of this lack of knowledge and awareness may be due to the lack of EI content in nursing program curricula. Because of the importance health care organizations are placing on EI, nursing faculty need to incorporate content on EI to prepare students to perform nursing care competently and effectively and understand what factors can influence EI (Cheshire et al., 2015; Jones-Schenk & Harper, 2014; Snowden et al., 2015).

Nurse educators should thus be able to apply concepts of EI in the curricula and identify nursing students who require assistance in understanding and applying EI. EI is a tool that nursing students need to acquire to manage their emotions and interact and empathize with others (Roso-Bas, Jimenez, & Garcia-Buades, 2016; Shanta & Gargiulo, 2014; Snowden et al., 2015; Snowden et al., 2018). Nursing students should develop strategies to understand their own emotions and to be able to make critical decisions, perform successfully academically, and behave professionally (Faguy, 2012).

In addition, nurse educators need to understand factors such as academic performance, gender, and ethnic background that are linked to EI. Roso-Bas et al. (2016) conducted a study on baccalaureate nursing students and determined that higher levels of EI were linked to higher academic achievement and lower intentions to drop out. Other researchers have found a positive correlation between EI levels and completion of baccalaureate courses and the program (Jones-Schenk & Harper, 2014; Snowden et al., 2018; Stenhouse et al., 2016). Studies involving baccalaureate nursing students revealed a

positive correlation between EI levels and academic performance (Beauvais, Stewart, Denisco, & Beauvais, 2014; Codier & Odell, 2014; Shanta & Gargiulo, 2014; Sharon & Grinberg, 2018; Thomas, Cassady, & Heller, 2017). Other researchers have found no or a negative correlation between EI levels and academic performance in baccalaureate nursing students (e.g., Cheshire et al., 2015; Strickland & Cheshire, 2017). Foster, Fethney, McKenzie, Fisher, and Harness (2017) examined and compared EI levels between male and female nursing students in Australia, finding no difference, whereas in other studies, female students had higher EI levels than males (Marvos & Hale, 2015; Snowden et al., 2015; Snowden et al., 2018; Stiglic et al., 2018). Pence (2011) and Eyong and Rathee (2017) found no correlation between EI and academic performance in ADN students, but they did not examine the relationship of EI with gender or ethnic background. Scott-Halsell, Saiprasert, and Yang (2013) found a difference in EI between those from Eastern and Western cultural backgrounds in hospitality students. McNulty, Mackay, Lewis, Lane, and White (2016) conducted a cross-sectional study using student radiographers in Australia, Hong Kong, Ireland, and the United Kingdom and found differences in the levels of EI among the groups of student radiographers from diverse ethnic backgrounds. The gap in the research is a lack of studies on EI levels of ADN students and successful completion of a nursing course the first time, gender, and ethnic background. The problem is that nursing students are not adequately prepared to perform in the nursing profession without proper EI education.

Background

In my review of the literature, I examined research on EI in health care focusing on nursing, nursing education, and nursing students in an associate degree program. In addition, I explored academic performance in a nursing program along with gender and ethnic background. To identify the gap and the need to study the topic of EI in the ADN student, a comprehensive review was conducted using electronic databases such as Cumulative Index to Nursing and Allied Health Literature (CINAHL) Plus with Full Text, MEDLINE with Full Text, ERIC, PsycINFO, Embase, ProQuest, PubMed, and Education Source through the Walden University Library. The inclusion criteria for the searches were English, peer-reviewed, scholarly journals with publication dates between 2014 and 2019. I included seminal work published prior to 2014 that related to EI concepts and models. My searches involved the following key words: *emotional intelligence*, *academic success/performance*, *academic achievement*, *nursing education*, *dropout*, *attrition*, *ethnicity*, *race*, *culture*, *gender*, *higher education*, *college*, *university*, *community college*, *associate degree*, *nursing student*, and *nurse.* In articles that met the inclusion criteria, the reference lists were reviewed for eligible articles, which led to the saturation of the literature.

The literature review section will begin with research and historical perspective on EI. Next, I will include the theoretical framework of Mayer and Salovey's (1997) four-branch ability model, followed by a discussion of EI and academic performance in the health care education field. There was a lack of articles addressing ADN students, so the review of the literature will include baccalaureate nursing programs. The final section

of the review of the literature will be on nursing education focusing on EI, completion of nursing courses, gender, and ethnic background of nursing students.

Historical Perspective on Emotional Intelligence

EI first emerged in practice and research over a century ago, but most recently, it has become popular in the business (Ingram, Peake, Stewart, & Watson, 2017), educational (Mayer, Oosthuizen, & Surtee, 2007), and professional (Hendon, Powell & Wimmer, 2017) arenas. The increase in popularity of EI created an understanding that people with high levels of EI are better equipped to understand, identify, and reason about emotions and use the information to analyze how emotions impact their decisions and manage the emotions of others (Mayer, Salovey, & Caruso, 2004). With the increase in attention to EI, it is helpful to understand its development and how it influences practice.

EI was first referred to as social intelligence. Thorndike (1920) first introduced the concept of *social intelligence*, which was the ability to understand and manage human relations among people of any age. Wechsler, in the 1940s, described different affective components of intelligence that played a role in how successful people are in life (Wechsler, 1940, 1943). He developed the Wechsler Adult Intelligence Scale, which had social and cognitive elements of intelligence and affective, personal, and social aspects (Wechsler, 1958). Wechsler (1940, 1943) determined that cognitive and EI were codependent. The challenge identified by Thorndike (1920) and Wechsler (1940, 1943) was that the qualities of EI were not easily measured as compared to cognitive intelligence due to emotions having different responses, perception, and interpretation

instead of right or wrong answers. Subsequent researchers have created instruments to assess and characterize EI (e.g., Bar-On, 2010; Goleman, 1995; Mayer & Salovey, 1997; Petrides, 2010).

In the 1980s, Gardner (2011) confirmed that an individual's interpersonal and intrapersonal intelligences were as important as cognitive intelligence. *Interpersonal intelligence* refers to the ability to understand and work well with others, and *intrapersonal intelligence* is the ability to be self-aware, to recognize one's own feelings, and to utilize the awareness for social interactions (Gardner, 2011). Gardner found that the measurements for intelligences were limited to cognitive intelligence, which did not consider the individual's abilities to perceive, process, and manage emotions as they can influence the individual's cognitive abilities. Gardner developed the multiple intelligence theory, which incorporates cognitive, interpersonal, and intrapersonal intelligences. EI has evolved to include interpersonal and intrapersonal intelligence as well as social intelligence.

The early research completed by Thorndike (1920), Wechsler (1940, 1943), and Gardner (2011) provided the foundation for various definitions, theories, models, and instruments of measurement related to EI. One theoretical model of EI is Mayer and Salovey's (1997) four-branch ability model of EI. The four-branch ability model of EI was a revision of the original definition of EI by Salovey and Mayer in 1990, which stated "the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and action" (Salovey & Mayer, 1990, p. 189). The revised definition of EI involves

> the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth. (Mayer & Salovey, 1997, p. 35)

There are different concepts of EI, but each complements the other. The different conceptualizations led to the grouping of EI theories and measurement tools by Salovey and Mayer, Petride, Goleman, and Bar-On (e.g., Bar-On, 2010; Goleman, 1995; Petrides, 2010; & Salovey & Mayer, 1990). The classifications for EI are ability based, trait-based, or mixed-trait ability.

Ability-based emotional intelligence. Salovey and Mayer (1990) proposed an ability-based classification for EI, linking emotion and intelligence in addition to cognitive ability. Salovey and Mayer's initial model consisted of three elements of appraising and expressing emotions, regulation of emotions, and utilization of emotions. Mayer and Salovey (1997) created the four-branch ability model of EI also to include problem-solving abilities to emotions. *Emotional intelligence* has recently been defined as "the ability to reason validly with emotions and with emotion-related information, and to use emotions to enhance thought" (Mayer, Caruso, & Salovey, 2016, p. 295). As the development of ability-based EI model evolved, so did the definition. The EI definition now includes emotional, personal, and social intelligence (Mayer, Caruso, & Salovey, 2016).

Trait-based emotional intelligence. EI has typically been viewed as a cognitive

ability (see Salovey & Mayer, 1990). Researchers developed trait-based EI to represent an individual's emotional perceptions of the world (Petrides & Furnham, 2000; Petrides et al., 2016). The traits of EI are divided into four subscales of personality: well-being, self-control, emotionality, and sociability (Petrides, 2010; Petrides et al., 2016). Trait-based EI focuses more on personality than abilities, which makes trait EI only a component of the broader definition of EI (Cherniss, 2010; Petrides, 2010). Trait-based EI refers to one's behavior and self-perceptions of a situation which affects the emotional responses of a person (Petrides et al., 2016).

Mixed-trait ability emotional intelligence. A popular approach to examining EI is Goleman's mixed model (1995, 1998), which includes both the abilities and traits of EI. The key elements of Goleman's model are self-awareness, self-management, social awareness, and relationship management (Goleman, 1995; see also Cherniss, 2010). Both Goleman's (1995, 1998) and Bar-On's (2010) conceptualizations are considered mixed EI due to elements of personality tests being included in their measurements and there not being a focus on EI in its attributes and beliefs (Codier, Muneno, Franey, & Matsuura, 2010; Mayer, Roberts, & Barsade, 2008). Cherniss (2010) noted that Goleman's and Bar-On's models are not models of EI but primarily social and emotional competencies. Although mixed EI models have been questioned as true EI models (see Cherniss, 2010), the mixed models still can be used to examine the individual's perception of emotions and responses to emotion in a situation, like the ability and trait EI models.

Mayer and Salovey's four-branch ability model of emotional intelligence. The four-branch ability model of EI was the theoretical framework for my research study. The

four branches of the ability model are (a) perceive and express one's emotions and others, (b) facilitate thinking through emotions, (c) understand and convey emotions, and (d) regulate emotions in oneself and others (Mayer & Salovey, 1997). The four branches range from the simplest to the most complex ability in identifying EI in oneself and others (Mayer & Salovey, 1997).

The lowest and simplest branch encompasses identifying the emotions in oneself and others in a given situation (Mayer & Salovey, 1997). The individual can express one's own emotions in emotional situations as well as identify the emotions of others in the same situation (Mayer & Salovey, 1997). When EI develops, the ability to perceive, assess, and express emotions in oneself and others becomes more accurate and appropriate to the situations (Mayer & Salovey, 1997).

The second branch requires an individual to facilitate thinking through emotions during an emotional event (Mayer & Salovey, 1997). The individual is aware of one's mood and understanding that may affect the thinking and perspectives of emotions in a situation (Mayer & Salovey, 1997). The second branch involves having an individual with a higher level of EI consider different viewpoints and demonstrate empathy (Mayer & Salovey, 1997). An individual who can facilitate thoughts emotionally has developed EI and self-awareness in order to gauge one's own feelings and other's feelings to various situations (Mayer & Salovey, 1997).

The third branch of the model focuses on understanding and conveying emotions of oneself and others (Mayer & Salovey, 1997). In this branch, the individual can identify emotions and use knowledge to understand the complexity of emotions in the situation

(Mayer & Salovey, 1997). The individual can understand the difference between emotions in situations and can detect cultural differences in the assessment of emotions (Mayer & Salovey, 1997). The individual's emotional knowledge allows for building relationships and emotional self-growth (Mayer & Salovey, 1997).

Finally, at the fourth and highest branch on the model, the individual possesses the abilities of all the branches. In the fourth branch, the individual is open-minded to feelings and emotions. The open-mindedness allows for the regulation of emotions by interpreting the emotions through the situation and changing if needed (Mayer & Salovey, 1997). The individual is able to monitor emotions and recognize how emotions influence oneself and others (Mayer & Salovey, 1997). At the highest level of EI, the individual is able to manage emotions in oneself and others by having the ability to adjust negative emotions and amplify positive emotions to communicate (Mayer & Salovey, 1997).

Emotional Intelligence in Health Care

High levels of EI are needed for professions involving social interactions (Mayer et al., 2008), especially the profession of nursing. EI involves the use of emotions to be able to plan, think creatively, redirect attention, and motivate others (Mayer & Salovey, 1997; Mayer et al., 2016). Having those abilities allows an individual to adapt to change or respond to unpredictable behaviors. Researchers have found jobs that require a high level of emotional labor lead to stressful work environments and burnout, but EI has been the key to maintaining a healthy work environment and job satisfaction (Faguy, 2012; Gutierrez & Mullen, 2016; Mullakanda & Dissanayake, 2015; Vandewaa et al., 2016).

Additionally, an individual working with human relationships has a core concept of caring and emotions (Freshwater & Stickley, 2004), and higher EI of the health care professional benefits themselves and the patients who they care for (Faguy, 2012). Decety and Fotopoulou (2015) found when health care providers take time bonding with their patients; it benefits the healing process and the relationship between the health care provider and patient. EI is an ability that health care professionals need to possess to provide empathic care and manage stressful situations.

Emotional Intelligence and Health Care Field Education

EI is a skill every health care provider should possess along with the cognitive intelligence needed to perform their job expectations (Faguy, 2012; Ruiz Aranda, Extremera, & Pineda Galán, 2014; Pop-Jordanova & Demerdzieva, 2015). Cognitive intelligence does not provide individuals with successful careers, social competence, and interpersonal relationships (Faguy, 2012; Mayer et al., 2004; Ruiz Aranda et al., 2014). However, cognitive intelligence does provide the ability to critically think and solve problems (Gardner, 2011). When an individual lacks the ability to self-regulate their emotions, the individual is unable to use a higher level of mental processing, which will negatively affect the situation (Jones-Schenk, 2019). Researchers have revealed higher levels of EI in the clinical setting have a positive effect on patient care and satisfaction along with the health care providers' stress, burnout, and job satisfaction (Gutierrez & Mullen, 2016; Mullakanda & Dissanayake, 2015; Marvos & Hale, 2015; Rice, 2015; Vandewaa et al., 2016). EI is essential to health care professionals in caring for patients

and maintaining a healthy work environment. Therefore, EI should be taught to health care professionals to improve the health care environment.

EI has been linked to academic performance in the health care field. Several different qualities of EI have a positive influence on the students' academic and career success (Faguy, 2012; Jones-Schenk, 2019). Jones-Schenk (2019) discussed the development of social and emotional skills continue through an individual's lifespan, and Faguy (2012) discussed the importance of health care students to be taught and improve on their EI to handle their own emotions and the emotions of their patients. Pop-Jordanova and Demerdzieva (2015) conducted a study to compare EI levels of young adult population and health care practitioners. The researchers concluded EI could be taught and influence the health care environment.

In the dental field, researchers internationally have examined the relationship between EI and academic performance (Hasegawa, Ninomiya, Fujii, & Sekimoto, 2016; Kumar, Puranik, & Sowmya, 2016). Hasegawa et al. (2016) used the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) on 129 dental students to explore the association between EI, gender, and academic performance at the Nippon Dental University in Japan, while Kumar et al. (2016) conducted a cross-sectional study on 200 dental students in India using Sterrett's EI questionnaire. Both researchers have revealed female students had a higher EI score than males, but the studies contained an unequal distribution of males and females (Hasegawa et al., 2016; Kumar et al., 2016). Additionally, the results of both studies provided a positive relationship between EI and academic performance for course grade (Hasegawa et al., 2016) and final-year Bachelor

Dental Surgery examinations (Kumar et al., 2016). Dental students identified as low-grade academic achievers may lack motivation, self-awareness, self-control, and empathy, which may have affected their attitudes and experiences with the responses to the EI test. EI can be increased through the support of self-confidence from educators (Hasegawa et al., 2016) and providing EI workshops along with incorporating EI into the curricula (Kumar et al., 2016).

Researchers recommended medical schools to include EI into the curricula (Chew, Zain, & Hassan, 2015; Ibrahim et al., 2017; Moslehi et al., 2015; Vasefi, Dehghani, & Mirzaaghapoor, 2018; Wijekoon et al., 2017). Ibrahim et al. (2017), Moslehi et al. (2015), and Wijekoon et al. (2017) conducted cross-sectional studies in Jeddah, Tehran, and Sri Lanka, respectively, using different questionnaires to measure EI. The comparable results of the studies provided that EI levels were positively correlated with academic performance on examinations (Moslehi et al., 2015; Wijekoon et al., 2017) and grade point average (GPA) (Ibrahim et al., 2017) in medical students. The students with higher EI were more likely to have higher self-esteem and self-efficacy, and the students with low EI levels were not aware of their own emotions and more likely to express negatively to stress and anxiety. The researchers' findings were similar to others, and they encourage EI to be integrated into the curricula to aid in the academic performance of the students (Ibrahim et al., 2017; Moslehi et al., 2015; Wijekoon et al., 2017).

Chew et al. (2015) and Vasefi et al., (2018) found EI has a negative or no effect on academic performance. Chew et al. (2015) conducted the study in Malaysia with 163

medical students using the MSCEIT, which measures the four branches of the EI model. The researchers have determined a negative relationship between emotional social intelligence and academic performance on total continuous assessment and the final examination. Similarly, Vasefi et al. (2018) found EI scores, measured by Trait Emotional Intelligence Questionnaire-Short Form (TEIQue-SF), did not affect the academic performance of GPA among 435 medical students in Iran. Additionally, the researchers have found senior medical students had lower EI scores than the junior medical students, which indicated a decrease in EI during the course of medical education. The decrease could be a true decrease or a limitation to study since there was a lack of cooperation from the students (Vasefi et al., 2018). The researchers in both studies continue to discuss the need to incorporate EI into the medical school curricula, even though the result indicated no increase in EI and negative or no effect on academic performance (Chew et al., 2015; Vasefi et al., 2018).

Several researchers conducted studies on medical students found various associations between EI and gender. Ibrahim et al. (2017) found females have higher EI than males, which was similar to the results of the study by Wijekoon et al. (2017). Females are more socialized and can better understand emotions (Ibrahim et al., 2017). On the other hand, Vasefi et al.'s (2018) results revealed an absence of association. While Yee, Yi, Aung, Lwin, and Myint (2018) found male medical students have higher EI levels than females. The dissimilarities between the studies may be due to the year in medical school and other socio-cultural factors, but further research is needed.

Health care students' ethnic backgrounds and EI levels have been studied in radiology students and medical students. McNulty et al. (2016) conducted a study of 485 first-year radiology students in four international institutions (University of Liverpool, University of Dublin, The Hong Kong Polytechnic University, and University of Sydney) using TEIQue-SF. The researchers have revealed significant differences in global EI scores between Hong Kong students and the UK and Irish students, but no significant difference between Australian and Hong Kong students, which may be due to the East and Southeast Asian students attended the Australian university (McNulty et al., 2016). Additionally, Scott-Halsell, Saiprasert, and Yang (2013) found similar results in hospitality students in the United States. They have found significant differences in EI scores in hospitality students from Eastern and Western cultures, where Eastern cultural backgrounds scored lower than Western students (Scott-Halsell et al., 2013). However, Yee et al. (2018) found no significant difference between ethnic backgrounds of 200 medical students in Malaysia. The differences in the results of the study in health care students' EI levels and ethnic background require further examination of the relationship between the two variables.

Researchers have revealed that EI is essential in health care to provide patients with satisfactory care and employee experience (Faguy, 2012; Hasegawa et al., 2016; Kumar et al., 2016; Pop-Jordanova & Demerdzieva, 2015). Health care students have the cognitive abilities to gain admission into the programs, but cognitive intelligence and academic performance are not enough alone to provide high-quality patient care in the complex health care systems. EI is a key component to understand and manage emotions

of oneself and the patients. The researchers examined different variables to influence the EI levels of health care students. Kumar et al. (2016) recommended workshops for students to develop EI skills. Hasegawa et al. (2016) also recommended reinforcement with feedback and encouragement when practicing EI skills. There is a strong recommendation for EI to be incorporated into health care educational curricula to provide health care students the opportunity to apply EI skills in the clinical setting along with developing the ability to manage their emotions and the emotions of others (Chew et al., 2015; Faguy, 2012; Ibrahim et al., 2017; Kaya, Senyuva, & Bodur, 2018; Kumar et al., 2016; Moslehi et al., 2015; Pop-Jordanova & Demerdzieva, 2015; Reemts, 2015; Sharon & Grinberg, 2018; Vasefi et al., 2018; Wijekoon et al., 2017).

Emotional Intelligence and Nursing Education

Nursing students may enter a nursing program for the financial and social status of the profession, while some nursing students are driven by the desire for varied work, opportunity to put theory into practice, and altruistic motivations regarding helping people to improve their lives (Merkley, 2016). Nursing education is challenging, demanding, and stressful due to the expectations to acquire academic knowledge, clinical competencies, and interpersonal skills (Cleary et al., 2018; Faguy, 2012; Freshwater & Stickley, 2004). Nursing students' academic preparation, academic performance, purpose, health, and socioeconomics influence the students' success or failure (Merkley, 2016). EI skills may be the key to nursing students' success or failure. Research is currently available examining the outcomes of teaching EI in nursing education programs.

Researchers examined the relationship between EI levels and retention in nursing programs and courses. Roso-Bas et al. (2016) and Pence (2011) conducted studies examining the relationship between EI levels and retention in a nursing program. Roso-Bas et al. (2016) cross-sectional perspective study included 144 undergraduate third-year nursing students in Spain while Pence (2011) conducted a descriptive nonexperimental study of 390 first-year students at nine different ADN schools in Illinois. The researchers of both studies found a positive association between EI levels and retention in the nursing program. Additionally, Roso-Bas et al. (2016) found a positive correlation between EI levels and optimistic disposition and higher academic results. However, retention was not associated with ethnicity, gender, ADN school, and returning status (Pence, 2011). The limitation of both studies was target populations being all third-year nursing students (Roso-Bas et al., 2016) and first-year students (Pence, 2011). The populations studied may not have been likely to drop out. With this limitation, the researchers recommended including students in all courses (Roso-Bas et al., 2016) and a diverse population in other geographic locations (Pence, 2011). Although these studies did not focus on nursing students repeating a course, it provided insight on EI and the student's tendency to drop out.

Snowden et al. (2015) and Snowden et al. (2018) conducted studies on nursing and midwifery students at two Scottish universities to examine the impact of EI on gender, and previous caring experience using the TEIQue-SF and Schutte Self-Report Emotional Intelligence Test (SSEIT). The results revealed no significance with previous caring experience and EI (Snowden et al., 2015; Snowden et al., 2018). The researchers

also found EI scores were higher in female students than male students, but the ratio of females to males was one to ten, which may have altered the results (Snowden et al., 2015; Snowden et al., 2018). Although female students have higher EI scores, the male students were just as likely to complete the nursing program (Snowden et al., 2018). Additionally, Snowden et al. (2018) examined the completion of the total number of nurse/midwives completing the nursing program. Of 876 students, the total number of nurse/midwives completing the program in 3 years was 589, and 279 students did not complete the program in 3 years (Snowden et al., 2018). The TEIQue-SF scores were higher at baseline and at completion for students who completed the program in 3 years, but the SSEIT scores were not significant at baseline and at completion for students who completed in 3 years. Although the researchers revealed females had higher EI scores than males, the male students were just as likely to complete the program in 3 years.

Stenhouse et al. (2016) utilized the same population as Snowden et al. (2015) but examined the baseline and end of the first year of the nursing and midwifery students at one of the Scottish universities to examine the impact of previous caring experience, EI, and social connection has on performance and retention. Five hundred and ninety-eight nursing and midwifery students completed the TEIQue-SF and SSEIT. Between EI and performance, there was no significant difference. Lower scores in social connection led to the students withdrawing from the course (Stenhouse et al., 2016).

A cross-sectional descriptive study of 113 nursing students and 104 engineering students in Slovenia focused on measuring differences in EI between the two groups and previous caring experience by gender (Stiglic et al., 2018). All students completed the

Trait Emotional Intelligence Questionnaire and SSEIT. The researchers found results similar to Snowden et al. (2015, 2018) and Stenhouse et al. (2016) showing no significance in EI and previous caring experience. The nursing students had higher EI levels than engineering students. There was no statistical significance in EI levels between the genders in nursing and engineering students but may be due to sampling size and a population composed of mostly females in nursing and males in the engineering program, which was a limitation to the study and potential for further research (Stiglic et al., 2018).

Both Sharon and Grinberg (2018) and Thomas et al. (2017) conducted cross-sectional studies using the same tool as this study (SSEIT) to measure EI of baccalaureate nursing students. The researchers have found higher EI was linked to higher academic performance in GPA and success over their courses in the universities (Sharon & Grinberg, 2018; Thomas et al., 2017). Both studies were not generalizable to the population due to one university studied in both, and the lack of diversity in the population studied. Sharon and Grinberg (2018) recommended exploring the use of EI as admission criteria.

Several researchers examined EI in relationship to nursing student success and use for admission criteria. Jones-Schenk and Harper (2014) conducted a multistate descriptive, correlational study of 116 baccalaureate nursing students and 42 successful staff nurses using the Emotional Quotient Inventory (EQ-i) to measure EI. An independent samples *t*-test found the nursing students had higher EI scores than staff nurses, and students who progressed through the program had higher EI scores than

students who dropped. In a study by Cheshire et al. (2015), baccalaureate nursing students' EI scores, measured by MSCEIT, were not correlated with final grades, GPA, or admission GPA. The researchers recommended a more diverse nursing student population to determine if EI can be used as admission criteria (Cheshire et al., 2015; Jones-Schenk & Harper, 2014). GPA and EI may be predictors of student success in the nursing program (Jones-Schenk & Harper, 2014), but the student's EI level and admission GPA can provide educators with an understanding of the student's academic and emotional abilities (Cheshire et al., 2015).

A similar study by Codier and Odell (2014) examined the EI levels and GPA of 72 baccalaureate nursing students. The researchers' results revealed statistical significance between EI and GPA, but the sample did not represent the population of nurses regarding gender and ethnicity (Codier & Odell, 2014). The recommendations were to add EI to the curricula and examine the relationship between EI and GPA with students who graduate versus those who do not (Codier & Odell, 2014). EI and GPA alone do not indicate success in the nursing program, but EI should be taught and could be useful in addition to other nursing school admission criteria.

Beauvais et al. (2014) found mixed results in EI and academic performance. The descriptive, correlational study had 244 undergraduate nursing students and 229 graduate nursing students from a private, Catholic university in New England completing the MSCEIT to determine if there was a relationship between EI, psychological empowerment, resilience, spiritual well-being, and academic performance. The researchers found EI was related to academic performance in graduate students in the

branches of facilitating emotions and managing emotions, but EI was not related to academic performance in undergraduate students (Beauvais et al., 2014). The mixed results between EI levels in relationship to academic performance of the graduate and undergraduate nursing students indicated there could be graduate students have applied the skills of facilitating and managing emotion to patient situations (Beauvais et al., 2014).

Other researchers found little or no significance with EI and academic performance (Eyong & Rathee, 2017; Strickland & Cheshire, 2017). Eyong and Rathee (2017) conducted a study to examine the relationship between EI and authentic leadership with academic performance on 121 community college nursing students in a college in the mid-Atlantic region. The results showed EI using the Trait Emotional Intelligence Questionnaire, was marginally positively correlated with academic performance, and EI was not related to GPA. In a similar study, Strickland and Cheshire (2017) determined EI, using the MSCEIT, was not correlated with GPA and not to include EI as admission criteria (Strickland & Cheshire, 2017). The researchers of both studies recommended further research using additional variables with EI in a diverse population (Eyong & Rathee, 2017; Strickland & Cheshire, 2017).

Foster et al. (2017) conducted a longitudinal study of preregistered Master of Nursing degree students in Australia to examine if EI increased over the course of the program and was related to academic performance. The researchers found EI increased over two semesters after teaching the students emotional mastery skills. However, there was no significant difference in EI between genders and age (Foster et al., 2017), which

were similar results in a study conducted by Cerit and Beser (2014) of baccalaureate nursing students in Health School of Bozok University. The researchers recommended incorporating EI into the nursing curricula. The researchers of both studies discovered no difference in EI levels between genders, which added to the mixed results of other researchers who found a difference in EI levels between male and female.

Shanta and Gargiulo (2014) conducted a quasi-experimental study of baccalaureate nursing students and baccalaureate education students to determine if there were higher levels of EI in nursing students. The researchers used students currently enrolled in the programs and students who declared nursing and education as majors. Mayer and Salovey's four-branch ability model of EI was used as the theoretical framework with the MSCEIT as the tool used for EI (Shanta & Gargiulo, 2014). The researchers' results revealed that GPA was a predictor of EI, where senior nursing students had both higher GPA and EI levels (Shanta & Gargiulo, 2014). However, there were no results in the study that determined nursing education had increased EI over other undergraduate education (Shanta & Gargiulo, 2014). The recommendations for future research from the researchers included: adding EI content into the curriculum and determine if it increases EI levels of the students and to explore the difference in EI regarding gender (Shanta & Gargiulo, 2014).

Marvos and Hale (2015) conducted an exploratory, descriptive study to examine the relationship between clinical performance and retention in 129 undergraduate nursing students in the United States using the four-branch ability model of EI and the MSCEIT. The researchers found a positive correlation between EI and clinical performance and

retention. Also, male students had lower EI scores than females, and higher EI scores were positively correlated with an increase in age (Marvos & Hale, 2015). The researchers recommended further research to include exploring the role EI plays in preparing students for the nursing profession and factors that influence EI in the nursing student (Marvos & Hale, 2015).

In an international study, Kaya et al. (2017, 2018) conducted longitudinal studies focused on the determining if baccalaureate nursing students develop critical thinking and EI over their first academic year and then over four courses of their undergraduate studies. In the first study, Kaya et al. (2017) had 197 freshman nursing students participated in determining if critical thinking and EI develop over the course of an academic year. The increase in critical thinking and EI over the academic year was statistically significant. Females had higher EI scores than males (p= .781) in EI at the end of the academic year (Kaya et al., 2017). In the second study, Kaya et al. (2018) had 82 nursing students participate over four academic years with the results revealing students' levels of critical thinking increased, but there was no statistically significant increase in EI. The small sample size of the studies indicated the need for further research to determine if EI levels increase over time.

A few researchers examined the relationship between EI levels and ethnic background of nursing students. Foster et al. (2017) found higher EI levels in Non-Australian nursing students compared to Australian nursing students, while Nosek (2015) found higher levels of EI in Asians compared to Caucasians in baccalaureate nursing students in the United States. Nosek (2015) also discovered males had higher levels of EI

in facilitating thoughts, and Latinos versus Caucasians were associated with higher scores in perceiving emotions. The results of these studies were similar to McNulty et al. (2016) in radiology students, but Yee et al. (2018) and Vasefi et al. (2018) found ethnic background had no relationship to EI levels among medical students. The mixed results and lack of generalizability show the need to examine the relationship between EI levels and ethnic background of ADN students.

Summary

Most of the research conducted on EI has been on health care students other than ADN students. The research I reviewed provided links between EI, academic performance, gender, and ethnic background. In the baccalaureate nursing students, EI was positively correlated with academic performance (Codier & Odell, 2014; Shanta & Gargiulo, 2014; Sharon & Grinberg, 2018; Thomas et al., 2017), but EI was also found to not correlate with academic performance (Cheshire et al., 2015; Eyong & Rathee, 2017; Strickland & Cheshire, 2017). Several researchers examined the genders differences with EI. Females were found to have higher EI than males (Kaya et al., 2017; Snowden et al., 2018; Stiglic et al., 2018), but Cerit and Beser (2014) and Foster et al. (2017) found no significant difference in EI between males and females. The recommendation for further research was to examine EI in a diverse population (Cheshire et al., 2015; Jones-Schenk & Harper, 2014; Shanta & Gargiulo, 2014; Snowden et al., 2018; Stiglic et al., 2018; Thomas et al., 2017), but there is no current research on EI and ethnically diverse in ADN students. With the limited number of studies on EI and ADN students (Eyong &

Rathee, 2017; Pence, 2011), there is a need to examine that population and the variables of academic performance, gender, and ethnic background.

Overview of the Manuscripts

In my three manuscripts, I examined the relationship between EI levels and academic performance, gender, and ethnic backgrounds in ADN students. The three manuscripts provide data to fill the gap in the literature on the relationship between EI and academic performance, gender, and ethnic backgrounds in ADN students because there are a limited number of research studies focused on ADN students. Looking at the different factors of the ADN students may assist nurse educators on how to implement strategies targeted to increase EI and aid in the increase in academic performance and carry the skills to their future career.

Manuscript 1

Attrition rates in nursing programs are problematic for students, programs, and health care organizations. Nursing programs across the United States struggle with attrition rate as high as 47% in ADN programs (Harris, Rosenberg, O'Rourke, 2014). With the high attrition rates, fewer new graduate nurses are entering the nursing profession, increased financial burden for the student and institution, and can cause students and families distress (Harris et al., 2014; Dante, Fabris, & Palese, 2015). Nurse educators need to identify students at risk of being unsuccessful to decrease the attrition rates in nursing programs.

Nurse educators need to assist students who are at risk of being unsuccessful in nursing courses. Several researchers conducted studies on baccalaureate nursing students

which found low EI levels to be linked with poor academic performance of unsuccessful grades in nursing courses and the increased likelihood to withdraw from the nursing course and nursing program (Beauvais et al., 2014; Roso-Bas et al., 2016; Sharon & Grinberg, 2018; Thomas et al., 2017) while other researchers have found no or negative correlation between EI and academic performance in baccalaureate nursing students Cheshire et al., 2015; Strickland & Cheshire, 2017). Determining a nursing student's EI level can provide the nurse educator and student with an understanding on how to gain skills to increase their EI level which may increase the likelihood of the student being successful in the nursing courses and program.

Research question. What is the difference in emotional intelligence among associate degree nursing students who successfully complete all nursing courses the first time versus those students who are not successful?

Nature of study and design. I conducted a comparative descriptive quantitative research design to determine if there was a difference between EI levels and completion of a nursing course the first time for an ADN student. The study had two distinct groups of successful first time completers of nursing courses and student who do not successfully complete nursing courses the first time. I measured the participants' EI levels (dependent variable) using the Schutte Self-Report Emotional Intelligence Test (SSEIT), which is a scale of 1 to 5 with 1 indicating *strongly disagree* and 5 indicating *strongly agree* with each of the 33 statements. I collected the independent variable of successful completion of nursing courses through a demographic survey with the response of "yes" or "no".

Sources of data. I collected data using the SSEIT and a demographic survey was distributed through an online survey tool, SurveyMonkey, which participants accessed through the community college's Blackboard learning management system site. The target population was students from ADN programs in a community college in a midwestern state in the United States. I collected sociodemographic data such as age, gender, ethnic background, what semester the student is in the nursing program, and successful completion of all nursing courses the first time.

Manuscript 2

Researchers examined EI and gender, but there has been no consensus if gender is a factor affecting levels of EI. Foster et al. (2017) conducted a longitudinal study which found comparable EI levels between females and males in Australia. Other researchers have found female baccalaureate nursing students had higher EI levels than males (Marvos & Hale, 2015; Snowden et al., 2015; Snowden et al., 2018; Stiglic et al., 2018). Nosek (2015) found males had higher levels of EI than females in the branch of facilitating thought. About 15% of students enrolled in the ADN program were males in 2016 (National League for Nursing, 2016b). With no studies on EI levels and gender among ADN students, there is a need to examine if there is a difference in the EI levels. Identifying the EI levels will assist the students in understanding their EI levels and implement strategies to increase EI levels aiding in the improvement of their academic performance and future nursing profession.

Research question. What is the difference in the levels of EI between males and females who are students in an associate degree nursing program in a community college

setting?

Nature of study and design. I conducted a comparative descriptive quantitative research design to examine if there was a difference between EI levels and the gender of an ADN student. The study had two groups, females and males. The dependent variable of EI was measured using the SSEIT, which is a scale 1 to 5 with 1 indicating *strongly disagree* and 5 indicating *strongly agree* with each of the 33 statements. I collected the independent variable of gender on the demographic survey.

Sources of data. I collected data using the SSEIT and a demographic form was distributed through an online survey tool, SurveyMonkey, which participants accessed through the community college's Blackboard learning management system site. The target population was students from the ADN program in a community college in a midwestern state in the United States. I collected sociodemographic data such as age, gender, ethnic background, and what semester the student is in the nursing program.

Manuscript 3

The United States population is becoming more ethnically diverse, which creates a need for a greater number of minority nurses to provide quality and culturally appropriate care (National League for Nursing, 2019). In 2016, minority students made up about 29% of the nursing students enrolled in basic nursing programs (National League for Nursing, 2016a). The difference in culture, beliefs, and values can affect EI. Cultural beliefs and traditions impact the way that individuals think and react to their environment along with affecting their relationships and behaviors when communicating with others (Scott-Halsell et al., 2013). Certain cultures may not support the expression of

emotions, which makes recognizing emotions difficult. EI plays an important role for individuals with cultural differences to recognize, manage, and regulate their emotions in a given situation (Mayer, Salovey, & Caruso, 2004).

There have been a limited number of studies conducted examining EI levels and different ethnic backgrounds. McNulty et al. (2016) conducted a cross-sectional study of radiographer students from Australia, Hong Kong, Ireland, and the United Kingdom and found differences in the levels of EI among the groups of student radiographers from diverse ethnic backgrounds. Another study of hospitality students revealed differences in EI levels among Eastern and Western cultural backgrounds. However, researchers conducting studies on ethnic backgrounds and EI levels in medical students found no difference (Vasefi et al., 2018; Yee et al., 2018). One researcher examined the relationship of EI levels and ethnic backgrounds of baccalaureate nursing students which revealed Asians have a higher level of EI than other ethnic backgrounds (Nosek, 2015). With mixed results and no studies conducted on ADN students, there is a need to examine the relationship between EI levels and ethnic backgrounds among ADN students.

Research question. What is the difference in emotional intelligence levels among different ethnic backgrounds (Caucasian, African American, Hispanic/Latino) among associate degree nursing students?

Nature of study and design. I conducted a comparative descriptive quantitative research design to examine if there were differences between EI levels by ethnic background of ADN students. The dependent variable of EI was measured using the

SSEIT, which is on a 1 to 5 scale with 1 indicating *strongly disagree* and 5 indicating *strongly agree* with each of the 33 statements. I collected the independent variable of ethnic background on the demographic survey with the categories of Caucasian, African American, Hispanic/Latino, and other.

Sources of data. I collected data using the SSEIT and a demographic form which was distributed through an online survey tool, SurveyMonkey, which participants accessed through the community college's Blackboard learning management system site. The target population was students from the ADN program in a community college in a midwestern state in the United States. I collected sociodemographic data such as age, gender, ethnic background, and what semester the student is in the nursing program.

Significance

My study filled the gap in the literature about the relationship between ADN students' EI levels and academic performance, gender, and ethnic background. In baccalaureate nursing programs, researchers have found high levels of EI associated with academic performance and retention in courses and programs (Beauvais et al., 2014; Codier & Odell, 2014; Jones-Schenk & Harper, 2014; Roso-Bas et al., 2016; Shanta & Gargiulo, 2014; Sharon & Grinberg, 2018; Snowden et al., 2018; Stenhouse et al., 2016; Thomas et al., 2017). However, Pence (2011) and Eyong and Rathee (2017) found no correlation between EI and academic performance in ADN students. With little known on EI levels of ADN students, nurse educators may apply the research found on baccalaureate nursing students on EI, but the demographics of the two populations of students are different. In the community college setting, about 53% of the students are of

a non-white demographic with 56% of the students being female (American Association of Community Colleges, 2018). In contrast, in a baccalaureate nursing program, about 30.1% of students are of non-white demographics with 88.3% of the students being female (American Association of Colleges of Nursing, 2015). With the demographics revealing nursing programs traditionally enrolling more females than male students, there no research to examine the difference in EI levels between the genders in ADN programs. The United States population is becoming more racially and ethnically diverse, so there needs to be a greater number of minority nurses to provide quality and culturally appropriate care (National League for Nursing, 2019). The study provides key information about the nursing student in an ADN program to assist nurse educators on incorporating EI content into the curricula to prepare student to perform nursing care competently, effectively, and culturally and understand the factors that can influence EI (Cheshire et al., 2015; Jones-Schenk & Harper, 2014; Snowden et al., 2015).

The purpose of positive social change is to improve human and social conditions (Walden University, n. d.). The insights of my study will increase the understanding of the factors associated with EI. Knowing if there is a relationship among EI and academic performance, gender, and ethnic background, the nursing students, nurse educators, educational institutions, and health care organizations can have a better understanding of the importance of EI in the nurse and the need to incorporate concepts of EI into the nursing curricula and effect positive social change. High levels of EI in the profession of nursing will allow a nurse to manage, regulate, understand the emotions of others and themselves in stressful situations (Faguy, 2012). Incorporating EI in the nursing curricula

will provide the nursing student opportunities to practice and apply the concepts learned in an educational setting which will improve their preparation to use EI in their nursing careers.

Summary

In this study, I examined the relationship between EI levels and academic performance, gender, and ethnic backgrounds among ADN students. There is a lack of literature that specifically addresses EI in ADN students. Many researchers indicated that baccalaureate nursing students with high levels of EI perform better academically (Beauvais et al., 2014; Cheshire et al., 2015; Codier & Odell, 2014; Jones-Schenk & Harper, 2014; Roso-Bas et al., 2016; Shanta & Gargiulo, 2014; Sharon & Grinberg, 2018; Snowden et al., 2018; Stenhouse et al., 2016; Thomas et al., 2017). Additionally, female baccalaureate nursing students were more likely to have higher levels of EI than male nursing students (Marvos & Hale, 2015; Snowden et al., 2015; Snowden et al., 2018; Stiglic et al., 2018), but there is no literature on the comparison of EI and ethnic background in ADN students. Cheshire et al. (2015) and Foster et al. (2017) indicated that nursing students learn fragments of EI concepts. Consequently, nursing students may learn some EI skills to apply to their nursing practice, but they may not understand how to apply the skills (Shanta & Gargiulo, 2014). The nursing student's understanding of how to manage their own emotions and others' emotions in a stressful situation is essential in their nursing practice (Faguy, 2012).

Part one offered an overview of the problem, background, and need for this study. The broad study problem, theoretical framework, and overview of the manuscripts were

provided. Part two offers three manuscripts in detail. Each of the manuscripts will describe in detail the specific problem to be addressed by the research question and design. The manuscripts will provide a summary of the study results, findings, implications for social change, recommendations on the utilization of the findings, and implication for further research.

References

American Association of Colleges of Nursing. (2015). Enhancing diversity in the workforce. Retrieved from https://www.aacnnursing.org/News-Information/Fact-Sheets/Enhancing-Diversity

American Association of Community Colleges. (2018). Fast facts. Retrieved from https://www.aacc.nche.edu

Bar-On, R. (2010). Emotional intelligence: An integral part of positive psychology. *South African Journal of Psychology*, *40*(1), 54-62. doi:10.1177/008124631004000106

Beauvais, A. M., Stewart, J. G., DeNisco, S., & Beauvais, J. E. (2014). Factors related to academic success among nursing students: A descriptive correlational research study. *Nurse Education Today, 34*, 918-923. doi:10.1016/j.nedt.2013.12.005

Carragher, J., & Gormley, K. (2017). Leadership and emotional intelligence in nursing and midwifery education and practice: A discussion paper. *Journal of Advanced Nursing*, *73*(1), 85-96. doi:10.1111/jan.13141

Cerit, E., & Beser, N. G. (2014). Levels of emotional intelligence of nursing students. *International Journal of Caring Sciences, 7*(3), 936-945. Retrieved from http://www.internationaljournalofcaringsciences.org/

Cherniss, C. (2010). Emotional intelligence: Toward clarification of a concept. *Industrial & Organizational Psychology*, *3*(2), 110-126. doi:10.1111/j.1754-9434.2010.01231.x

Cheshire, M. H., Strickland, H. P., & Carter, M. R. (2015). Comparing traditional measures of academic success with emotional intelligence scores in nursing

students. *Asia-Pacific Journal of Oncology Nursing*, *2*(2), 99-106. doi:10.4103/2347-5625.154090

Chew, B. H., Zain, A. M., & Hassan, F. (2015). The relationship between the social management of emotional intelligence and academic performance among medical students. *Psychology, Health & Medicine, 20*(2), 198-204. doi:10.1080-13548506.2014.913797

Cleary, M., Visentin, D., West, S., Lopez, S., & Kornhaber, R. (2018). Promoting emotional intelligence and resilience in undergraduate nursing students: An integrative review. *Nurse Education Today, 68,* 112-120. doi:10.1016/j.nedt.2018.05.018

Codier, E., Muneno, L., Franey, L., & Matsuura, F. (2010). Is emotional intelligence an important concept for nursing practice? *Journal of Psychiatric and Mental Health Nursing, 17*(10), 940-948. doi:10.111/j.1365-2850.2010.01610.x

Codier, E., & Odell, E. (2014). Measured emotional intelligence ability and grade point average in nursing students. *Nurse Education Today, 34*, 608-612. doi:10.1016/j.nedt.2013.06.007

Dante, A., Fabris, S., & Palese, A. (2015). Predictive power of individual factors and clinical learning experience on academic success: Findings from longitudinal study. *Nurse Educator, 40*(3), E1-E6. doi:10.1097/NNE.0000000000000132

Decety, J., & Fotopoulou, A. (2015). Why empathy has a beneficial impact on others in medicine: Unifying theories. *Frontiers in Behavioral Neuroscience, 8*, 1-11. doi:10.3389/fnbeh.2014.00457

Eyong, D. N., & Rathee, N. K. (2017). Exploring emotional intelligence and authentic leadership in relation to academic achievement among nursing students. *International Journal of Arts & Sciences, 10*(1). 49-56. Retrieved from http://www.universitypublications.net/ijas/

Faguy, K. (2012). Emotional intelligence in healthcare. *Radiologic Technology, 83*(3), 237-253. Retrieved from http://www.radiologictechnology.org/

Foster, K., Fethney, J., McKenzie, H., Fisher, M., & Harness, E. (2017). Emotional intelligence increases over time: A longitudinal study of Australian pre-registration nursing students. *Nurse Education Today, 55*, 65-70. doi:10.1016/j.nedt.2017.05.008

Freshwater, D., & Stickley, T. (2004). The heart of the art: Emotional intelligence in nurse education. *Nursing Inquiry, 11*(2), 91-98. doi:10.111/j.1440-1800.20041.00198.x

Gardner, H. (2011). *Frame of mind. [electronic resource]: theory of multiple intelligences*. New York: Basic Books, 2011.

Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. New York, NY: Bantam Books.

Goleman, D. (1998). *Working with emotional intelligence*. New York, NY: Bantam Books.

Gutierrez, D., & Mullen, P. R. (2016, July). Emotional intelligence and the counselor: Examining the relationship of trait emotional intelligence to counselor burnout. *Journal of Mental Health Counseling, 38*(3), 187-200. doi:10.1774/mehc.38.3.01

Harris, R. C., Rosenberg, L., & O'Rourke, M. E. G. (2014). Addressing the challenges of nursing student attrition. *Journal of Nursing Education, 53*(1), 31-37. doi:10.3928/01484834-20131218-.3

Hasegawa, Y., Ninomiya, K., Fujii, K., & Sekimoto, T. (2016). Emotional intelligence score and performance of dental undergraduates. *Odontology, 104*(3), 397-401. doi:10.1007/s10266-015-0219-0

Hendon, M., Powell, L., & Wimmer, H. (2017). Emotional intelligence and communication levels in information technology professionals. *Computers in Human Behavior, 71*, 165-171. doi:10.1016/j.chb.2017.01.048

Hutchinson, M., Hurley, J., Kozlowski, D., & Whitehair, L. (2017). The use of emotional intelligence capabilities in clinical reasoning and decision-making: A qualitative, exploratory study. *Journal of Clinical Nursing*, *27*(3-4), e600-e610. doi:10.111/jocn.14106

Ibrahim, N. K., Algethmi, W. A., Binshihon, S. M., Almahyawi, R. A., Alahmadi, R. F., & Baabdullah, M. Y. (2017). Predictors and correlations of emotional intelligence among medical students at King Abdulaziz University, Jeddah. *Pakistan Journal of Medical Science, 33*(5), 1080-1085. doi:10.12669/pjms.335.13157

Ingram, A., Peake, W. O., Stewart, W., & Watson, W. (2017). Emotional intelligence and venture performance. *Journal of Small Business Management*, *57*(3), 780-800. doi:10.1111/jsbm.12333

Institute of Medicine. (2010). *The future of Nursing: Focus on education.* Retrieved from http://www.nationalacademies.org/

Jones-Schenk, J. (2019). Social and emotional learning: Why does it matter? *Journal of Continuing Education in Nursing, 50*(2), 57-58. doi:10.3928/00220124-20190115-03

Jones-Schenk, J., & Harper, M. G. (2014). Emotional intelligence: An admission criterion alternative to cumulative grade point averages for prelicensure students. *Nurse Education Today, 34,* 413-420. doi:10.1016j.nedt.2013.03.018

Kaya, H., Senyuva, E., & Bodur, G. (2017). Developing critical thinking disposition and emotional intelligence of nursing students: A longitudinal research. *Nurse Education Today, 48,* 72-77. doi:10.1016/j.nedt.2016.09.011

Kaya, H., Senyuva, E., & Bodur, G. (2018). The relationship between critical thinking and emotional intelligence in nursing students: A longitudinal study. *Nurse Education Today, 68,* 26-32. doi:10.1016/j.nedt.2018.05.024

Kumar, A., Puranik, M. P., & Sowmya, K. R. (2016). Association between dental students' emotional intelligence and academic performance: A study at six dental colleges in India. *Journal of Dental Education, 80*(5), 526-532. Retrieved from www.jdentaled.org/

Marvos, C., & Hale, F. B. (2015). Emotional intelligence and clinical performance/retention of nursing students. *Asia-Pacific Journal of Oncology Nursing, 2*(2), 63-71. doi:10.4103/2347/5625.157569

Mayer, J. D., Caruso, D. R., & Salovey, P. (2016). The ability model of emotional intelligence: Principles and updates. *Emotion Review, 8*(4), 290-300. doi:10.1177/1754073916639667

Mayer, C. H., Oosthuizen, R. M., & Surtee, S. (2017). Emotional intelligence in South African women leaders in higher education. *SA Journal of Industrial Psychology, 43*, a1405. doi:10.4102/sajip.v4310.1405

Mayer, J. D., Roberts, R.D., & Barsade, S. G. (2008). Human abilities: Emotional intelligence. *Annual Review of Psychology, 59*(1), 507-536. doi:10.1146/annurev.psych.59.103006.093646

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey, M. A. Brackett, & J. D. Mayer (Eds), *Emotional intelligence: Key readings on the Mayer and Salovey model* (pp. 29-60). Port Chester, NY: Dude Publishing.

Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional intelligence: Theory, findings and implications. *Psychology Inquiry, 15*(30), 197-215. doi:10.1207/s15327965pli1503_02

McNulty, J. P., Mackay, S. J., Lewis, S. J., Lane, S., & White, P. (2016). An international study of emotional intelligence in first year radiography students: The relationship to age, gender and culture. *Radiography, 22*(2), 171-176. doi:10.1016/j.radi.2015.10.008

Merkley, B. R. (2016). Student nurse attrition: A half century of research. *Journal of Nursing Education and Practice, 6*(3), 71-75. doi:10.5430/jnep.v6n3p71

Moslehi, M., Samouei, R., Tayebani, T., & Kolahduz, S. (2015). A study of the academic performance of medical students in the comprehensive examination of basic sciences according to the indices of emotional intelligence and educational status.

Journal of Education and Health Promotion, 4, 1-4. doi:10.4103/2277-9531.162387

Mullakanda, P. S., & Dissanayake, K. (2015). Strategies for maintaining emotional stability: The case of nurses in private health care industry. *Management Science Letter, 5*(12), 1097-1110. doi:10.5267/j.msl.2015.10.004

National League for Nursing. (2019). Diversity. Retrieved from http://www.nln.org/advocacy-public-policy/issues/diversity

National League for Nursing. (2016a). Percentage of minorities enrolled in basic RN programs by race-ethnicity: 2016. Retrieved from http://www.nln.org/docs/default-source/newsroom/nursing-education-statistics/percentage-of-minorities-in-basic-rn-programs-by-race-ethnicity-2016-(pdf)c842c45c78366c709642ff00005f0421.pdf?sfvrsn=0

National League for Nursing. (2016b). Percentage of students enrolled in nursing programs who are males by program type, 2016. Retrieved from http://www.nln.org/docs/default-source/newsroom/nursing-education-statistics/percentage-of-students-enrolled-in-nursing-program-by-sex-and-program-type-2016-(pdf).pdf?sfvrsn=0

Nosek, M. (2015). A cross sectional exploration of emotional intelligence in US baccalaureate nursing students. *Journal of Nursing Education and Practice, 5*(11), 29-41. doi:10.5430/jnep.v5n11p29

Pence, P. L. (2011). Predictors of retention among undergraduate students attending associate-degree nursing programs in Illinois. *Teaching and Learning in Nursing, 6*(3), 131-138. doi:10.1016/j.teln.2011.01.004

Petrides, K. V. (2010). Trait emotional intelligence theory. *Industrial and Organizational Psychology, 3*(2), 136-139. doi:10.111/j.1754-8434.2010.01213.x

Petrides, K. V., & Furnham, A. (2000). On the dimensional structure of emotional intelligence. *Personality and Individual Differences, 29*, 313-320. doi:10.1016/s0191-8869(99)00195-6

Petrides, K. V., Mikolajczak, M., Mavriveli, S., Sanchez-Ruiz, M., Furnham, A., & Perez-Gonzales, J. (2016). Developments in trait emotional intelligence research. *Emotion Review, 8*(8), 335-341. doi:10.1177/175407391650493

Pop-Jordanova, N., & Demerdzieva, A. (2015). Is the level of emotional intelligence in students and health workers satisfactory? *International Journal of Innovation and Research in Educational Sciences, 2*(4), 259-264. Retrieved from https://www.researchgate.net/publication/282294385_Is_the_Level_of_Emotional_Intelligence_in_Students_and_Health_Workers_Satisfactory

Reemts, G. S. (2015). Emotional intelligence levels in baccalaureate-prepared early career registered nurses. *Asia-Pacific Journal of Oncology Nursing, 2*(2), 72-81. doi:10.4103/2347-5625.157573

Rice, E. (2015). Predictors of successful clinical performance in associate degree nursing students. *Nurse Educator, 40*(4), 207-211. doi:10.1097/nne.0000000000000136

Roso-Bas, F., Jimenez, A. P., & Garcia-Buades, E. (2016). Emotional variables, dropout and academic performance in Spanish nursing students. *Nurse Education Today, 37*, 53-58. doi:10.1016/j.nedt.2015.11.021

Ruiz Aranda, D., Extremera, N., & Pineda Galán, C. (2014). Emotional intelligence, life satisfaction and subjective happiness in female student health professionals: The mediating effect of perceived stress. *Journal of Psychiatric and Mental Health Nursing, 21*(2), 106-113. doi:10.1111/jpm.12052

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality, 9*(3), 185-211. doi:10.2190/DUGG-P24E-52WK-6CDG

Scott-Halsell, S. A., Saiprasert, W., & Yang, J. (2013). Emotional intelligence differences: Could culture be the culprit? *Journal of Teaching in Travel & Tourism, 13*(4), 339-353. doi:10.1080/15313220.2013.839301

Shanta, L., & Gargiulo, L. (2014). A study of the influence of nursing education on development of emotional intelligence. *Journal of Professional Nursing, 30*(6), 511-520. doi:10.1016/j.profnurs.2014.06.005

Sharon, D., & Grinberg, K. (2018). Does the level of emotional intelligence affect the degree of success in nursing students? *Nurse Education Today, 64*, 21-26. doi:10.1016/j.nedt.2018.01.030

Snowden, A., Stenhouse, R., Duers, L., Marshall, S., Carver, F., Brown, N., & Young, J. (2018). The relationship between emotional intelligence, previous caring experience and successful completion of a pre-registration nursing/midwifery degree. *Journal of Advanced Nursing, 74*(2), 433-442. doi:10.111/jan.13455

Snowden, A., Stenhouse, R., Young, J., Carver, H., Carver, F., & Brown, N. (2015). The relationship between emotional intelligence, previous caring experience and mindfulness in student nurses and midwives: A cross sectional analysis. *Nurse Education Today, 35,* 152-158. doi:10.1016/j.nedt.2014.09.004

Stenhouse, R., Snowden, A., Young, J., Carver, F., Carver, H., & Brown, N. (2016). Do emotional intelligence and previous caring experience influence student nurse performance? A comparative analysis. *Nurse Education Today*, *43*, 1-9. doi:10.1016/j.nedt.2016.04.015

Stiglic, G., Cilar, L., Novak, Z., Vrbnjak, D., Stenhouse, R, Snowden, A., & Pajnkihar, M. (2018). Emotional intelligence among nursing students: Findings from a cross-sectional study. *Nurse Education Today*, *66*, 33-38. doi:10.1016/j.nedt.2018.03.028

Strickland, H. P., & Cheshire, M. H. (2017). Exploring the correlation between nontraditional variables and student success: A longitudinal study. *Journal of Nursing Education, 56*(6), 351-355. doi:10.3928/01484834-20170518-06

Thomas, C. L., Cassady, J. C., & Heller, M. L. (2017). The influence of emotional intelligence, cognitive test anxiety, and coping strategies on undergraduate academic performance. *Learning and Individual Differences, 55,* 40-48. doi:10.1016/j.lindif.2017.03.001

Thorndike, E. L. (1920). Intelligence and its uses. *Harper's Magazine, 140,* 227-235.

Vandewaa, E. A., Turnipseed, D. L., & Cain, G. (2016). Panacea or placebo? An evaluation of the value of emotional intelligence in healthcare workers. *Journal of*

Health & Human Services Administration, 38(4), 438-477. Retrieved from https://www.researchgate.net/profile/David_Turnipseed/publication/276894670_Panacea_or_Placebo_An_Evaluation_of_the_Value_of_Emotional_Intelligence_in_Healthcare/links/5761be6a08ae2b8d20ed5f62/Panacea-or-Placebo-An-Evaluation-of-the-Value-of-Emotional-Intelligence-in-Healthcare.pdf

Vasefi, A., Dehghani, M., & Mirzaaghapoor, M. (2018). Emotional intelligence of medical students of Shiraz University Medical Science cross sectional study. *Annals of Medicine and Surgery, 32*, 26-31. doi:10.1016/j.amsu.2018.07.005

Walden University. (n. d.). Social change. Retrieved from http://www.waldenu.edu/about/social-change

Wechsler, D. (1940). Non-intellective factors in general intelligence. *Psychological Bulletin, 37*, 444-445.

Wechsler, D. (1943). Non-intellective factors in general intelligence. *Journal of Abnormal Psychology, 38*(1), 101-103. doi:10.1037/h0060613

Wechsler, D. (1958). *The measurement and appraisal of adult intelligence* (4th ed.). Baltimore, MD: Williams & Wilkins Co.

Wijekoon, C. N., Amaratunge, H., de Silva, Y., Senanayake, S., Jayawardane, P., & Senarath, U. (2017). Emotional intelligence and academic performance of medical undergraduates: A cross-sectional study in a selected university in Sri Lanka. *BioMed Central Medical Education, 17*(1), 1-11. doi:10.1186/s12909-017-1018-9

Yee, K. T., Yi, M. S., Aung, K. C., Lwin, M. M., & Myint, W. W. (2018). Emotional intelligence level of year one and two medical students of University Malaysia

Sarawak: Association with demographic data. *Malaysian Applied Biology, 47*(1), 203-208. Retrieved from http://mabjournal.com/

Part 2: Manuscripts

Emotional Intelligence and Successful Completion of Nursing Courses in Associate Degree Nursing Student

Melanie R. Benington

Walden University

[Notes]

Outlet for Manuscript

The target journal for the manuscript on emotional intelligence (EI) level and successful completion of a nursing course the first time among associate degree nursing (AND) students will be *Teaching and Learning in Nursing* (https://www.sciencedirect.com/journal/teaching-and-learning-in-nursing). The journal's focus is on ADN education, practice, administration, and research. The study will provide insight on ADN students and their EI levels along with the academic performance of successful completion of nursing courses the first time.

The formatting expectations of the journal are APA formatting with an abstract of 50 to 70 words and a maximum number of 12 key words. There is also a requirement of highlights of three to five bullet points with a maximum number of 85 characters, including spaces (Teaching and Learning in Nursing, 2019).

Abstract

The attrition rate is high in nursing programs across the United States. Nurse educators need to find a way to decrease the attrition rate. Emotional intelligence (EI) may be the key essential to nursing education. The purpose of this quantitative study was to determine if there was a relationship between EI level and successful completion of all nursing courses the first time among associate degree nursing student in a community college. The results revealed no significant difference in EI $t(108) = .999$, $p = .320$, with 95% CI [-2.466, 7.481], between nursing students who were successful in all nursing courses the first time and those students who were not successful the first time. Although the study revealed no statistical significance, nurse educators need to understand the importance of assisting nursing students in developing EI skills to manage their emotions and emotions of others in stressful situations in the nursing profession. Future research could be done to determine whether the EI levels have changed throughout a nursing program.

Introduction

Emotional intelligence (EI) has been correlated with academic performance in nursing students (Cheshire et al., 2015; Sharon & Grinberg, 2018). Health care organizations expect nurses to have high levels of EI and positive professional identity (Cheshire et al., 2015; Sharon & Grinberg, 2018). However, graduate nurses often enter the nursing profession with little knowledge about EI or what expectations health care organizations have for EI (Hutchinson, Hurley, Kozlowski, & Whitehair, 2017). Part of this lack of knowledge and awareness may be due to the lack of EI content in nursing programs. Because of the importance health care organizations are placing on EI, nursing faculty need to incorporate content on EI to prepare students to perform nursing care competently and effectively and understand what factors can influence EI (Cheshire, Strickland, & Carter, 2015; Jones-Schenk & Harper, 2014; Snowden et al., 2018). Identifying the EI levels of students may assist nurse educators in improving students' EI levels; nurse educators may also be better able to provide students with additional resources and applications of their EI skills in the nursing program and afterward in their careers.

Significance/Importance

Attrition rates are high among nursing programs leading to fewer new graduate nurses entering the nursing profession. The attrition rate of associate degree nursing (ADN) programs in the United States is 47% (Harris, Rosenberg, & O'Rourke, 2014). Nursing students encounter challenges in nursing programs that may influence the student to continue, fail, or withdraw from the program (Jeffreys, 2004). EI may provide

the nursing student with the skills needed to be successful in the nursing program and the nursing profession. Possessing EI skills may enable nursing students to manage, regulate, and understand their own emotions to be able to make critical decisions, perform successfully academically, and behave professionally (Faguy, 2012). Nurse educators may be able to assist nursing students in determining their EI levels and assisting them in understanding how to increase their EI levels to aid in their success in the nursing course, program, and future nursing career. Researchers have found that baccalaureate nursing students with higher EI scores were less likely to drop out or withdraw from a nursing course or program (Jones-Schenk & Harper, 2014; Marvos & Hale, 2015; Roso-Bas, Jimenez, & Garcia-Buades, 2016), but the studies focused on a specific semester of the nursing program and not the entire nursing program. In addition, researchers have focused on the relationship between GPA, leadership, and clinical performance with EI (e.g., Cheshire et al., 2015; Codier & Odell, 2014; Eyong & Rathee, 2017; Jones-Schenk & Harper, 2014; Marvos & Hale, 2015; Nosek, 2015; Rice, 2015; Shanta & Gargiulo, 2014; Thomas, Cassidy, & Heller, 2017), resulting in a lack of research data on the relationship between EI and successful completion of nursing courses the first time among ADN students, according to my review of the literature.

The theoretical framework for this study was Mayer and Salovey's (1997) four-branch ability model of EI. The key concepts of the framework are the appraisal and expression of emotion, facilitation of emotion, understanding and analysis of emotions, and reflective regulation of emotion (Mayer & Salovey, 1997), which are essential to the profession of nursing. Nursing students need to be able to understand their own emotions

along with the emotions of others to be successful in the nursing program and nursing profession (Faguy, 2012; Freshwater & Stickley, 2004). The purpose of this study was to determine if there was a difference in EI levels in students who successfully complete nursing courses the first time compared to students who are not successful in completing nursing courses the first time.

Relevant Scholarship

Many studies have provided evidence on the relationship between EI and academic performance in nursing students (Beauvais et al., 2014; Cheshire et al., 2015; Codier & Odell, 2014; Eyong & Rathee, 2017; Nosek, 2015; Shanta & Gargiulo, 2014; Sharon & Grinberg, 2018; Thomas et al., 2017). However, there are mixed results about the relationship between EI and academic performance. Studies conducted on baccalaureate nursing students in the United States have revealed a positive association between EI levels and GPA (Cheshire et al., 2015; Codier & Odell, 2014; Nosek, 2015; Shanta & Gargiulo, 2014; Sharon & Grinberg, 2018; Thomas et al., 2017). In a study of undergraduate and graduate nursing students, high levels of EI were positively correlated with GPA in the graduate students, but no correlation between EI and GPA was found in undergraduate students (Beauvais, Stewart, DeNisco, & Beauvais, 2014). Additionally, Eyong and Rathee (2017) found no correlation between EI and GPA in community college nursing students. The mixed results may be due to the diversity in methodological approaches to measure EI and academic performance. Researchers have recommended conducting a similar study in a more diverse population (Cheshire et al., 2015; Sharon &

Grinberg, 2018; Thomas et al., 2017) and incorporating EI into nursing curricula (Cheshire et al., 2015; Nosek, 2015; Shanta & Gargiulo, 2014).

Other researchers have investigated the relationship between EI and retention in nursing programs (Jones-Schenk & Harper, 2014; Marvos & Hale, 2015; Roso-Bas et al., 2016; Snowden et al., 2018; Stenhouse et al., 2016). Roso-Bas et al. (2016) and Stenhouse et al. (2016) found that nursing students with higher EI scores were less likely to drop out or withdraw from a nursing course or program. Additionally, Jones-Schenk and Harper (2014) and Marvos and Hale (2015) conducted studies among baccalaureate nursing students which found nursing students who possessed higher levels of EI were more likely to remain in the program and graduate. In contrast, Snowden et al. (2018) conducted a study among preregistration nursing and midwifery students using the SSEIT. The results revealed no significant difference in EI scores between students who completed the program compared to students who did not (Snowden et al., 2018). The mixed results of the nursing program retention and EI levels warrant further research.

Despite my current review of literature on EI, evidence linking high levels of EI and successful completion of nursing courses on the first attempt has not yet fully been addressed in the literature. Given the research findings linking EI and academic performance and retention, it is possible that higher levels of EI may correlate with nursing students who successfully complete nursing courses the first time. Thus, further investigation of the relationship is warranted.

Research Question and Design

This quantitative, comparative descriptive study addressed the following research question: What is the difference in emotional intelligence among associate degree nursing students who successfully complete all nursing courses the first time versus those students who are not successful?

I used a comparative descriptive design in which I examined the relationship between EI levels in two groups: nursing students who successfully complete nursing courses the first time and students who were not successful in nursing courses the first time enrolled in ADN program in a Midwestern U.S. state's community college. The comparative descriptive design involved a comparison of the two groups to the same dependent variable of EI (see Gray, Grove, & Sutherland, 2017).

Methods

Participants

I drew the convenience sample of nursing students enrolled at a Midwestern U.S. state's community college for all four semesters of an ADN program. The enrollment of the nursing program was approximately 825 students in all four semesters.

Sample and Power

Using the G*Power (Version 3.1.9.4) software for a two-tailed, independent *t*-tests with an effect size of .5 and power of .8, a sample size of 128 participants with 64 in each group was calculated. Response rates that constitute the sample size can vary widely for online surveys or questionnaires (Nulty, 2008). Overall, a 50% response return is deemed acceptable for online surveys (Nulty, 2008). I recruited ADN nursing students

via e-mail request distributed from the nursing program's learning management system (Blackboard) and an announcement posted on the nursing program's Blackboard site (see Appendix A). Both the e-mail and announcement had a link to the survey which took the participants to SurveyMonkey.

Variables/ Source of Data

I compared the two groups compared to the dependent variable of EI, which was measured using the Schutte Self-Report Emotional Intelligence Test (SSEIT) (Schutte et al., 1998). The SSEIT is an interval level of measurement based on a Likert-scale of 1 to 5.

The independent variable of successful completion of nursing courses was collected as self-report with sociodemographic data. The ADN students completed the sociodemographic survey on which they identified whether they have or have not completed nursing courses the first time, which was a dichotomous variable.

I would expect to find the EI levels to be higher in the nursing students who have successfully completed nursing courses the first time.

Instrumentation or Measures

A sociodemographic survey included questions about age, gender, ethnic background, what semester the student is in the nursing program, and successful completion of all nursing courses the first time.

I obtained permission to use the SSEIT from Dr. Nicola Schutte (see Appendix B). Schutte et al. (1998) developed the SSEIT based on the combination of Salovey and Mayer's original (1990) and the revised model (Mayer & Salovey, 1997) of EI. It

measures the four facets of the model, which are perceiving emotion, utilizing emotions, managing emotions, and managing others' emotions (Mayer & Salovey, 1997). The SSEIT consists of 33-items which are rated on a 5-point Likert scale. A score of 1 represents *strongly disagree*, and a score of 5 represents *strongly agree*. The range of scores is 33 to 165 (Schutte, Malouff, & Bhullar, 2009). The highest scores on the scale indicate greater levels of EI (Schutte et al., 1998).

Schutte et al. (1998) designed the SSEIT by gathering a set of 62 initial items which reflected an adaptive tendency toward EI with 62 items evaluated for fidelity to the relevant construct, clarity, and readability. A subset of the participants also completed theoretically related measures of alexithymia, nonverbal communication of affect, optimism, pessimism, attention to feelings, clarity of feelings, mood repair, depressed mood, and impulsivity (Schutte et al., 1998). The goal of the study was to analyze 62 items and select final items for the scale. The hypothesis was between-group differences on the valid measure of EI (Schutte et al., 1998). Schutte et al. also hypothesized that psychotherapists would have higher EI than prisoners and psychotherapy clients. Additionally, the authors hypothesized that women would have higher EI than men (Schutte et al., 1998). The study consisted of 346 participants who were from a university and diverse community setting in a metropolitan area in the southeastern United States (Schutte et al., 1998). The participants rated themselves on each for the 62-item using a 5-point Likert scale.

Schutte et al. (1998) used a principal-components, orthogonal-rotation, factor analysis of the responses to the 62 items which revealed a scree plot of eigenvalues of

four factors of items at 0.40 and above. When reviewing the factors, the first factor had an eigenvalue of 10.79 and 33 of the items were at 0.40 or above. The second through fourth factors had eigenvalues of 3.58, 2.90, and 2.53, respectively (Schutte et al., 1998). The items loading on factors two through four were not conceptually distinct from items loading on factor. The results revealed 33-items were recognizable as conceptually distinct from other items and represented all the conceptual model of Salovey and Mayer (1990). The final SSEIT contains: 13 items from appraisal and expression of emotion, 10 items from regulation of emotions, and 10 items from utilization of emotions with reverse coding of items 5, 28, and 33 (Schutte et al., 1998).

The SSEIT has validity, internal consistency, and reliability. Schutte et al. (1998) found scores on the SSEIT were substantially related to greater attention to emotions, greater clarity of emotions, and less lack of awareness of emotion and inability to express emotion. The relationship between SSEIT and Emotional Quotient Inventory (EQ-i) was substantial at r = .43, and the relationship between SSEIT and Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) were statistically significant, but not strong at r = .18 (Schutte et al., 2009). The internal consistency of the SSEIT using a Cronbach's alpha was .90 for 346 participants, and a replication study of 32 participants was .87 (Schutte et al., 1998).

Numerous of other studies reported the internal consistency using Cronbach's alpha of the 33 items scale for diverse samples. Foster, Fethney, McKenzie, Fisher, and Harness (2017) surveyed 111 preregistration Master of Nursing Students using SSEIT and obtained .87 internal reliability. In another study of 110 baccalaureate nursing

students, the Cronbach's alpha was found to be .87 (Sharon & Grinberg, 2018). Ibrahim et al. (2017) also found Cronbach's alpha of .91. SSEIT is reliable tool for measurement of EI.

Design and Analysis

My study was a quantitative, descriptive design with a comparative analysis which describes "what is" and no variables are controlled (Gray et al., 2017). I compared the EI levels between two groups of nursing students. One group of students was successful completers of nursing courses the first time. The second group was students who were not successful the first time in nursing courses. The comparison of the two groups required a statistical test that will examine the difference of means between the groups. Since the design was not experimental with two groups examined by a pre- and post-test design, there was no need to manipulate the independent variable (Gray et al., 2017).

I collected data and analyzed the descriptive statistics and inferential data analysis using SPSS Version 24 after the data was cleaned and screened. Descriptive statistics were conducted to summarize the frequencies and percentages of the students' demographic data. I conducted an independent *t*-test to determine if there was a significant difference between the students who were successful in nursing courses the first time versus those who were not in their level of EI.

Ethical Considerations

Researchers have the responsibility to ensure their research is conducted with integrity and honesty. All data that was collected and will be stored electronically and

used only in the manner in which the participant consents and consistent with the Walden and the Institution's IRB. The data collected was not connected in any manner to its source, which allowed for the surveys to be anonymous. Informed consent was obtained after providing details of the study. Walden University's IRB and the Institution's IRB for the protection of human subjects were obtained prior to any survey distribution.

Results

Execution

This quantitative, descriptive study was conducted to determine if there was a difference between EI levels and students who were successful in all nursing courses the first time versus students who are not among ADN students at a community college. Data collection occurred using SurveyMonkey. The SSEIT was used to measure the EI levels of the nursing students. A sociodemographic survey collected the student's successful completion of all nursing courses the first time or not.

The study was approved by the partner site's IRB for data collection on June 29, 2019 and Walden University IRB (approval number 07-17-19-0747583). The sample used for the study was a convenience sample of ADN students at a community college, where approximately 825 students were enrolled. The ADN students were solicited through the community college's ADN Blackboard learning management system site with an announcement, which generated an e-mail to the students. The first announcement and e-mail were posted on July 1, 2019, followed by weekly announcements and e-mails on July 8, 2019, July 15, 2019, and the last day of the study July 22, 2019. The link to SurveyMonkey was included in the Blackboard posts. One

hundred and twenty-three surveys were started; however, only 110 of those surveys were completed. The response rate was 13.3%.

Data collection time was a total of 21 days, from the initial Blackboard announcement on July 1, 2019 to July 22, 2019. The number of students who complete the survey was $N = 110$ which produced a small-sized effect, $d = .202$. G*Power (Version 3.1.9.4) software calculated for the study was .172. The a priori sample size calculated by using the G*Power (Version 3.1.9.4) software for a two-tailed, independent *t*-tests with an effect size of .5 and power of .8 was 128. Power was not achieved due to decreased sample size possibly due to the survey being conducted during the summer semester when most of the nursing students may not have been checking their e-mails or accessing Blackboard.

Data were first export to Excel from SurveyMonkey before importing the data to SPSS version 24. Before conducting the analyses, I screened for missing data and inaccuracies in Excel. From the original dataset, five entries were removed due to lack of completion of the entire survey, and eight were removed for incomplete responses to the EI portion of the survey. The final dataset contained answers to the SSEIT and the sociodemographic survey.

The SSEIT contained 33 Likert scale questions on a 5-point scale and was coded for analysis as follows: (1) *strongly disagree*, (2) *somewhat disagree*, (3) *neither agree nor disagree*, (4) *somewhat agree*, and (5) *strongly agree* for all responses except for reverse coding of the items 5, 28, and 33. The total EI was calculated in Excel by using the function of summation. Data were then imported into SPSS version 24, screened, and

cleaned. The missing data points were transformed and recoded as -1 for the variable of age, where for the variable eight responses were not completed. There were no missing data for student's successful completion of all nursing courses the first time or not and ethnic background. However, there was one missing data point for gender and eight missing data points for age.

Results

I conducted baseline descriptive analyses on sociodemographic information, including gender, ethnic background, and semester in the nursing program. The majority of the students were female (94 of 110, 85.5%), Caucasian (71 of 110, 64.5%), and in the first or second semester of the nursing program (64 of 110, 58.2%) with an average age of 30. Table 1 displays the frequencies and percentages for the sociodemographic characteristics. The mean EI level for the 110 students was 126.45 (SD = 12.659).

Table 1

Frequencies and Percentages for Sociodemographic Data (N = 110)

Characteristics	*N*	%
Failed a nursing course		
No	70	63.6
Yes	40	36.4
Number of nursing courses failed		
0	70	63.6
1	31	28.2
2	9	8.2
Semester in nursing program		
First	32	29.1
Second	32	29.1
Third	24	21.8
Fourth	22	20.0
Ethnic background		
African American	19	17.3
Hispanic/Latino	7	6.4
Caucasian	71	64.5
Other	13	11.8
Gender		
Female	94	85.5
Male	15	13.6

Table 2

Descriptive Statistics for Age and Emotional Intelligence Level

	N	*M*(*SD*)	Range
Age	110	30.47(8.062)	[18, 52]
Emotional intelligence level	110	126.45(12.659)	[84, 156]

Table 3

Descriptive Statistics of Successful in Nursing Course the First Time and Emotional Intelligence Level

Failed nursing course	*N*	EI *M* (*SD*)	Std. error Mean
No	70	127.36 (13.348)	1.595
Yes	40	124.85 (11.338)	1.793

The independent *t*-test is a comparison of the differences in the means of two variables (Frankfort-Nachmias & Leon-Guerrero, 2018). There are three assumptions for the *t*-test that must be met, independence of observations, normal distribution, and homogeneity (Frankfort-Nachmias & Leon-Guerrero, 2018). Independence of observation is the first assumption, and this specifies that the observations that comprise the independent variable (successful completion of all nursing courses the first time) were not influenced in any way by each other or were independent of each other. This study met this assumption as the successful completion of all nursing courses (yes and no) are distinct and separate, and one group has no influence over the other group. The second assumption is the populations from which the samples are drawn from show a normal distribution. There was a normal distribution as the Shapiro-Wilk test revealed $p = .077$, so the null hypothesis was retained. The third assumption of homogeneity of variances was analyzed using Levene's statistic which was $p = .699$. The null hypothesis was retained meaning there was no significant variation between the two groups and equal variance was assumed (Frankfort-Nachmias & Leon-Guerrero, 2018). Therefore, all assumptions of the independent *t*-test were met.

The independent *t*-test was performed to determine if there was a difference in students who were successful in all nursing courses the first time versus students who were not in their EI levels in an ADN program. Of 110 nursing students who responded to the survey, 70 who successfully completed all nursing courses the first time, and 40 nursing students did not complete all nursing courses the first time. Table 3 displays the descriptive statistics of the EI means and standard deviations of the two groups. The results (Table 4) revealed no significant difference in EI $t(108) = .999$, $p = .320$, with 95% CI [-2.466, 7.481], between nursing students who were successful in all nursing courses the first time than those students who were not successful the first time.

Table 4

Independent- Samples t-Test on Successful in Nursing Course the First Time and Emotional Intelligence Level

	Levene's test for equality of variance		*t*-test for equality of means					
	F	Sig.	*t*	d*f*	Sig. (2-tailed)	Mean difference	Std. error difference	95% CI
Equal variances assumed	.150	.699	.999	108	.320	2.507	2.509	[-2.466, 7.481]

Note. CI= confidence interval

A chi-square analysis was completed to determine if there were any associations between success in all nursing courses and gender, ethnic background, and semester in the nursing program. The results (Table 5) revealed a nonsignificant association between success in all nursing courses the first time and gender $\chi^2(2, N = 110) = .659$, $p = .719$.

For the two cells that had expected counts less than 5, the Fisher's Exact Test was used and revealed no significant difference (p = .686). Also, the results (Table 6) of the chi-square analysis revealed a nonsignificant association between success in all nursing courses the first time and ethnic background $\chi^2(3, N = 110) = 2.085$, p = .555). However, there were two cells that had expected counts less than 5; the Fisher's Exact Test was used and revealed no significant difference (p = 2.247). The results (Table 7) of chi-square analysis also revealed nonsignificant association between success in all nursing courses the first time and semester in the nursing program $\chi^2(3, N = 110) = 6.306$, p = .098). Thus, there was no statistically significant association between successful completion of all nursing course the first time and gender, ethnic background or semester in the nursing program.

Table 5

Cross Tabulation and Chi-Square Results for Success in Nursing Courses the First Time by Gender

Gender	Failed nursing course					
	No	Yes	Total	χ^2	d*f*	*p*
Female	60	34	94	.659	2	.719
Male	9	6	15			
Total	70	40	110			

Table 6

Cross Tabulation and Chi-Square Results for Success in Nursing Courses the First Time by Ethnic Background

Ethnic background	Failed nursing course					
	No	Yes	Total	χ^2	d*f*	*p*
African American	11	8	19	2.085	3	.555
Hispanic/Latino	3	4	7			
Caucasian	48	23	71			
Other	8	5	13			
Total	70	40	110			

Table 7

Cross Tabulation and Chi-Square Results for Success in Nursing Courses the First Time by Semester in the Nursing Program

Semester in nursing program	Failed nursing course					
	No	Yes	Total	χ^2	d*f*	*p*
First	26	6	32	6.306	3	.098
Second	17	15	32			
Third	14	10	24			
Fourth	13	9	22			
Total	70	40	110			

Descriptive statistics for number of nursing courses failed and EI are presented in Table 8. The students who have failed 2 nursing courses (N = 9, M = 129.33, SD = 10.607) have higher EI than student who have failed no nursing courses (N = 70, M = 127.36, SD = 11.372), and one nursing course (N = 31, M = 123.55, SD = 11.372).

Table 8

Descriptive Statistics of Number of Nursing Courses Failed and Emotional Intelligence

Number of course failed	*N*	EI *M (SD)*	Std. Error Mean	95% CI	Range
0	70	127.36 (13.348)	1.595	[124.17, 130.54]	[84, 156]
1	31	123.55 (11.372)	2.042	[119.38, 127.72]	[98, 140]
2	9	129.33 (10.607)	3.536	[121.18, 137.49]	[116, 141]
Total	110	126.45 (12.659)	1.207	[124.05, 128.84]	[84, 156]

Note. CI= confidence interval

I used ANOVA to compare the differences in the means of the groups (Frankfort-Nachmias & Leon-Guerrero, 2018). There are five assumptions for the ANOVA that must be met which are: level of measurement, random sampling, independence of observations, normal distribution, and homogeneity (Frankfort-Nachmias & Leon-Guerrero, 2018). First, the level of measurement should be interval-ratio. EI level was an interval-ratio level of measurement. The second assumption was not met because I used convenience sampling. While not causing major issues respective to data analysis, this violation will limit generalization of the study to the population as a whole because the selection of participants for the study happened by choice not by chance which adds bias results (Warner, 2013). Independence of observation is the third assumption, which was met by participants can only select one option for the number of nursing courses failed.

The fourth assumption is the populations from which the samples are drawn from show a normal distribution. The Shapiro-Wilk test revealed $p = .077$, so null hypothesis was retained. Finally, the fifth assumption is the homogeneity of variances. This specifies that the variability of the EI levels of the number of nursing courses failed were similar which can be determined by calculating Levene's statistic. The results of the Levene's (Table 9) was $p = .875$, so the null hypothesis was retained (Wagner, 2016).

Table 9

Test of Homogeneity of Variance for Number of Nursing Courses Failed and Emotional Intelligence Level

Levene's statistic	d*f*1	d*f*2	Sig.
.133	2	107	.875

The one-way ANOVA test was conducted to compare the EI levels of the students and the number of nursing courses failed. The results (Table 10) showed there was no significance between the number of failures and EI levels ($F(2, 107) = 1.233$, $p = .296$). Therefore, the null hypothesis was retained. The Bonferroni post-hoc test (Table 11) showed no statistical significance in all pair-wise comparisons.

Table 10

ANOVA Test for Number of Nursing Courses Failed and Emotional Intelligence Level

	Sum of squares	d*f*	Mean square	*F*	Sig.
Between Groups	393.424	2	196.712	1.233	.296
Within Groups	17073.749	107	159.568		
Total	17467.173	109			

Table 11

Post Hoc Test for Number of Nursing Courses Failed and Emotional Intelligence Level (Bonferroni)

Number of nursing courses failed	Number of nursing courses failed	Mean difference	Standard error	Sig.	95% CI
0	1	3.809	2.725	.495	[-2.82, 10.44]
	2	-1.976	4.473	.1.000	[-12.86, 8.90]
1	0	-3.809	2.725	.495	-10.44, 2.82]
	2	-5.785	4.783	.687	[-17.42, 5.85]
2	0	1.976	4.473	1.000	[-8.90, 12.86]
	1	5.785	4.783	.687	[-5.85, 17.42]

Note. CI= confidence interval.

Discussion

Interpretation

The results of the study showed there was no statistical significance $t(108) = .999$, $p = .320$ in EI between nursing students who were successful in all nursing courses the

first time (*M* = 127.36, *SD* = 13.348) versus students who were not (*M* = 124.85, *SD* = 11.338). My results were congruent with those of Eyong and Rathee (2017), who found that EI levels have no relationship to academic performance in ADN students. However, the results of my study were different than what has been found in previous studies for baccalaureate nursing students. Researchers conducted studies on baccalaureate nursing students in the United States revealed a positive association between EI levels and GPA (Cheshire et al., 2015; Codier & Odell, 2014; Nosek, 2015; Shanta & Gargiulo, 2014; Sharon & Grinberg, 2018; Thomas et al., 2017). The difference in the studies by Cheshire et al. (2015), Codier and Odell (2014), and Nosek (2015) were the tools to measure EI levels. Those researchers used the MSCEIT, which may have led to different results along with the population of the nursing students enrolled in a baccalaureate nursing program. However, Sharon and Grinberg (2018) and Thomas et al. (2017) used the same tool as this study, which showed a significant difference between EI levels and academic performance. Snowden et al. (2018) conducted a study among nursing and midwifery students using SSEIT, which yielded a similar finding to this study. Their results revealed no significant difference in EI scores between students who completed the program compared to a student who did not (Snowden et al., 2018). On the other hand, Jones-Schenk and Harper (2014) and Marvos and Hale (2015) conducted studies among baccalaureate nursing students which found a nursing student with higher levels of EI were more likely to remain in the program and graduate. Additionally, researchers found nursing students with higher EI scores were less likely to drop out or withdraw from a

nursing course or program (Roso-Bas et al., 2016; Stenhouse et al., 2016). Again, the mixed results may be due to different approaches to measuring EI levels.

This study also revealed that there were no associations between successful completion of all nursing courses the first time and gender, ethnic background, and semester in the nursing program. However, when analyzing the data in regard to number of failed courses, the EI levels of students who failed 2 courses ($N = 9$, $M = 129.33$, $SD = 10.607$) were higher than the students who had not failed any courses ($N = 70$, $M = 127.36$, $SD = 11.372$) and those who failed 1 ($N = 31$, $M = 123.55$, $SD = 11.372$). In the literature, there were no studies that examined the number of failed courses and EI levels. Many researchers conducted studies examining the EI levels and academic performance (Cheshire et al., 2015; Codier & Odell, 2014; Nosek, 2015; Shanta & Gargiulo, 2014; Sharon & Grinberg, 2018; Thomas et al., 2017) and likelihood of dropping out of a nursing course or program (Roso-Bas et al., 2016; Stenhouse et al., 2016), which revealed a positive correlation with higher EI levels and academic performance.

Limitations

The generalizability of the results from the study to all ADN students was limited by several factors. First, the sample was a convenience sample of ADN students attending one community college. Additionally, participation was limited to students who voluntarily chose to participate, which they may not be a true sample of the population evaluated. The recruitment occurred over the summer break, which may have limited the number of students participating. In retrospect, I would have administered the survey during the academic year to obtain a greater number of responses. The small sample

population produced a small-sized effect, d = .202 and a G*Power (version 3.1.9.4) of .172. The small power for the study may have led to a sampling error A third limitation involves the possibility of self-selection bias in the sample. It is possible that the results of those who responded to the self-administered survey may have answered the questions with what they assessed as the desired answer and not as they truly felt.

Implications

The quantitative approach to the study allowed for the use the SSEIT which aligned with the theoretical framework of Mayer and Salovey's four-branch ability model of EI. The results did not show a difference in EI levels between students who were successful the first time in all nursing course and those who were not, but it added to the knowledge on ADN students and EI levels. Further investigation on ADN students and EI levels may assist the students in understanding their own emotions along with the emotions of others to be successful in the nursing program and nursing profession (Faguy, 2012; Freshwater & Stickley, 2004).

This study provides a foundation for further investigation of ADN students' EI levels and academic performance. No other studies have focused on the student's success in all nursing course in an ADN program. However, there have been studies on baccalaureate nursing students' EI levels and retention in a nursing program or nursing course (Jones-Schenk & Harper, 2014; Marvos & Hale, 2015; Roso-Bas et al., 2016; Snowden et al., 2018; Stenhouse et al., 2016). Nursing students with higher EI levels may be able to handle stressful situations by managing emotions in themselves and others (Faguy, 2012). The recommendations for practice found in the study were to continue to

conduct studies on ADN students to determine if EI skills are incorporated into the nursing curricula and then implement strategies to incorporate EI skills to improve on the students' abilities to handle difficult situations. The potential impact for positive social change is to gain an understanding of the factors associated with EI. I determined there was no relationship among EI and successful completion of all nursing courses the first time, but it is important to incorporate concepts of EI into the nursing curricula to assist nursing students in developing the EI skills needed for the nursing profession to manage regulate, understand the emotions of others and themselves in stressful situations (Faguy, 2012).

Recommendations

Given the limitations of the study, I recommend replicating the study during an academic year to increase the potential response rate from the nursing students. Replication of the study should be conducted using more than one ADN program to increase the number of available participants and increase generalizability of the study. Additionally, I recommend conducting a longitudinal study across the curriculum to determine whether the EI levels have changed.

Conclusion

The attrition rates in nursing programs are high, and nurse educators need to continue to seek out ways to aid in the student's success in a nursing course or nursing program. Although this study did not reveal that EI level was related to successful completion of all nursing courses the first time, EI skills can assist nursing students in managing, regulating, and understanding their own emotions and the emotions of others

in order to provide high quality, competent nursing care in stressful situations. Nurse educators need to understand the important role EI plays in caring for patients and stress the development of EI skills in nursing students throughout the curricula.

References

Beauvais, A. M., Stewart, J. G., DeNisco, S., & Beauvais, J. E. (2014). Factors related to academic success among nursing students: A descriptive correlational research study. *Nurse Education Today, 34*, 918-923. doi:10.1016/j.nedt.2013.12.005

Cheshire, M. H., Strickland, H. P., & Carter, M. R. (2015). Comparing traditional measures of academic success with emotional intelligence scores in nursing students. *Asia-Pacific Journal of Oncology Nursing, 2*(2), 99-106. doi:10.4103/2347-5625.154090

Codier, E., & Odell, E. (2014). Measured emotional intelligence ability and grade point average in nursing students. *Nurse Education Today, 34*, 608-612. doi:10.1016/j.nedt.2013.06.007

Eyong, D. N., & Rathee, N. K. (2017). Exploring emotional intelligence and authentic leadership in relation to academic achievement among nursing students. *International Journal of Arts & Sciences, 10*(1). 49-56. Retrieved from http://www.universitypublications.net/ijas/

Faguy, K. (2012). Emotional intelligence in healthcare. *Radiologic Technology, 83*(3), 237-253. Retrieved from http://www.radiologictechnology.org/

Foster, K., Fethney, J., McKenzie, H., Fisher, M., & Harness, E. (2017). Emotional intelligence increases over time: A longitudinal study of Australian pre-registration nursing students. *Nurse Education Today, 55*, 65-70. doi:10.1016/j.nedt.2017.05.008

Frankfort-Nachmias, C., & Leon-Guerrero, A. (2018). *Social statistics for a diverse*

society (8th ed.). Thousand Oaks, CA: Sage Publications.

Freshwater, D., & Stickley, T. (2004). The heart of the art: Emotional intelligence in nurse education. *Nursing Inquiry, 11*(2), 91-98. doi:10.111/j.1440-1800.20041.00198.x

Gray, J. R., Grove, S. K., & Sutherland, S. (2017). *The practice of nursing research: Appraisal, synthesis, and generation of evidence* (8th ed.). St. Louis, MO: Elsevier.

Harris, R. C., Rosenberg, L., & O'Rourke, M. E. G. (2014). Addressing the challenges of nursing student attrition. *Journal of Nursing Education, 53*(1), 31-37. doi:10.3928/01484834-20131218-.3

Hutchinson, M., Hurley, J., Kozlowski, D., & Whitehair, L. (2017). The use of emotional intelligence capabilities in clinical reasoning and decision-making: A qualitative, exploratory study. *Journal of Clinical Nursing, 27*(3-4), e600-e610. doi:10.1111/jocn.14106

Ibrahim, N. K., Algethmi, W. A., Binshihon, S. M., Almahyawi, R. A., Alahmadi, R. F., & Baabdullah, M. Y. (2017). Predictors and correlations of emotional intelligence among medical students at King Abdulaziz University, Jeddah. *Pakistan Journal of Medical Science, 33*(5), 1080-1085. doi:10.12669/pjms.335.13157

Jeffreys, M. R. (2004). *Nursing student retention: Understanding the process and making a difference.* New York, NY: Springer.

Jones-Schenk, J., & Harper, M. G. (2014). Emotional intelligence: An admission criterion alternative to cumulative grade point averages for prelicensure students. *Nurse Education Today, 34*, 413-420. doi:10.1016j.nedt.2013.03.018

Marvos, C., & Hale, F. B. (2015). Emotional intelligence and clinical performance/retention of nursing students. *Asia-Pacific Journal of Oncology Nursing, 2*(2), 63-71. doi:10.4103/2347/5625.157569

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey, M. A. Brackett, & J. D. Mayer (Eds.), *Emotional intelligence: Key readings on the Mayer and Salovey model* (pp. 29-60). Port Chester, NY: Dude Publishing.

Nosek, M. (2015). A cross sectional exploration of emotional intelligence in US baccalaureate nursing students. *Journal of Nursing Education and Practice, 5*(11), 29-41. doi:10.5430/jnep.v5n11p29

Nulty, D. D. (2008). The adequacy of response rates to online and paper surveys: What can be done? *Assessment & Evaluation in Higher Education, 33*(3), 301-314. doi:10.1080/02602930701293231

Rice, E. (2015). Predictors of successful clinical performance in associate degree nursing students. *Nurse Educator, 40*(4), 207-211. doi:10.1097/nne.0000000000000136

Roso-Bas, F., Jimenez, A. P., & Garcia-Buades, E. (2016). Emotional variables, dropout, and academic performance in Spanish nursing students. *Nurse Education Today, 37*, 53-58. doi:10.1016/j.nedt.2015.11.021

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality, 9*(3), 185-211. doi:10.2190/DUGG-P24E-52WK-6CDG

Schutte, N. S., Malouff, J. M., & Bhullar, N. (2009). The assessing emotions scale. In C. Stough, D. Saklofske, & J. Parker (Eds.), *The assessment of emotional intelligence* (pp. 119-135). doi:10.1007/979-0-387-88370-0_7

Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of measure of emotional intelligence. *Personality and Individual Differences, 25*, 167-177. doi:10.1016/S0191-8869(98)00001-4

Shanta, L., & Gargiulo, L. (2014). A study of the influence of nursing education on development of emotional intelligence. *Journal of Professional Nursing, 30*(6), 511-520. doi:10.1016/j.profnurs.2014.06.005

Sharon, D., & Grinberg, K. (2018). Does the level of emotional intelligence affect the degree of success in nursing students? *Nurse Education Today, 64*, 21-26. doi:10.1016/j.nedt.2018.01.030

Snowden, A., Stenhouse, R., Duers, L., Marshall, S., Carver, F., Brown, N., & Young, J. (2018). The relationship between emotional intelligence, previous caring experience, and successful completion of a pre-registration nursing/midwifery degree. *Journal of Advanced Nursing, 74*(2), 433-442. doi:10.111/jan.13455

Stenhouse, R., Snowden, A., Young, J., Carver, F., Carver, H., & Brown, N. (2016). Do emotional intelligence and previous caring experience influence student nurse performance? A comparative analysis. *Nurse Education Today, 43*, 1-9. doi:10.1016/j.nedt.2016.04.015

Teaching and Learning in Nursing. (2019). *Guide for authors*. Retrieved from https://www.elsevier.com/journals/teaching-and-learning-in-nursing/1557-3087/guide-for-authors

Thomas, C. L., Cassady, J. C., & Heller, M. L. (2017). The influence of emotional intelligence, cognitive test anxiety, and coping strategies on undergraduate academic performance. *Learning and Individual Differences, 55*, 40-48. doi:10.1016/j.lindif.2017.03.001

Comparison of Emotional Intelligence and Gender in Associate Degree Nursing Students

Melanie R. Benington

Walden University

[Notes]

Outlet for Manuscript

The journal for the manuscript on gender and emotional intelligence (EI) will be *Nurse Education in Practice* (https://www.sciencedirect.com/journal/nurse-education-in-practice). The journal is an international journal focused on advancements of educational theory and pedagogy. The journal has created a new section for doctorate studies which follows the outline of a dissertation with a literature review, research design, methodologies, and data analyses. EI and gender have been researched in various health care professions with mixed results. Foster, Fethney, McKenzie, Fisher, and Harness (2017) conducted a longitudinal study which found comparable EI levels between females and males in Australia. Other studies found female baccalaureate nursing students had higher EI levels than males (Marvos & Hale, 2015; Snowden et al., 2015; Snowden et al., 2018; Stiglic et al., 2018). Nosek (2015) found males had higher levels of EI than females in the branch of facilitating thought. The manuscript will add to the journal's articles on EI and gender with the focus on associate degree nursing students.

The journal's requirements include a maximum of 6,000 words, which include in-text references, abstract, key words, and references. The journal also requires APA formatting with 12-point font, double spaced lines with wide margins at least 2.5 cm, and numbered pages. The journal requires an abstract of 200 words maximum and three to four key words. Highlights of three to five bullet points with the core findings with a maximum of 85 characters per bullet point, including spaces, are needed for each article. With the submission, a cover letter is needed (Nurse Education in Practice, 2019).

Abstract

Women have dominated the nursing profession since Florence Nightingale. The Institute of Medicine, in 2010, recognized that there is a lack of gender diversity in the nursing profession. Therefore, the purpose of this study was to determine if there is a difference in emotional intelligence (EI) level and gender in associate degree nursing students in a community college setting in the United States. A self-reported survey, including the Schutte Self-Report Emotional Intelligence Test and a sociodemographic survey, was completed by 110 associate degree nursing students. An independent *t*-test revealed there was no statistical significance ($t(107) = 1.868$, $p = .064$) between the EI levels in men and women. Further research is required to fully determine if there is no difference in EI levels in men and women. Nurse educators should incorporate EI skills into nursing curricula to assist students with increasing their EI abilities in their personal and professional lives.

Introduction

The U.S. Bureau of Labor Statistics identified the nursing profession as one of the top occupations for job growth with a projection of growth of 15% from 2016 to 2026 (U.S. Bureau of Labor Statistics, 2018). Nursing is expected to grow from 2.95 million to 3.39 million nurses during this time frame (U.S. Bureau of Labor Statistics, 2018). Yet, the percentage of men enrolled in associate degree nursing (ADN) programs in 2016 was 15% (National League for Nursing, 2016), and 9.1% are men in the nursing workforce in 2017 (National Council of State Boards of Nursing, 2018). Gender diversity is lacking in the nursing profession (Institute of Medicine, 2010).

The profession of nursing has been dominated by women since Nightingale's model portrayed nurses as being the preserve of women (Nightingale, 1969). Nightingale (1969) believed that men were not suited to be a nurse and that it was a natural disposition for women to be a nurse. Her comments on nursing were not only on the abilities necessary to make a good nurse but also the personality and ladylike qualities required. Additionally, nursing involves both emotional labor and physical labor, which is viewed more as the province of females (Gray, 2010). Seidler (2005) described how masculine identities had been shaped around unemotionality and disconnection from bodies. Therefore, society continues to see nursing as women's work leading to issues with gender diversity.

Significance/Importance

There have been several studies examining emotional intelligence (EI) and gender, but there has been no consensus on whether gender is a factor affecting levels of

EI (Foster, Fethaney, McKenzie, Fisher, & Harness, 2017; Marvos & Hale, 2015; Nosek, 2015; Snowden et al., 2015; Snowden et al., 2018; Stiglic et al., 2018). Research has shown that EI levels between women and men differ. EI levels may differ between women and men due to more socialization, societal expectations, perceptions of females' motherly nature, and better learning of emotions by females (Mullola et al., 2012). The known difference in EI levels between genders, there may be a need for additional resources to increase EI levels. With the difference in EI levels between genders, additional resources may be needed to increase EI levels.

The theoretical framework for this study was Mayer and Salovey's (1997) four-branch ability model of EI. The framework focuses on the appraisal and expression of emotion, facilitation of emotion, understanding and analysis of emotions, and reflective regulation of emotion (Mayer & Salovey, 1997), which is essential for the nursing profession. Nursing students may be able to increase their EI level by applying different techniques to promote emotional and intellectual growth. The purpose of this study was to determine if there were differences in EI levels between male and female ADN students.

Relevant Scholarship

Researchers have examined the relationship between EI levels and gender in nursing students (Cerit & Beser, 2014; Foster et al., 2017; Kaya, Senyuva, Bodur, 2017; Marvos & Hale, 2015; Nosek, 2015; Snowden et al., 2015; Snowden et al., 2018; Stiglic et al., 2018). However, there are mixed results concerning the relationship between EI and gender. Researchers conducted studies on baccalaureate nursing students revealed

women have higher EI levels than men (Kaya et al., 2017; Marvos & Hale, 2015; Snowden et al., 2015). Snowden et al. (2018) found that women have higher levels of EI than men, but men were just as likely to complete the nursing program as females. Stiglic et al. (2018) also discovered that female students had higher levels of EI than male students. In contrast, Cerit and Beser (2014) and Foster et al. (2017) found no difference in EI between women and men while Nosek (2015) found male baccalaureate nursing students to have higher EI levels than female students. The mixed results may be due to the diversity in methodological approaches to measure EI and the percentage of males in the sample population. The mixed results support further studies of the difference in EI levels between females and males to gain a better understanding of the gendered nature of EI in nursing.

Research Question and Design

This quantitative, comparative descriptive study addressed the following research question: What is the difference in the levels of emotional intelligence between males and females who are students in an associate degree nursing program in a community college setting?

I used a comparative descriptive design in which I examined the relationship between EI levels in two groups: men and women enrolled in the ADN program in a Midwestern U.S. state's community college. The comparative descriptive design involved comparison of the two groups to the same dependent variable of EI (see Gray, Grove, & Sutherland, 2017).

Methods

Participants

I drew the convenience sample of nursing students enrolled at a Midwestern U.S. state's community college for all four semesters of an associate degree program. The enrollment of the nursing program was approximately 825 students in all four semesters.

Sample and Power

Using the G*Power (Version 3.1.9.4) software for a two-tailed, independent *t*-tests with an effect size of .5 and power of .8, a sample size of 128 participants with 64 in each group was calculated. Response rates that constitute the sample size can vary widely for online surveys or questionnaires (Nulty, 2008). Overall, a 50% response return is deemed acceptable for online surveys (Nulty, 2008). I recruited ADN nursing students via e-mail request distributed from the nursing program's Blackboard learning management system and an announcement posted on the nursing program's Blackboard site (see Appendix A). Both the e-mail and announcement had a link to the survey which took the participants to SurveyMonkey.

Variables/Sources of Data

I compared the two groups to the dependent variable of EI, which was measured using the Schutte Self-Report Emotional Intelligence Test (SSEIT) (Schutte et al., 1998). The SSEIT is an interval level of measurement based on a Likert-scale of 1 to 5. The independent variable of gender was collected as self-report with sociodemographic data. The ADN students completed the sociodemographic survey on which they identified whether they were male or female. Gender was thus a categorical variable. In the study

results, I expected to find the EI levels to be higher in female nursing students than male nursing students.

Instrumentation or Measures

A sociodemographic survey included questions about age, gender, ethnic background, what semester the student is in the nursing program, and successful completion of all nursing courses the first time.

I obtained permission to use the SSEIT from Dr. Nicola Schutte (see Appendix B). The SSEIT was developed by Schutte et al. (1998) based on the combination of Salovey and Mayer's original (1990) and revised model (Mayer & Salovey, 1997) of EI. It measures the four facets of the model, which are perceiving emotion, utilizing emotions, managing emotions, and managing others' emotions (Mayer & Salovey, 1997). The SSEIT consists of 33 items which are rated on a 5-point Likert scale. A score of 1 represents *strongly disagree*, and a score of 5 represents *strongly agree*. The range of scores is 33 to 165 (Schutte, Malouff, & Bhullar, 2009). The highest scores on the scale indicate greater levels of EI (Schutte et al., 1998).

Schutte et al. (1998) designed the SSEIT by gathering a set of 62 initial items which reflected an adaptive tendency toward EI with 62 items evaluated for fidelity to the relevant construct, clarity, and readability. A subset of the participants also completed theoretically related measures of alexithymia, nonverbal communication of affect, optimism, pessimism, attention to feelings, clarity of feelings, mood repair, depressed mood, and impulsivity (Schutte et al., 1998). The goal of the study was to analyze 62 items and select final items for the scale. The hypothesis was between-group differences

on the valid measure of EI (Schutte et al., 1998). Schutte et al. also hypothesized that psychotherapists would have higher EI than prisoners and psychotherapy clients. Additionally, the authors hypothesized that women would have higher EI than men (Schutte et al., 1998). The study consisted of 346 participants who were from a university and diverse community setting in a metropolitan area in the southeastern United States (Schutte et al., 1998). The participants rated themselves on each for the 62-item using a 5-point Likert scale (Schutte et al., 1998).

Schutte et al. (1998) used a principal-components, orthogonal-rotation, factor analysis of the responses to the 62 items which revealed a scree plot of eigenvalues of four factors of items at 0.40 and above. When reviewing the factors, the first factor had an eigenvalue of 10.79 and 33 of the items were at 0.40 or above. The second through fourth factors had eigenvalues of 3.58, 2.90, and 2.53, respectively (Schutte et al., 1998). The items loading on factors two through four were not conceptually distinct from items loading on factor. The results revealed 33-items were recognizable as conceptually distinct from other items and represented all of the conceptual model of Salovey and Mayer (1990). The final SSEIT contains: 13 items from appraisal and expression of emotion, 10 items from regulation of emotions, and 10 items from utilization of emotions with reverse coding of items 5, 28, and 33 (Schutte et al., 1998).

The SSEIT has validity, internal consistency, and reliability. Schutte et al. (1998) found scores on the SSEIT were substantially related to greater attention to emotions, greater clarity of emotions, and less lack of awareness of emotion and inability to express emotion. The relationship between SSEIT and Emotional Quotient Inventory (EQ-i) was

substantial at r = .43, and the relationship between SSEIT and Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) were statistically significant, but not strong at r = .18 (Schutte et al., 2009). The internal consistency of the SSEIT using a Cronbach's alpha was .90 for 346 participants, and a replication study of 32 participants was .87 (Schutte et al., 1998).

Numerous of other studies reported the internal consistency using Cronbach's alpha of the 33 items scale for diverse samples. Foster et al. (2017) surveyed 111 preregistration Master of Nursing Students using SSEIT and obtained .87 internal reliability. In another study of 110 baccalaureate nursing students, the Cronbach's alpha was found to be .87 (Sharon & Grinberg, 2018). Ibrahim et al. (2017) also found Cronbach's alpha of .91. SSEIT is reliable tool for measurement of EI.

Design and Analysis

My study was a quantitative, descriptive design with a comparative analysis which describes "what is" and no variables are controlled (Gray et al., 2017). I compared EI levels between two groups of nursing students. One group of students was women, and the second group was men. The comparison of the two groups requires a statistical test that examined the difference of means between the groups. Since the design was not experimental with two groups examined by a pre- and post-test design, there was no need to manipulate the independent variable (Gray et al., 2017).

I collected data and analyzed the descriptive statistics and inferential data analysis using SPSS Version 24 after the data was cleaned and screened. Descriptive statistics were conducted to summarize the frequencies and percentages of the participants'

demographic data. I conducted an independent *t*-test to determine if there was a significant difference between men and women in their levels of EI.

Ethical Considerations

The participants were provided with details regarding the study. All data that were collected were stored electronically and used only in the manner in which the participant consented and is consistent with the Walden and the Institution's IRB. Ethical principles of autonomy of the participants, confidentiality, and anonymity were upheld. Walden University's IRB and the Institution's IRB approval was obtained prior to any survey distribution.

Results

Execution

This quantitative, descriptive study was conducted to determine if there was a difference between EI level among females and males of ADN students at a community college. Data collection occurred using SurveyMonkey. I collected sociodemographic data and used the SSEIT to measure the EI levels of nursing students.

The study was approved by the partner site's IRB for data collection on June 29, 2019 and Walden University IRB (approval number 07-17-19-0747583). The sample used for the study was a convenience sample for ADN students at a community college, where approximately 825 students were enrolled. The ADN students were solicited through the community college's ADN Blackboard learning management system site with an announcement, which generated an e-mail to the students. The first announcement and e-mail were posted on July 1, 2019, followed by weekly

announcements and e-mails on July 8, 2019, July 15, 2019, and the last day of the study July 22, 2019. The link to SurveyMonkey was included in the Blackboard posts. One hundred and twenty-three surveys were started; however, only 110 of those surveys were completed. The response rate was 13.3%.

Data collection time was a total of 21 days, from the initial Blackboard announcement on July 1, 2019 to July 22, 2019. The number of participants who complete the survey was $N = 110$ which produced a medium-sized effect, $d = .464$. G*Power (Version 3.1.9.4) software calculated for the study was .38. The a priori sample size calculated by using the G*Power (Version 3.1.9.4) software for a two-tailed, independent *t*-tests with an effect size of .5 and power of .8 was 128. Power was not achieved due to decreased sample size possibly due to the survey being conducted during the summer semester when most of the nursing students may not have been checking their e-mails or accessing Blackboard.

Data were first export to Excel from SurveyMonkey before importing the data to SPSS version 24. Before conducting the analyses, I screened for missing data and inaccuracies in Excel. From the original dataset, five entries were removed due to lack of completion of the entire survey, and eight were removed for incomplete responses to the EI survey. The final dataset contained answers to the SSEIT and the sociodemographic survey.

The SSEIT contained 33 Likert scale questions on a 5-point scale and was coded for analysis as follows: (1) *strongly disagree*, (2) *somewhat disagree*, (3) *neither agree nor disagree*, (4) *somewhat agree*, and (5) *strongly agree* for all responses except for

reverse coding of the items 5, 28, and 33. The total EI was calculated in Excel by using the function of summation. Data were then imported into SPSS version 24, screened, and cleaned. The missing data points were transformed and recoded as -1 for the variables of age, where for the variable eight responses were not completed. There were no missing data for student's successful completion of all nursing courses the first time or not and ethnic background. However, there was one missing datapoint for gender and eight missing for age.

Results

I conducted baseline descriptive analyses on sociodemographic information, including gender, ethnic background, and semester in the nursing program. Most of the participants were female (94 of 110, 85.5%), Caucasian (71 of 110, 64.5%), and in the first or second semester of the nursing program (64 of 110, 58.2%) with an average age of 30. The mean EI level for the 110 students was 126.45 (SD = 12.659). Table 12 displays frequencies and percentages for the sociodemographic characteristics.

Table 12

Frequencies and Percentages for Sociodemographic Data (N = 110)

Characteristics	*N*	%
Failed a nursing course		
No	70	63.6
Yes	40	36.4
Number of nursing courses failed		
0	70	63.6
1	31	28.2
2	9	8.2
Semester in nursing program		
First	32	29.1
Second	32	29.1
Third	24	21.8
Fourth	22	20.0
Ethnic background		
African American	19	17.3
Hispanic/Latino	7	6.4
Caucasian	71	64.5
Other	13	11.8
Gender		
Female	94	85.5
Male	15	13.6

Table 13

Descriptive Statistics for Age and Emotional Intelligence Level

	N	*M*(*SD*)	Range
Age	110	30.47(8.062)	[18, 52]
Emotional intelligence level	110	126.45(12.659)	[84, 156]

I analyzed the data using a two-tailed independent *t*-test. There are three assumptions for the *t*-test that must be met, independence of observations, normal

distribution, and homogeneity (Frankfort-Nachmias & Leon-Guerrero, 2018). The assumption of independence of observation was met as the gender (female and male) are distinct and separate, and one group has no influence over the other group. The second assumption, normal distribution was met with Shapiro-Wilk test $p = .077$. Finally, the third assumption of homogeneity of variances was met (Levene's statistic $p = .188$).

An independent *t*-test was performed to determine if there was a difference in females and males EI levels in an ADN program. There was a difference in the number of females and males responding to the survey. Female ($N = 94$) had more responding than males ($N = 15$). Table 14 displays the descriptive statistics which indicated females ($M = 127.33$, $SD = 12.006$) have a higher EI level than males ($M = 120.80$, $SD = 15.830$). The results (Table 15) revealed no significance $t(107) = 1.868$, $p = .064$, with 95% CI [-.400, 13.459] difference between EI levels of males and female ADN students.

Additionally, an independent *t*-test was performed to determine if there was a difference between age and gender. The descriptive statistics (Table 16) showed females ($N = 87$, $M = 30.87$, $SD = 8.232$) were older than males ($N = 14$, $M = 28.79$, $SD = 7.040$). The results (Table 17) revealed no significant difference in age $t(99) = .897$, $p = .372$, with 95% CI [-2.532, 6.708], between females and males.

Table 14

Descriptive Statistics of Gender and Emotional Intelligence Level

Gender	*N*	EI *M*(*SD*)	Std. error mean
Female	94	127.33(12.006)	1.238
Male	15	120.80(15.830)	4.087

Table 15

Independent- Samples t-test on Gender and Emotional Intelligence Level

	Levene's test for equality of variance		*t*-test for equality of means					
	F	Sig.	*t*	d*f*	Sig. (2-tailed)	Mean difference	Std. error difference	95% CI
Equal variances assumed	1.757	.188	1.868	107	.064	6.530	3.496	[-.400, 13.459]

Note. CI= confidence interval

Table 16

Descriptive Statistics of Gender and Age

Gender	*N*	*M*(*SD*)	Std. error mean
Female	87	30.87(8.232)	.883
Male	14	28.79(7.040)	1.882

Table 17

Independent- Samples t-test on Gender and Age

	Levene's test for equality of variance		*t*-test for equality of means					
	F	Sig.	*t*	d*f*	Sig. (2-tailed)	Mean difference	Std. error difference	95% CI
Equal variances assumed	.273	.603	.897	99	.372	2.088	2.328	[-2.532, 6.708]

Note. CI= confidence interval

To determine if there were any associations between gender and success in all nursing courses the first time, ethnic background, and semester in the nursing program, a Chi-square analysis was completed. The results (Table 18) revealed a nonsignificant association between gender and successful in all nursing courses the first time $\chi^2(2, N = 110) = .659$, $p = .719$. For the two cells that had expected counts less than 5, the Fisher's Exact Test was used to reveal no significant difference ($p = .686$). Also, the results of the chi-square analysis (Table 19) revealed a nonsignificant association between gender and ethnic background $\chi^2(6, N = 110) = .770$, $p = .993$. For the two cells that had expected counts less than 5, the Fisher's Exact Test revealed no significant difference ($p = 2.986$). The results of chi-square analysis (Table 20) also revealed nonsignificant association between gender and semester in the nursing program $\chi^2(2, N = 110) = 3.951$, $p = .683$. For the two cells that had expected counts less than 5, the Fisher's Exact Test was used to reveal no significant difference ($p = 4.023$). Thus, there was no statistically significant

association between gender and successful completion of all nursing course the first time, ethnic background, or semester in the nursing program.

Table 18

Cross Tabulation and Chi-Square Results for Gender by Success in Nursing Courses the First Time

Failed nursing course	Gender					
	Female	Male	Total	χ^2	d*f*	*p*
No	60	9	94	.659	2	.719
Yes	34	6	15			
Total	94	15	109			

Table 19

Cross Tabulation and Chi-Square Results for Gender by Ethnic Background

Ethnic background	Gender					
	Female	Male	Total	χ^2	d*f*	*p*
African American	17	2	19	.770	6	.993
Hispanic/Latino	6	1	7			
Caucasian	60	10	70			
Other	11	2	13			
Total	94	15	109			

Table 20

Cross Tabulation and Chi-Square Results for Gender by Semester in the Nursing Program

Semester in nursing program	Gender					
	Female	Male	Total	χ^2	d*f*	*p*
First	27	4	32	3.951	6	.683
Second	28	4	32			
Third	19	5	24			
Fourth	20	2	22			
Total	94	15	109			

Discussion

Interpretation

In this study, the EI levels of ADN students were found to be not significant with regards to gender. There was a significant difference in the group sizes, which may have led to the difference in EI levels. Other researchers (Foster et al., 2017; Kaya et al., 2017; Marvos & Hale, 2015; Stiglic et al., 2018) mentioned the same limitation when researching EI levels and gender.

My results were similar to Foster et al. (2017) and Cerit and Beser (2014). Foster et al. (2017) conducted a longitudinal study on 111 Australian preregistered nursing students. Their study revealed no significant difference between male and female students. Similarly, Cerit and Beser (2014) conducted a study on 183 nursing students in Turkey, where 67.2 % were female students. The results revealed no statistical significance in EI levels between women and men.

In contrast, several researchers have concluded women nursing students have higher EI levels than men students (Kaya et al., 2017; Marvos & Hale, 2015; Snowden et al., 2015; Snowden et al., 2018; Stiglic et al., 2018). In a study of 129 undergraduate nursing students in the United States, the sample population consisted of 73% women and 27% men found men had significantly lower managing emotions scores than women (Marvos & Hale, 2015). Also, Snowden et al. (2015) and Snowden et al. (2018) studied nursing and midwifery students found in both studies women had higher EI levels than men. The differences in the studies were the sample populations. None of the studies involve ADN students, which could be the difference in the findings.

Limitations

The generalizability of the results from the study to all ADN students is limited by several factors. First, the sample was a convenience sample of ADN students attending one community college. Additionally, participation was limited to students who voluntarily chose to participate; they may also not be a true sample of the population evaluated. The recruitment occurred over the summer break, which may have limited the number of students participating. In retrospect, I would have administered the survey during the academic year to obtain a greater number of responses. The small sample population produced a medium-sized effect, d = .464 and a G*Power (Version 3.1.9.4) software of .38. The small power of the study may have led to a sampling error. Additionally, there were significantly more women responding to the survey than men, which could lead to higher EI levels with more women responding to the survey. A third limitation involves the possibility of self-selection bias in the sample. It is possible that the results of those who responded to the self-administered survey may have answered the questions with what they assessed as the desired answer and not as they truly felt.

Implications

My quantitative approach to the study allowed for the use the SSEIT which aligned with the theoretical framework of Mayer and Salovey's four-branch ability model of EI. My results did not show a difference in EI levels between women and men, but continuing to assess EI levels of ADN students will assist them in understanding their own emotions along with the emotions of others to apply to stressful situations in the nursing profession (Faguy, 2012; Freshwater & Stickley, 2004).

This study provides a foundation for the investigation of the differences in EI levels and gender for ADN programs. Previously, there was no study on EI levels and gender for ADN students. Understanding the potential differences in EI levels and gender may lead to further men entering and staying in the nursing profession. Exhibiting greater EI abilities will allow nursing students to handle difficult situations they encounter in their personal and professional life (Faguy, 2012).

The study adds to the body of knowledge that already exists regarding EI levels and gender. The study's focus of ADN students is one of few in the literature and provides a foundation for further research on EI levels and gender differences in ADN students. The recommendation for practice found in this study is to incorporate EI into the nursing curricula with no specific focus on gender to enhance the students' abilities to manage difficult patient situations. The potential impact for positive social change is to understand the factors influencing EI levels and to incorporate the concepts of EI into the nursing curricula.

Recommendations

Given the limitations of the study, I recommend replicating the study during an academic year to increase the potential response rate from the nursing students. Replication of the study should be conducted using more than one ADN program to increase the number of available participants and increase generalizability of the study. Additionally, I recommend conducting a longitudinal study across the curriculum to determine whether the EI levels have changed.

Conclusion

Given the challenges in health care and the need for more men entering the nursing profession, it is important to identify factors which correlate with high levels of performance and providing high quality and competent care. The findings in this study revealed no significant difference in EI levels between men and women but incorporating EI skills into the nursing curricula can assist nursing students in managing, regulating, and understanding their emotions and the emotions of others. Nurse educators need to understand the importance of EI and assist nursing students in the development of EI skills.

References

Bureau of Labor Statistics. (2018). Occupational outlook handbook: Registered nurses. Retrieved from https://www.bls.gov/ooh/healthcare/registered-nurses.htm#tab-6

Cerit, E., & Beser, N. G. (2014). Levels of emotional intelligence of nursing students. *International Journal of Caring Sciences, 7*(3), 936-945. Retrieved from http://www.internationaljournalofcaringsciences.org/

Faguy, K. (2012). Emotional intelligence in healthcare. *Radiologic Technology, 83*(3), 237-253. Retrieved from http://www.radiologictechnology.org/

Foster, K., Fethney, J., McKenzie, H., Fisher, M., & Harness, E. (2017). Emotional intelligence increases over time: A longitudinal study of Australian pre-registration nursing students. *Nurse Education Today, 55*, 65-70. doi:10.1016/j.nedt.2017.05.008

Frankfort-Nachmias, C., & Leon-Guerrero, A. (2018). *Social statistics for a diverse society* (8th ed.). Thousand Oaks, CA: Sage Publications.

Freshwater, D., & Stickley, T. (2004). The heart of the art: Emotional intelligence in nurse education. *Nursing Inquiry, 11*(2), 91-98. doi:10.111/j.1440-1800.20041.00198.x

Gray, B. (2010). Emotional labour, gender and professional stereotypes of emotional and physical contact, and personal perspectives on emotional labour of nursing. *Journal of Gender Studies, 19*(4), 349-360. doi:10.1080/09589236.2010.514207

Gray, J. R., Grove, S. K., & Sutherland, S. (2017). *The practice of nursing research: Appraisal, synthesis, and generation of evidence* (8th ed.). St. Louis, MO: Elsevier.

Ibrahim, N. K., Algethmi, W. A., Binshihon, S. M., Almahyawi, R. A., Alahmadi, R. F., & Baabdullah, M. Y. (2017). Predictors and correlations of emotional intelligence among medical students at King Abdulaziz University, Jeddah. *Pakistan Journal of Medical Science, 33*(5), 1080-1085. doi:10.12669/pjms.335.13157

Institute of Medicine. (2010). *The future of Nursing: Focus on education.* Retrieved from http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2010/The-Future-of-Nursing/Nursing%20Education%202010%20Brief.pdf

Kaya, H., Senyuva, E., & Bodur, G. (2017). Developing critical thinking disposition and emotional intelligence of nursing students: A longitudinal research. *Nurse Education Today, 48,* 72-77. doi:10.1016/j.nedt.2016.09.011

Marvos, C., & Hale, F. B. (2015). Emotional intelligence and clinical performance/retention of nursing students. *Asia-Pacific Journal of Oncology Nursing, 2*(2), 63-71. doi:10.4103/2347/5625.157569

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey, M. A. Brackett, & J. D. Mayer (Eds), *Emotional intelligence: Key readings on the Mayer and Salovey Model* (pp. 29-60). Port Chester, New York: Dude Publishing.

Mullola, S., Ravaja, N., Lipsanen, J., Alatupa, S., Hintsanen, M., Jokela, M., & Keltikangas-Jarvinene, L. (2012). Gender difference in teachers; perceptions of students' temperament, educational competence, and teachability. *British Journal*

of Educational Psychology, 82(2), 185-206. doi:10.1111/j.2044-8279.2010.02017.x

National Council of State Boards of Nursing. (2018). *National nursing workforce study*. Retrieved from https://www.ncsbn.org/workforce.htm

National League for Nursing. (2016). Percentage of students enrolled in nursing programs who are males by program type, 2016. Retrieved from http://www.nln.org/docs/default-source/newsroom/nursing-education-statistics/percentage-of-students-enrolled-in-nursing-program-by-sex-and-program-type-2016-(pdf).pdf?sfvrsn=0

Nightingale, F., 1820-1910. (1969). *Notes on nursing: What it is, and what it is not*. New York: Dover Publications.

Nosek, M. (2015). A cross sectional exploration of emotional intelligence in US baccalaureate nursing students. *Journal of Nursing Education and Practice, 5*(11), 29-41. doi:10.5430/jnep.v5n11p29

Nulty, D. D. (2008). The adequacy of response rates to online and paper surveys: What can be done? *Assessment & Evaluation in Higher Education, 33*(3), 301-314. doi:10.1080/02602930701293231

Nurse Education in Practice. (2019). *Guide for authors*. Retrieved from https://www.elsevier.com/journals/nurse-education-in-practice/1471-5953/guide-for-authors

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality, 9*(3), 185-211. doi:10.2190/DUGG-P24E-52WK-6CDG

Schutte, N. S., Malouff, J. M., & Bhullar, N. (2009). The assessing emotions scale. In C. Stough, D. Saklofske, & J. Parker (Eds.), *The assessment of emotional intelligence* (pp. 119-135). doi:10.1007/979-0-387-88370-0_7

Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of measure of emotional intelligence. *Personality and Individual Differences, 25,* 167-177. doi:10.1016/S0191-8869(98)00001-4

Seidler, V. J. (2005). *Transforming masculinities: Men, cultures, bodies, power, sex and love.* New York, New York: Routledge.

Sharon, D., & Grinberg, K. (2018). Does the level of emotional intelligence affect the degree of success in nursing students? *Nurse Education Today, 64*, 21-26. doi:10.1016/j.nedt.2018.01.030

Snowden, A., Stenhouse, R., Duers, L., Marshall, S., Carver, F., Brown, N., & Young, J. (2018). The relationship between emotional intelligence, previous caring experience, and successful completion of a pre-registration nursing/midwifery degree. *Journal of Advanced Nursing, 74*(2), 433-442. doi:10.111/jan.13455

Snowden, A., Stenhouse, R., Young, J., Carver, H., Carver, F., & Brown, N. (2015). The relationship between emotional intelligence, previous caring experience and mindfulness in student nurses and midwives: A cross sectional analysis. *Nurse Education Today, 35,* 152-158. doi:10.1016/j.nedt.2014.09.004

Stiglic, G., Cilar, L., Novak, Z., Vrbnjak, D., Stenhouse, R., Snowden, A., & Pajnkihar, M. (2018). Emotional intelligence among nursing students: Findings from a cross-

sectional study. *Nurse Education Today, 66,* 33-38.

doi:10.1016/j.nedt.2018.03.028

Emotional Intelligence and Ethnic Background of Associate Degree Nursing Student

Melanie R. Benington

Walden University

[Notes]

Outlet for Manuscript

The journal selected for the manuscript on ethnic background and emotional intelligence (EI) level is *Nurse Education Today* (https://www.sciencedirect.com/journal/nurse-education-today). The journal's focus is on the link between education and practice. This study of ethnic background and EI levels among associate degree nursing students will provide insight into the EI levels of different ethnic backgrounds. Study findings may allow for further development of resources for nursing students and practicing nurses of various ethnic backgrounds to increase their EI levels.

The requirements for the journal are 3,500 to 5,000 words, which include the abstract, summary, and references. The abstract is to be no more than 300 words focused on background, objectives, design, settings, participants, methods, results, and conclusion. There needs to be four to eight key words. The article title needs to include the topic or question along with the design or type (Nurse Education Today, 2019).

Abstract

The nursing profession cares for a diverse population of patients, but there is a lack of diversity in the nursing profession. Nursing schools are admitting fewer minority students. Emotional intelligence (EI) may be the key to identifying additional resources needed for different ethnic groups. The purpose of the study was to determine if there are differences in EI levels among different ethnic backgrounds of associate degree nursing students. One hundred ten associate degree nursing students participated in the study. There were 65% Caucasian, 17% African American, 6% Hispanics/Latinos, and 12% Other participants. EI was measured using the Schutte Self-Report Emotional Intelligence Test; a sociodemographic survey was used to obtain the ethnic background of participants. The data were analyzed using the statistical test of ANOVA. The result revealed no statistical significance ($F(3, 106) = 2.396$, $p = .072$)) difference in EI levels among the different ethnic backgrounds of the associate degree nursing students. Although the results were not statistically significant, the study provides valuable information to nurse educators that EI may need to be incorporated into nursing curricula to improve students' abilities to provide culturally competent care to a diverse population.

Introduction

Ethnic diversity is lacking in the nursing profession (Institute of Medicine, 2010). In 2016, minority students made up about 29% of the nursing students enrolled in basic nursing programs in the United States (National League for Nursing, 2016). Nursing students enrolled in nursing programs should all have the opportunity for success, but some students may lack emotional intelligence (EI), which may make success unachievable for them. EI is important for individuals to recognize, manage, and regulate their emotions and others' emotions regarding cultural differences in situations (Mayer, Salovey, & Caruso, 2004).

Significance/Importance

Nurses care for a diverse patient population and are required to manage their emotions and the emotions of others in difficult situations. According to the United States Census Bureau (2018), the United States' population consisted of 76.5% Caucasians, 13.4% African Americans, 5.8% Asians, and 18.1% Hispanic/Latinos in 2018. Cultural beliefs and traditions impact the way that individuals think and react to their environment along with affecting their relationships and behaviors when communicating with others (Scott-Halsell, Saiprasert, & Yang, 2013). Certain cultures may not allow for the expression of emotions, which makes recognizing emotions difficult and may influence EI (Kluckhohn, 1951; Scott-Halsell et al., 2013). EI may be the key to responding competently to the needs of a culturally diverse population, according to Scott- Halsell et al., 2013).

Culture affects EI. Cultural beliefs, values, and traditions impact the way individuals think and react to their situation affecting relationships and behaviors while interacting with others (Kluckhohn, 1951). Different cultural values affect emotion, expression, and regulation of emotions (Mayer et al., 2004). One of the predominant roles of culture is to help develop norms of emotion, especially emotional expression (Matsumoto, Yoo, & Fontaine, 2008). People in different cultures may have different concepts of self, others, and interdependence of the self with others, which is a key component of self-awareness in EI (Markus & Kitayama, 1991). Western cultures value personal achievement and individual feelings, whereas Eastern cultures value the interdependence of the self and others (Markus & Kitayama, 1991). There may be differences in culture, but EI skills can assist a person to understand cultural differences and manage emotions in any situation, according to researchers (Kluckhohn, 1951; Matsumoto, et al., 2008; Scott-Halsell, et al., 2013).

The theoretical framework for this study was Mayer and Salovey's (1997) four-branch ability model EI. The model has four facets: expression of emotions, facilitation of emotions, analysis emotions, and regulation of emotions (Mayer & Salovey, 1997). The model focuses on the key essentials needed in the profession of nursing. When nursing students face a situation with cultural differences, they need to be able to identify what emotions are felt and then determine the appropriate response to the situation (Mayer & Salovey, 1997). As the students develop EI skills, they will effectively manage their emotions and the emotions of others leading to emotional and intellectual growth

(Mayer & Salovey, 1997). The purpose of the study was to examine the differences in EI levels between ethnic backgrounds among associate degree nursing (ADN) students.

Relevant Scholarship

A small number of studies have been conducted to measure EI within culturally diverse student groups (McNulty, Mackay, Lewis, Lane, & White, 2016; Scott-Halsell et al., 2013). Scott-Halsell et al. (2013) conducted a study to examine the cultural differences and EI in undergraduate hospitality students in the United States. Researchers found significant differences between Western and Eastern cultures, where Eastern cultural backgrounds scored significantly lower in EI than Western (Scott-Halsell et al., 2013). Similar results revealed in a study of radiography students in four different countries, including Australia, Hong Kong, Ireland, and the United Kingdom. McNulty et al. (2016) found that Western cultures scored higher in EI than Eastern cultures. In contrast, Vasefi. Dehghani, and Mirzaaghapoor (2018) and Yee, Yi, Aung, Lwin, and Myint (2018) found no significant difference in EI between different ethnic backgrounds in medical students. In the review of my literature, the differences in the programs of study and demographic locations of the studies may have led to the differences in the results of EI levels and ethnic backgrounds.

My research revealed two studies conducted in the nursing field (Foster, Fethney, McKenzie, Fisher, & Harness, 2017; Nosek, 2015). Foster et al. (2017) conducted a longitudinal study of Australian preregistration nursing students and found higher levels of EI in non-Australian students than Australian students. Nosek (2015) also found higher levels of EI in Asian baccalaureate nursing students compared to other ethnic

backgrounds, but there was a lack of representation of all ethnic groups, particularly African Americans. In the current literature, there appears to be a lack of research on the differences in EI levels between ethnic backgrounds; I also found no studies of ADN students. Further investigation is therefore needed to examine the relationship between EI level and ethnic background.

Research Question and Design

This quantitative, comparative descriptive study addressed the following research question: What is the difference in emotional intelligence levels among different ethnic backgrounds (Caucasian, African American, Hispanic/Latino) among associate degree nursing students?

For the study, I used a comparative descriptive design in which I examined the relationship between EI levels in three groups: Caucasian, African Americans, and Hispanics/Latinos enrolled in ADN program in a Midwestern U.S. state's community college. The comparative descriptive design involved a comparison of the two or more groups to the same dependent variable of EI (Gray, Grove, & Sutherland, 2017).

Methods

Participants

I recruited the convenience sample of nursing students enrolled at Midwestern U.S. state's community college for all four semesters of an ADN program. The enrollment of the nursing program was approximately 825 students in all four semesters. Given the statistics of the partner site, the ethnic backgrounds of Caucasian, African American, and Hispanic/ Latino was examined. The category of other was added to allow

for participants who are not of the ethnic backgrounds of Caucasian, African American, and Hispanic/Latino to answer the question.

Sample and Power

Using the G*Power (Version 3.1.9.4) software for ANOVA with fixed effects, special, main effects and interactions, an effect size of .25 and power of .8 a sample size of 269 participants was calculated. Response rates that constitute the sample size can vary widely for online surveys or questionnaires (Nulty, 2008). Overall, a 50% response return is deemed acceptable for online surveys (Nulty, 2008).

I recruited ADN nursing students via e-mail request distributed from the nursing program's Blackboard learning management system and an announcement posted on the nursing program's Blackboard site (see Appendix A). Both the e-mail and announcement had a link to the survey which took the participants to SurveyMonkey.

Variables/ Sources of Data

I compared four groups to the dependent variable of EI, which was measured using the Schutte Self-Report Emotional Intelligence Test (SSEIT) (Schutte et al., 1998). The SSEIT is an interval level of measurement based on a Likert-scale of 1 to 5.

The independent variable of ethnic backgrounds was collected as self-report with sociodemographic data. The ADN students completed the sociodemographic survey on which they identified whether they were Caucasian, African American, Hispanic/Latino, or other. Ethnic background was a categorical variable.

Instrumentation or Measures

A sociodemographic survey included questions about age, gender, ethnic background, what semester the student is in the nursing program, and successful completion of all nursing courses the first time.

I obtained permission to use the SSEIT from Dr. Nicola Schutte (see Appendix B). The SSEIT was developed by Schutte et al. (1998) based on Salovey and Mayer's original (1990) and revised model (Mayer & Salovey, 1997) of EI. It measures the four facets of the model, which are perceiving emotions, utilizing emotions, managing emotions, and managing others' emotions (Mayer & Salovey, 1997). The SSEIT consists of 33-items which are rated on a 5-point Likert scale. A score of 1 represents *strongly disagree*, and a score of 5 represents *strongly agree*. The range of scores is 33 to 165 (Schutte, Malouff, & Bhullar, 2009). The highest scores on the scale indicate greater levels of EI (Schutte et al., 1998).

Schutte et al. (1998) designed the SSEIT by gathering a set of 62 initial items which reflected an adaptive tendency toward EI with 62 items evaluated for fidelity to the relevant construct, clarity, and readability. A subset of the participants also completed theoretically related measures of alexithymia, nonverbal communication of affect, optimism, pessimism, attention to feelings, clarity of feelings, mood repair, depressed mood, and impulsivity (Schutte et al., 1998). The goal of the study was to analyze 62 items and select final items for the scale. The hypothesis was between-group differences on the valid measure of EI (Schutte et al., 1998). Schutte et al. also hypothesized that psychotherapists would have higher EI than prisoners and psychotherapy clients.

Additionally, women would have higher EI than men (Schutte et al., 1998). The study consisted of 346 participants who were from a university and diverse community setting in a metropolitan area in the southeastern United States (Schutte et al., 1998). The participants rated themselves on each for the 62-item using a 5-point Likert scale (Schutte et al., 1998).

Schutte et al. (1998) used a principal-components, orthogonal-rotation, factor analysis of the responses to the 62 items which revealed a scree plot of eigenvalues of four factors of items at 0.40 and above. When reviewing the factors, the first factor had an eigenvalue of 10.79 and 33 of the items were at 0.40 or above. The second through fourth factors had eigenvalues of 3.58, 2.90, and 2.53, respectively (Schutte et al., 1998). The items loading on factors two through four were not conceptually distinct from items loading on factor. The results revealed 33-items were recognizable as conceptually distinct from other items and represented all of the conceptual model of Salovey and Mayer (1990). The final SSEIT contains: 13 items from appraisal and expression of emotion, 10 items from regulation of emotions, and 10 items from utilization of emotions with reverse coding of items 5, 28, and 33 (Schutte et al., 1998).

The SSEIT has validity, internal consistency, and reliability. Schutte et al. (1998) found scores on the SSEIT were substantially related to greater attention to emotions, greater clarity of emotions, and less lack of awareness of emotion and inability to express emotion. The relationship between SSEIT and Emotional Quotient Inventory (EQ-i) was substantial at $r = .43$, and the relationship between SSEIT and Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) were statistically significant, but not strong at $r =$

.18 (Schutte et al., 2009). The internal consistency of the SSEIT using a Cronbach's alpha was .90 for 346 participants, and a replication study of 32 participants was .87 (Schutte et al., 1998).

Numerous of other studies reported the internal consistency using Cronbach's alpha of the 33 items scale for diverse samples. Foster et al. (2017) surveyed 111 preregistration Master of Nursing Students using SSEIT and obtained .87 internal reliability. In another study of 110 baccalaureate nursing students, the Cronbach's alpha was found to be .87 (Sharon & Grinberg, 2018). Ibrahim et al. (2017) also found Cronbach's alpha of .91. SSEIT is reliable tool for measurement of EI.

Design and Analysis

My study was a quantitative, descriptive design with comparative analysis which describes "what is" and no variables are controlled (Gray et al., 2017). I compared EI levels between the three groups of nursing students, Caucasian, African American, and Hispanic/Latino.

I collected data and analyzed the descriptive statistics and inferential data analysis using SPSS Version 24 after the data was cleaned and screened. Descriptive statistics were conducted to summarize the frequencies and percentages of the participants' demographic data. I calculated an ANOVA to determine if there was a significant difference between the participants' ethnic backgrounds and their levels of EI.

Ethical Consideration

IRB approval was obtained prior to any data collection from Walden University and the Institution. The participants provided informed consent after being explained in

detail about the study and the purpose of the study. All data collected will be stored electronically and used only in the manner in which the participant consents and consistent with the Walden and the Institution's IRB. Ethical principles of autonomy of the participants, confidentiality, and anonymity were upheld.

Results

Execution

This quantitative, descriptive study was conducted to determine if there was a relationship between EI level and ethnic background of ADN students at a community college. Data collection occurred using SurveyMonkey. The SSEIT was used to measure the EI level of the nursing students. A sociodemographic survey collected the student's ethnic background.

The study was approved by the partner site's IRB for data collection on June 29, 2019 and Walden University IRB (approval number 07-17-19-0747583). The sample used for the study was a convenience sample for ADN students at a community college, where approximately 825 students were enrolled. The ADN students were solicited through the community college's ADN Blackboard site with an announcement, which generated an e-mail to the students. The first announcement and e-mail were posted on July 1, 2019, followed by weekly announcements and e-mails on July 8, 2019, July 15, 2019, and the last day of the study July 22, 2019. The link to SurveyMonkey was included in the Blackboard posts. One hundred and twenty-three surveys were started; however, only 110 of those surveys were completed. The response rate was 13.3%.

Data collection time was a total of 21 days, from the initial Blackboard

announcement on July 1, 2019 to July 22, 2019. The number of participants who complete the survey was $N = 110$, which produced a small effect size of .064. G*Power (Version 3.1.9.4) software calculated for the study was .052. The a priori sample size calculated 269 using the G*Power (Version 3.1.9.4) software for ANOVA with fixed effects, special, main effects and interactions, an effect size of .25 and power of 0.8. Power was not achieved due to decreased sample size possibly due to the survey being conducted during the summer semester when most of the nursing students may not have been checking their e-mails or accessing Blackboard.

Data were first export to Excel from SurveyMonkey before importing the data to SPSS version 24. Before conducting the analyses, I screened for missing data and inaccuracies in Excel. From the original dataset, five entries were removed due to lack of completion of the entire survey, and eight were removed for incomplete responses to the EI survey. The final dataset contained answers to the SSEIT and the sociodemographic survey.

The SSEIT contained 33 Likert scale questions on a 5-point scale and was coded for analysis as follows: (1) *strongly disagree*, (2) *somewhat disagree*, (3) *neither agree nor disagree*, (4) *somewhat agree*, and (5) *strongly agree* for all responses except for reverse coding of the items 5, 28, and 33. The total EI was calculated in Excel and then imported into SPSS version 24, screened, and cleaned. The missing data points were transformed and recoded as -1 for the variable of age, where for the variable eight responses were not completed. There were no missing data for ethnic background or

student's successful completion of all nursing course the first time or not. However, there was one missing data point for gender and eight for age.

Results

I conducted baseline descriptive analyses on sociodemographic information, including gender, ethnic background, and semester in the nursing program. The majority of the students were female (94 of 110, 85.5%), Caucasian (71 of 110, 64.5%), and in the first or second semester of the nursing program (64 of 110, 58.2%) with an average age of 30. The mean EI level for the 110 students was 126.45 (SD = 12.659). Table 21 displays frequencies and percentages for the sociodemographic characteristics.

Table 21

Frequencies and Percentages for Sociodemographic Data (N = 110)

Characteristics	*N*	%
Failed a nursing course		
No	70	63.6
Yes	40	36.4
Number of nursing courses failed		
0	70	63.6
1	31	28.2
2	9	8.2
Semester in nursing program		
First	32	29.1
Second	32	29.1
Third	24	21.8
Fourth	22	20.0
Ethnic background		
African American	19	17.3
Hispanic/Latino	7	6.4
Caucasian	71	64.5
Other	13	11.8
Gender		
Female	94	85.5
Male	15	13.6

Table 22

Descriptive Statistics for Age and Emotional Intelligence Level

	N	*M*(*SD*)	Range
Age	110	30.47(8.062)	[18, 52]
Emotional intelligence level	110	126.45(12.659)	[84, 156]

Descriptive statistics for ethnic backgrounds and EI are presented in Table 23. The participants of the African American background (*N* = 19, *M* = 132.89, *SD* = 9.700)

have higher EI than Hispanic/Latino (*N* = 7, *M* = 127.43, *SD* = 9.572), Caucasian (*N* = 71, *M* = 124.41, *SD* = 13.330), and Other (*N* = 13, *M* = 127.62, *SD* = 3.277).

Table 23

Descriptive Statistics of Ethnic Background and Emotional Intelligence

Ethnic background	*N*	EI *M (SD)*	Std. error mean	95% CI	Range
African American	19	132.89 (9.700)	2.225	[128.22, 137.57]	[112, 149]
Hispanic/Latino	7	127.43 (9.572)	3.618	[118.58, 136.28]	[113, 137]
Caucasian	71	124.41 (13.330)	1.582	[121.25, 127.56]	[84, 156]
Other	13	127.62 (3.277)	11.815	[120.48, 134.76]	[108, 146]
Total	110	126.45 (12.659)	1.207	[124.05, 128.84]	[84, 156]

Note. CI= confidence interval

I used ANOVA to compare the differences in the means of the groups (Frankfort-Nachmias & Leon-Guerrero, 2018). There are five assumptions for the ANOVA that must be met which are: level of measurement, random sampling, independence of observations, normal distribution, and homogeneity (Frankfort-Nachmias & Leon-Guerrero, 2018). First, the level of measurement should be interval-ratio. EI level was an interval-ratio level of measurement. I used convenience sampling which violated the second assumption. While not causing major issues respective to data analysis, this violation will limit generalization of the study to the population as a whole because the

selection of participants for the study happened by choice not by chance which adds bias results (Warner, 2013). Independence of observation is the third assumption, which was met by participants only about to select one ethnic background. The fourth assumption is the populations from which the samples are drawn from show a normal distribution (Figure 1) which the Shapiro-Wilk test revealed p =.077, so the null hypothesis was retained. Finally, the fifth assumption is the homogeneity of variances. This specifies that the variability of the EI levels of the ethnic backgrounds were similar which can be determined by calculating Levene's statistic. The results of the Levene's (Table 24) was p = .491, so the null hypothesis was retained, which means there were no variations among the variables and equal variance was assumed (Wagner, 2016).

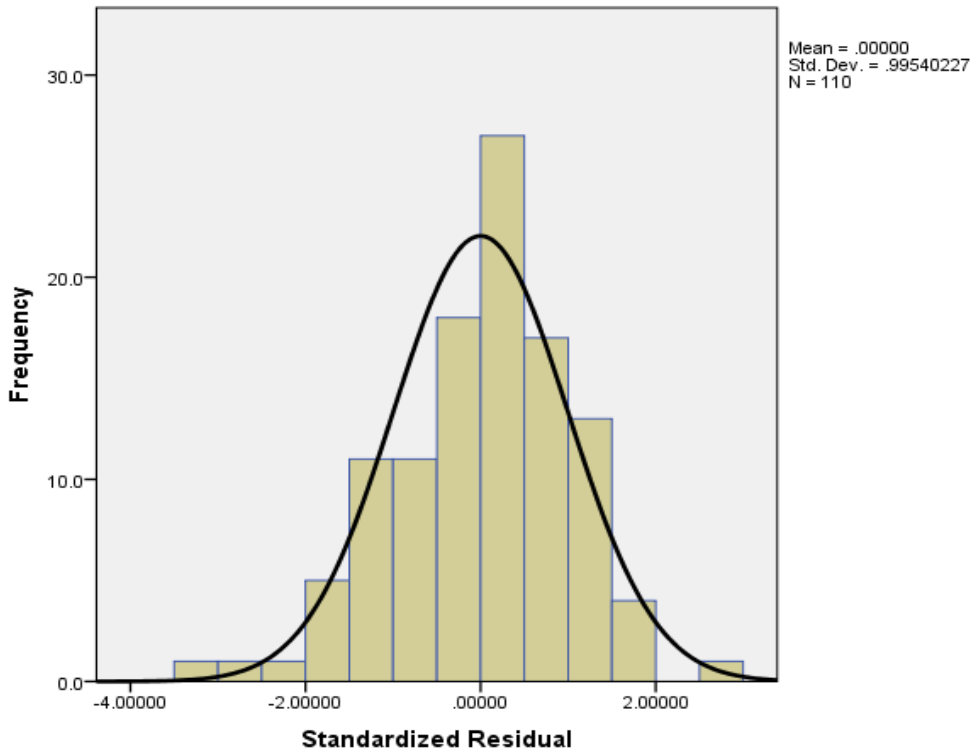

Figure 1. Normal distribution of the data for ethnic background and emotional intelligence meeting ANOVA assumption of normal distribution.

Table 24

Test of Homogeneity of Variance for Ethnic Background and Emotional Intelligence Level

Levene's statistic	d*f*1	d*f*2	Sig.
.810	3	106	.491

The one-way ANOVA test was conducted to compare the EI levels of African Americans, Hispanic/Latino, Caucasians, and Others (student did not identify with the listed ethnic backgrounds). The results (Table 25) showed there was no significance between ethnic backgrounds and EI levels ($F(3, 106) = 2.396$, $p = .072$). Therefore, the

null hypothesis was retained. The Bonferroni post-hoc test (Table 26) showed no statistical significance in all pair-wise comparisons.

Table 25

ANOVA Test for Ethnic Background and Emotional Intelligence Level

	Sum of squares	d*f*	Mean square	*F*	Sig.
Between groups	1109.437	3	369.812	2.396	.072
Within groups	16357.736	106	154.318		
Total	17467.173	109			

Table 26

Post Hoc Test for Ethnic Background and Emotional Intelligence Level (Bonferroni)

Ethnic background	Ethnic background	Mean difference	Standard error	Sig.	95% CI
African American	Hispanic/ Latino	5.466	5.492	1.000	[-9.30, 20.23]
	Caucasian	8.486	3.209	.056	[-.14, 17.11]
	Other	5.279	4.471	1.000	[-6.74, 17.30]
Hispanic/ Latino	African American	-5.466	5.492	1.000	[-20.23, 9.30]
	Caucasian	3.020	4.921	1.000	[-10.21, 16.25]
	Other	-.187	5.824	1.000	[-15.84, 15.47]
Caucasian	African American	-8.486	3.209	.056	[-17.11, .14]
	Hispanic/ Latino	-3.020	4.921	1.000	[-16.25, 10.21]
	Other	-3.207	3.748	1.000	[-13.28, 6.87]
Other	African American	-5.279	4.471	1.000	[-17.30, 6.74]
	Hispanic/ Latino	.187	5.824	1.000	[-15.47, 15.84]
	Caucasian	3.207	3.748	1.000	[-6.87, 13.28]

Note. CI= confidence interval.

Descriptive statistics for ethnic backgrounds and age are presented in Table 27. The students of the African American background (N = 17, M = 33.40, SD = 9.970) were

older than Hispanic/Latino (*N* = 7, *M* = 29.71, *SD* = 6.969), Caucasian (*N* = 68, *M* = 29.96, *SD* = 7.781), and Other (*N* = 12, *M* = 30.33, *SD* = 8.117).

Table 27

Descriptive Statistics of Ethnic Background and Age

Ethnic background	*N*	*M (SD)*	Std. error mean	95% CI	Range
African American	15	33.40 (9.970)	2.574	[27.88, 38.92]	[21, 52]
Hispanic/Latino	7	29.71 (6.969)	2.634	[23.27, 36.16]	[20, 40]
Caucasian	68	29.96 (7.781)	.944	[28.07, 31.84]	[18, 52]
Other	12	30.33 (8.117)	2.343	[25.18, 35.49]	[20, 47]
Total	102	30.49 (8.093)	.801	[28.90, 32.08]	[18, 52]

Note. CI= confidence interval

The one-way ANOVA test was conducted to compare the student's age and ethnic background to determine if there was an association. The results of the Levene's (Table 28) was $p = .491$, so the null hypothesis was retained (Wagner, 2016). The results (Table 29) showed there was no significance between ethnic backgrounds and age ($F(3, 98) = .763$, $p = .518$). Therefore, the null hypothesis was retained. The Bonferroni post-hoc test (Table 30) showed no statistical significance in all pair-wise comparisons.

Table 28

Test of Homogeneity of Variance for Ethnic Background and Emotional Intelligence

Level

Levene's statistic	d*f*1	d*f*2	Sig.
.810	3	98	.491

Table 29

ANOVA Test for Ethnic Background and Age

	Sum of squares	d*f*	Mean square	*F*	Sig.
Between Groups	150.927	3	50.309	.763	.518
Within Groups	6464.563	98	65.965		
Total	6615.490	101			

Table 30

Post Hoc Test for Ethnic Background and Age (Bonferroni)

Ethnic background	Ethnic background	Mean difference	Standard error	Sig.	95% CI
African American	Hispanic/ Latino	3.686	3.718	1.000	[-6.33, 13.70]
	Caucasian	3.444	2.317	.842	[-2.79, 9.68]
	Other	3.067	3.146	1.000	[-5.40, 11.54]
Hispanic/ Latino	African American	-3.686	3.718	1.000	[-13.70, 6.33]
	Caucasian	-.242	3.224	1.000	[-8.92, 8.44]
	Other	-.619	3.863	1.000	[-11.02, 9.78]
Caucasian	African American	-3.444	2.317	.842	[-9.68, 2.79]
	Hispanic/ Latino	.242	3.224	1.000	[-8.44, 8.92]
	Other	-.377	2.543	1.000	[-7.23, 6.47]
Other	African American	-3.067	3.146	1.000	[-11.54, 5.40]
	Hispanic/ Latino	.619	3.863	1.000	[-9.78, 11.02]
	Caucasian	.377	2.543	1.000	[-6.47, 7.23]

Note. CI= confidence interval.

To determine if there were any associations between gender, ethnic background, and success in all nursing courses, and semester in the nursing program, a Chi-square

analysis was completed. The results of the chi-square analysis (Table 31) revealed a nonsignificant association between ethnic backgrounds and gender $\chi^2(6, N = 110) = .770$, $p = .993$. For the two cells that had expected counts less than 5, the Fisher's Exact Test revealed no significant difference ($p = 2.986$). Also, the results of the chi-square analysis (Table 32) revealed a nonsignificant association between success in all nursing courses the first time and ethnic background $\chi^2(3, N = 110) = 2.085$, $p = .555$. For the two cells that had expected counts less than 5, the Fisher's Exact Test revealed no significant difference ($p = 2.247$). The results of chi-square analysis (Table 33) also revealed nonsignificant association between ethnic background and semester in the nursing program $\chi^2(9, N = 110) = 10.521$, $p = .310$. For the two cells that had expected counts less than 5, the Fisher's Exact Test revealed no significant difference ($p = 10.007$). Thus, there was no statistically significant association between ethnic background and successful completion of all nursing course the first time, gender or semester in the nursing program.

Table 31

Cross Tabulation and Chi-Square Results for Ethnic Background by Gender

Ethnic background	Gender					
	Female	Male	Total	χ^2	d*f*	*p*
African American	17	2	19	.770	6	.993
Hispanic/Latino	6	1	7			
Caucasian	60	10	70			
Other	11	2	13			
Total	94	15	109			

Table 32

Cross Tabulation and Chi-Square Results for Ethnic Background by Success in Nursing Courses the First Time

Ethnic background	Failed nursing course					
	No	Yes	Total	χ^2	d*f*	*p*
African American	11	8	19	2.085	3	.555
Hispanic/Latino	3	4	7			
Caucasian	48	23	71			
Other	8	5	13			
Total	70	40	110			

Table 33

Cross Tabulation and Chi-Square Results for Ethnic Background by Semester in the Nursing Program

Ethnic background	Semester in the nursing program							
	First	Second	Third	Fourth	Total	χ^2	d*f*	*p*
African American	7	7	3	2	19	10.521	9	.310
Hispanic/Latino	4	0	2	1	7			
Caucasian	17	23	17	14	71			
Other	4	2	2	5	13			
Total	32	32	24	22				

Discussion

Interpretation

No statistically significant differences were found in EI levels among four ethnic groups of ADN students. There was a significant difference in the group sizes, which may have led to the difference in EI levels. My findings were similar to the Yee et al. (2018) and Vasefi et al., (2018) in medical students where their research revealed no difference in EI levels and ethnicity or culture.

In contrast, Foster et al. (2017) and Nosek (2015) found differences in EI levels among different ethnicities in nursing students. Foster's et al. (2017) research was focused on preregistered Master of Nursing students in Australian, where the non-Australians had higher EI levels than Australians. In the U.S., Nosek's (2015) research focused on baccalaureate nursing students, where Asians were found to have higher EI levels than the other ethnicities.

Although the data did not reveal significance among the different ethnic backgrounds regarding EI level, it added to the knowledge of nursing research. There was a lack of research on ethnic background and its relationship with EI level, and there were few studies on ADN students and EI levels. Further research is needed to examine the relationship of ethnic backgrounds and EI levels given there continues to be mixed results in health care students.

Limitations

The generalizability of the results from the study to all ADN students was limited by several factors. First, the sample was a convenience sample of ADN students attending one community college, and the students who participated may not be indicative of all students from the ethnic background identified. Additionally, participation was limited to students who volunteered to participate and may also not be true sample of the population. There were unequal sample populations between the groups, which could change the EI level if there were more participants of the African American, Hispanic/Latino, and Other. The recruitment occurred over the summer break, which may have limited the number of students participating leading to a small effect size

of .064 and a G*Power (Version 3.1.9.4) software of .052. In retrospect, I would have administered the survey during the academic year to obtain a greater number of responses. A third limitation involves the possibility of self-selection bias in the sample. It is possible that the results of those who responded to the self-administered survey may have answered the questions with what they assessed as the desired answer and not as they truly felt.

Implications

The quantitative approach to the study allowed for the use the SSEIT which aligned with the theoretical framework of Mayer and Salovey's four-branch ability model of EI. The results did not find a difference in EI level among different ethnic backgrounds, but ADN students should understand the importance of understanding their own emotions along with the emotions of others (Faguy, 2012; Freshwater & Stickley, 2004) to respond competently to the needs of a culturally diverse population.

Although the results of the study did not reveal significant differences in EI levels among different ethnic backgrounds, the study provided useful information for practical application. EI is important in the nursing profession to be able to perceive and respond to situations appropriately no matter the individual's ethnic background. The study draws attention to the potential differences that can occur in a nursing student body, and nurse educators need to be able to assist students in improving on their EI levels. The potential positive social change impact is to have nurse educators assist nursing students in developing their abilities in EI among a diverse population because high levels of EI have been linked to nurse retention, work satisfaction, professional achievement, and clinical

performance (Faguy, 2012; Gutierrez & Mullen, 2016; Marvos & Hale, 2015; Mullakanda & Dissanayake, 2015; Rice, 2015; Vandewaa, Turnipseed, & Cain, 2016).

Recommendations

With the limited number of studies on EI and ADN students, the study provided a foundation for further research on ethnic backgrounds and EI in ADN students. I recommend replicating the study during an academic year to increase the potential response rate from the nursing students. Replication of the study should be conducted using more than one ADN program to increase the number of available participants and increase generalizability of the study. Conducting a longitudinal study on EI in an ethnically diverse population is recommended to determine whether the EI levels have changed over time.

Conclusion

The nursing profession involves dealing with patients and families from different ethnic backgrounds. The ability to recognize, manage, and understand emotions may impact the relationships patients and families have with health care. Additionally, this research could begin the discussion on how best to incorporate EI in the nursing curricula to improve the student's EI abilities to provide culturally competent care to a diverse population.

References

Faguy, K. (2012). Emotional intelligence in healthcare. *Radiologic Technology, 83*(3), 237-253. Retrieved from http://www.radiologictechnology.org/

Foster, K., Fethney, J., McKenzie, H., Fisher, M., & Harness, E. (2017). Emotional intelligence increases over time: A longitudinal study of Australian pre-registration nursing students. *Nurse Education Today, 55*, 65-70. doi:10.1016/j.nedt.2017.05.008

Frankfort-Nachmias, C., & Leon-Guerrero, A. (2018). *Social statistics for a diverse society* (8th ed.). Thousand Oaks, CA: Sage Publications.

Freshwater, D., & Stickley, T. (2004). The heart of the art: Emotional intelligence in nurse education. *Nursing Inquiry, 11*(2), 91-98. doi:10.111/j.1440-1800.20041.00198.x

Gray, J. R., Grove, S. K., & Sutherland, S. (2017). *The practice of nursing research: Appraisal, synthesis, and generation of evidence* (8th ed.). St. Louis, MO: Elsevier.

Gutierrez, D., & Mullen, P. R. (2016, July). Emotional intelligence and the counselor: Examining the relationship of trait emotional intelligence to counselor burnout. *Journal of Mental Health Counseling, 38*(3), 187-200. doi:10.1774/mehc.38.3.01

Ibrahim, N. K., Algethmi, W. A., Binshihon, S. M., Almahyawi, R. A., Alahmadi, R. F., & Baabdullah, M. Y. (2017). Predictors and correlations of emotional intelligence among medical students at King Abdulaziz University, Jeddah. *Pakistan Journal of Medical Science, 33*(5), 1080-1085. doi:10.12669/pjms.335.13157

Institute of Medicine. (2010). *The future of Nursing: Focus on education.* Retrieved from http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2010/The-Future-of-Nursing/Nursing%20Education%202010%20Brief.pdf

Kluckhohn, C. (1951). The study of culture. In D. Lerner & H. D. Lasswell (Eds), *The policy sciences* (pp. 86-101). Stanford, CA: Stanford University Press.

Markus, H. R., & Kitayama, S. (1991). Culture and self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*(2), 224-253. Retrieved from https://www.apa.org/pubs/journals/rev/index

Marvos, C., & Hale, F. B. (2015). Emotional intelligence and clinical performance/retention of nursing students. *Asia-Pacific Journal of Oncology Nursing, 2*(2), 63-71. doi:10.4103/2347/5625.157569

Matsumoto, D., Yoo, S. H., & Fontaine, J. (2008). Mapping expressive differences around the world: The relationship between emotional display rules and individualism versus collectivism. *Journal of Cross-Cultural Psychology, 39*(1), 55-74. doi:10.1177/0022022107311854

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey, M. A. Brackett, & J. D. Mayer (Eds), *Emotional intelligence: Key readings on the Mayer and Salovey model* (pp. 29-60). Port Chester, NY: Dude Publishing.

Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional intelligence: Theory, findings and implications. *Psychology Inquiry, 15*(30), 197-215. doi:10.1207/s15327965pli1503_02

McNulty, J. P., Mackay, S. J., Lewis, S. J., Lane, S., & White, P. (2016). An international study of emotional intelligence in first year radiography students: The relationship to age, gender and culture. *Radiography, 22*(2), 171-176. doi:10.1016/j.radi.2015.10.008

Mullakanda, P. S., & Dissanayake, K. (2015). Strategies for maintaining emotional stability: The case of nurses in private health care industry. *Management Science Letter, 5*(12), 1097-1110. doi:10.5267/j.msl.2015.10.004

National League for Nursing. (2016). Percentage of minorities enrolled in basic RN programs by race-ethnicity: 2016. Retrieved from http://www.nln.org/docs/default-source/newsroom/nursing-education-statistics/percentage-of-minorities-in-basic-rn-programs-by-race-ethnicity-2016-(pdf)c842c45c78366c709642ff00005f0421.pdf?sfvrsn=0

Nosek, M. (2015). A cross sectional exploration of emotional intelligence in US baccalaureate nursing students. *Journal of Nursing Education and Practice, 5*(11), 29-41. doi:10.5430/jnep.v5n11p29

Nulty, D. D. (2008). The adequacy of response rates to online and paper surveys: What can be done? *Assessment & Evaluation in Higher Education, 33*(3), 301-314. doi:10.1080/02602930701293231

Nurse Education Today. (2019). *Guide for authors*. Retrieved from https://www.elsevier.com/journals/nurse-education-today/0260-6917/guide-for-authors

Rice, E. (2015). Predictors of successful clinical performance in associate degree nursing students. *Nurse Educator, 40*(4), 207-211. doi:10.1097/nne.0000000000000136

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality, 9*(3), 185-211. doi:10.2190/DUGG-P24E-52WK-6CDG

Schutte, N. S., Malouff, J. M., & Bhullar, N. (2009). The assessing emotions scale. In C. Stough, D. Saklofske, & J. Parker (Eds.), *The assessment of emotional intelligence* (pp. 119-135). doi:10.1007/979-0-387-88370-0_7

Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of measure of emotional intelligence. *Personality and Individual Differences, 25,* 167-177. doi:10.1016/S0191-8869(98)00001-4

Scott-Halsell, S. A., Saiprasert, W., & Yang, J. (2013). Emotional intelligence differences: Could culture be the culprit? *Journal of Teaching in Travel & Tourism, 13*(4), 339-353. doi:10.1080/15313220.2013.839301

Sharon, D., & Grinberg, K. (2018). Does the level of emotional intelligence affect the degree of success in nursing students? *Nurse Education Today, 64,* 21-26. doi:10.1016/j.nedt.2018.01.030

United States Census Bureau. (2018). QuickFacts United States. Retrieved from https://www.census.gov/quickfacts/fact/table/US/PST045218

Vandewaa, E. A., Turnipseed, D. L., & Cain, G. (2016). Panacea or placebo? An evaluation of the value of emotional intelligence in healthcare workers. *Journal of Health & Human Services Administration, 38*(4), 438-477. Retrieved from

https://www.researchgate.net/profile/David_Turnipseed/publication/276894670_Panacea_or_Placebo_An_Evaluation_of_the_Value_of_Emotional_Intelligence_in_Healthcare/links/5761be6a08ae2b8d20ed5f62/Panacea-or-Placebo-An-Evaluation-of-the-Value-of-Emotional-Intelligence-in-Healthcare.pdf

Vasefi, A., Dehghani, M., & Mirzaaghapoor, M. (2018). Emotional intelligence of medical students of Shiraz University Medical Science cross sectional study. *Annals of Medicine and Surgery, 32*, 26-31. doi.org/10.1016/j.amsu.2018.07.005

Wagner, W. E. (2016). *Using IBM® SPSS® statistics for research methods and social science statistics* (6th ed.). Thousand Oaks, CA: Sage Publications.

Warner, R. M. (2013). *Applied statistics: From bivariate through multivariate technique* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Yee, K. T., Yi, M. S., Aung, K. C., Lwin, M. M., & Myint, W. W. (2018). Emotional intelligence level of year one and two medical students of University Malaysia Sarawak: Association with demographic data. *Malaysian Applied Biology, 47*(1), 203-208. Retrieved from http://mabjournal.com/

Part 3: Summary

Integration of the Studies

The United States has an aging population with increasingly diverse needs, treatment, and conditions. Nurses need to be able to care for an aging population with multiple chronic conditions and comorbid diseases amid along with the advancements in technology (Institute of Medicine, 2010). The nurse needs to be prepared to handle difficult situations. Nurse educators need to prepare nursing students to perform care and understand factors that can influence EI (Cheshire et al., 2015; Jones-Schenk & Harper, 2014; Snowden et al., 2015).

The purpose of the three manuscripts was to obtain an understanding of the linkage between EI levels and academic performance, gender, and ethnic background in ADN students. In all three of the studies, I found no significant differences between the groups studied and EI levels. In the literature of baccalaureate nursing students, several researchers have found positive correlations between EI levels and academic performance (Beauvais et al., 2014; Codier & Odell, 2014; Shanta & Gargiulo, 2014; Sharon & Grinberg, 2018; Thomas, Cassady, & Heller, 2017), but other researchers have found no or a negative correlation between EI levels and academic performance (e.g., Cheshire et al., 2015; Strickland & Cheshire, 2017). Researchers have conducted studies on ADN students in which they found no correlation between EI and academic performance (Eyong & Rathee, 2017; Pence, 2011). With the mixed results in nursing students, I did not know what to expect. The results of no significance ($t(108) = .999$, $p = .320$) in EI

level and successful completion of a nursing course the first time versus those who were not were similar to Eyong and Rathee's (2017) and Pence's (2011) findings.

Furthermore, the research on EI levels and gender and ethnic background revealed mixed results. Foster et al. (2017) examined and compared EI levels between male and female nursing students in Australia whereas in other studies, female students had higher EI levels than males (Marvos & Hale, 2015; Snowden et al., 2015; Snowden et al., 2018; Stiglic et al., 2018). Again, the results of preregistration and graduate nursing students in this study were mixed. The result of my study revealed no significance ($t(107) = 1.868$, $p = .064$) in EI level between males and females. Finally, researchers in the medical field have found mixed results on EI levels and ethnic backgrounds. Foster et al. (2017) and Nosek (2015) found different EI levels among different ethnic backgrounds on nursing students, while Vasefi et al. (2018) and Yee et al. (2018) found no significant difference in EI between different ethnic backgrounds in medical students. I was surprised at the results of my study with no significance ($F(3, 106) = 2.396$, $p = .072$) in EI level between ethnic backgrounds in ADN students. The results of my study may have been influenced using unequal groups, which was a limitation in other researchers' studies (Foster et al., 2017; McNulty et al., 2015; Nosek, 2015; Stiglic et al., 2018).

The studies conducted for this capstone revealed no significance in EI levels and academic performance, gender, and ethnic background, but the data collected add to the nursing knowledge of ADN students. The data provide a foundation to other researchers conducting studies on ADN students and EI levels, academic performance, gender, and ethnic backgrounds. The concept of EI is important to incorporate into nursing curricula

to provide the nursing student opportunities to practice and apply the concepts learned in an educational setting. Doing so may improve students' preparation to use EI in their nursing careers (Faguy, 2012; Freshwater & Stickley, 2004).

Theoretical Context

Mayer and Salovey's (1997) four-branch ability model of EI was the theoretical foundation of this study. The combination of the four branches of EI (self-emotion appraisal, others' emotions appraisal, regulation of emotion, and use of emotion; Mayer & Salovey, 1997) represents the multidimensional construct of EI and aligned with the SSEIT. EI is the combination of identifying emotions in self and others, understanding emotions, and managing emotions (Mayer & Salovey, 1997). One of the four branches cannot stand alone to represent EI. EI can be visualized as a pyramid with self-emotion appraisal as the foundation, regulation of emotion next, followed by others' emotion appraisal, and finally use of emotion to facilitate performance, which is the pinnacle of EI. Nurses who have higher EI can manage stressful situations while providing patient care (Cheshire et al., 2015; Jones-Schenk, 2019; Sharon & Grinberg, 2018). Although there was no direct causation between EI level and academic performance, gender, and ethnic background, health care organizations and the nursing profession expect nurses to have high levels of EI to care for the culturally diverse population.

Implications for Positive Social Change

I did not find significance among EI and academic performance, gender, and ethnic background, but positive social change may still occur. The study increased the understanding of EI levels and academic performance, gender, and ethnic background

among ADN students. Drawing attention to EI among nursing students, nurse educators, and educational institutions may increase awareness of the importance of EI in nurses and the need to incorporate concepts of EI into the nursing curricula, which may effect positive social change. Nurse educators should incorporate EI skills into nursing curricula to produce nurses with higher levels of EI allowing them to manage, regulate, and understand the emotions of others and themselves in stressful situations (Faguy, 2012).

Future Research

Based on the findings of the study, future research is warranted on the population of ADN students and EI. Although there was no significance in the results, the limitations of the study support replication of the study with a larger sample size to confirm that there truly is no significance and conducting a similar study in a diverse population in other community colleges. Finally, future research could be done to determine if EI levels change throughout a nursing program and determine if EI skills are taught in nursing programs.

Lessons Learned

During the research process, I learned several lessons. First, I learned that I could not rush the process. I wanted to start data collection as soon as possible, but it took time to obtain IRB approval from both institutions. The second lesson learned was that even though there was potential for large sample size from the community college, not everyone would choose to participate, especially during the summer. I concluded that it would have been better if I had collected data during the academic year when most students would be signing into Blackboard at least weekly. Finally, I was surprised to

learn the actual results, which ran counter to my expected results. I ran my statistical test multiple times to confirm the results. The data tell the story of the sample population no matter what preconceived thoughts and knowledge the researcher has about what the results should be (Gray et al., 2017). The research process taught me to be patient when working with other departments and open-minded about the data collection and analysis of results.

Conclusion

In this study, I evaluated the relationship between EI levels and academic performance, gender, and ethnic background for ADN students. I found there was no difference between EI and academic performance. I also found no difference between EI levels and gender and EI levels and ethnic backgrounds. These results are consistent with previous research showing that there was no difference in EI level between academic performance (Eyong & Rathee, 2017; Strickland & Cheshire, 2017), gender (Cerit & Beser, 2014; Foster et al., 2017), and ethnic background (Vasefi et al., 2018; Yee et al., 2018).

The results provide evidence that there were no differences in EI levels in ADN students. However, EI can be difficult to assess and influenced by many variables (Faguy, 2012). EI compasses an important part of nursing and maybe more important than skills and technique, according to some observers (Freshwater & Stickley, 2004). Teaching nursing skills is a fairly straightforward task, whereas EI is influenced by a myriad of variables such as age, life experience, and self-awareness (Faguy, 2012; Freshwater & Stickley, 2004; Jones-Schenk, 2019). This study functions as an introduction to the

exploration of EI levels in ADN students, particularly academic performance, gender, and ethnic background. Further examining characteristics that may influence EI may provide nurse educators assistance in incorporating EI skills in nursing curricula and aid in the development of EI skills in the students' personal and professional lives.

Appendix A: E-mail/Announcement for Participation in the Survey

Dear Nursing Student,

Melanie Benington, a Doctoral Student at Walden University, invites you to participate in a research study on emotional intelligence (EI) in the associate degree nursing student. The purpose of this research is to learn the EI levels of ADN students. The results will provide useful information to nurse educators in incorporating EI into the nursing curriculum through resources to increase EI which has been found to increase academic performance. She has obtained permission to conduct the study from the Dean of Nursing, and The Office of Evidence & Inquiry at the college.

Participation is voluntary and anonymous. The survey will be administered using SurveyMonkey and should not take more than 15 minutes to complete. The information provided is strictly confidential and 100% anonymous. You are not asked to disclose any identifying information (i.e., name, student identification number, date of birth), and no IP addresses will be collected to ensure anonymity. The data collected will be stored in a password protected electronic format in a locked office at the college.

There are no compensations or benefits for any persons who decide to participate in the study. You may refuse to answer certain questions or stop at any time without penalty. There are no known risks or harm to completing this survey. The results will be used for scholarly purpose only and shared with Walden University and the college.

The survey will be available until **July 22nd at 5pm**. To participate in the study, you must provide informed consent. Upon opening the link to SurveyMonkey, you will be prompted to read the consent form and select "Yes" if you agree to participate or "No" if you do not agree to participate. Without consent, you will not be able to participate in the study. To open the survey, copy and paste this link into your browser: **https://www.surveymonkey.com/r/L8CVXTD**

If you have any questions or concerns about completing the survey or about being in this study, prior to starting the survey, you may contact me at my e-mail address.
Thank you for your participation,
Melanie Benington MSN, RN, CNE
Assistant Professor of Nursing/ Doctoral Candidate

Appendix B: Permission to Use Schutte Self-Report Emotional Intelligence Test

RE: Use of Schutte Self-Report Emotional Intelligence Test

NS

Nicola Schutte

Reply all

Sun 4/7, 8:06 PM

Melanie Benington

Save

Assessing Emotions Scale Chapter published manuscript version.pdf
170 KB

Show all 1 attachments (170 KB) Download

Save to OneDrive - Laureate Education - ACAD

Thank you for your message. You are welcome to use the scale. Please find attached the manuscript version of a published chapter that contains the scale and background information, including regarding scoring, reliability and validity.

Kind regards, Nicola Schutte

From: Melanie Benington
Sent: Saturday, 6 April 2019 4:11 AM
To: Nicola Schutte
Subject: Use of Schutte Self-Report Emotional Intelligence Test

Dr. Nicola Schutte,

My name is Melanie Benington. I'm a doctoral student at Walden University and I am currently completing my dissertation on emotional intelligence and sociodemographics characteristics among associate degree nursing students. I would like to use the Schutte's Self-Report Emotional Intelligence Test to measure emotional intelligence in the students. Do I have your permission to use the test for the study? If so, how is the test scored? Thank you.

Melanie Benington