

International Journal of Nursing and Health Care Research

Willis A. Int J Nurs Health Care Res 03: 1173.

DOI: 10.29011/2688-9501.101173

Research Article

Emotional Intelligence and Nursing Student Success: A Quantitative Study

Angela Willis*

Department of Nursing, University of Central Oklahoma, Oklahoma, USA

***Corresponding author:** Angela Willis, Assistant Professor, Department of Nursing, University of Central Oklahoma, 100 N. University Dr., Edmond, Oklahoma 73034 USA

Citation: Willis A (2020) Emotional Intelligence and Nursing Student Success: A Quantitative Study. Int J Nurs Health Care Res 03: 1173. DOI: 10.29011/2688-9501.101173

Received Date: June 30, 2020; **Accepted Date:** August 10, 2020; **Published Date:** August 15, 2020

Abstract

Emotional Intelligence (EI) is a topic in nursing research that has far-reaching implications. The caring nature of nursing envelops the use of technical skills, interpersonal, and intrapersonal skills. Interpersonal and intrapersonal skills relate to how one interacts and responds with others. However, EI is not included in most nursing curricula.

Purpose: The purpose of this study was to determine if a relationship between EI and Nursing Student Success (NSS) existed by examining first-semester nursing students at a mid-western university. The student's initial Testing Essential Academic Skills Test (TEAS) score, a self-report EI score using the Schutte Self-Report Emotional Intelligence Test (SSEIT), the final theory (academic tests) grade, and overall grade (includes labs and clinical performance) in a first semester Nursing course as the independent variables, and NSS as the dependent variable.

Population: 57 First semester nursing students.

Methods: A correlational and regression analysis was performed at the end of the semester, based on an effect size of 0.30, setting the desired power level of 0.8, and using a probability level testing for significance at 0.05.

Results and Conclusions: The study data did not reveal a significant relationship between EI and Nursing Student Success; however, the Testing Essential Academic Skills was significantly related to the overall course grade, and NSS ($p = .000$). However, a linear regression analysis confirmed the study variables, including student age and gender, provided a useful model to predict NSS. More research is needed to investigate the relationship between nursing and EI, as it undeniably contributes to nursing effectiveness, extending to patient outcomes.

Keywords: Emotions; Grades; Intelligence; Nursing; Perception; Success

Introduction

Everyone is born with emotions from happiness, fear, anger, sadness, and many others. How individuals experience and express those emotions are what make people unique. Emotions impact the day to day lives of everyone regardless of age, gender, ethnicity, or professional experience. The abbreviated definition of EI is the "ability to perceive emotions, to access, and generate emotions to assist thought, and to reflectively regulate emotions

to promote emotional and intellectual growth [1,2]." The process of being aware of emotions in one's self and others is referred to as Emotional Intelligence (EI). EI also encompasses individual reactions and experiences with emotions as others perceive them. These emotional experiences and interpretations influence relationships at home, at school, or in the work environment. EI is a concept that has been gaining attention and has resulted in increased research over the last several years. In 1995, Emotional Intelligence was made popular by the journalist, Daniel Goleman, with his book publication of his book on EI.

The term emotional intelligence was first used by Salovey and Mayer in 1990 with their article entitled Emotional Intelligence [3]. This first article presented a framework EI [1,2]. The idea surrounding EI was that it was a subset of social intelligence. In 1998, Mayer and Salovey developed a revised model of EI placing more emphasis on the cognitive components of EI and conceptualized EI as a skill or trait that can promote intelligence and emotional growth. Since that time, many have developed models for EI with assessment tools; however, many based their models on the Mayer and Salovey model [4].

To understand the concept of EI, one must first understand intelligence and emotion. Most scholars have defined intelligence as the cognitive sphere that includes “such functions as human memory, reasoning, judgment, and abstract thought, [1,2].” Intelligence gives one the ability to separate or combine concepts and independently reason through, make judgments about, and utilize abstract thought. Emotions belong to the affective sphere that encompasses mental functioning. This sphere includes emotions, moods, evaluations, and other feelings including fatigue and energy [1,2]. Emotions change and not everything concerning intelligence connects to emotion. The phenomena of EI has been around for several decades and used in education, leadership, management, and nursing. A literature review of CINHL produced 5973 articles since 2013 on the concept of Emotional Intelligence (EI). The central components of emotional intelligence include:

- Perception of Emotion
- Appraisal and Expression of Emotions in Self and Others
- Emotional Regulation in Self and Others
- Utilization of Emotion [5-7]

These central components provide the model of EI in this current study. Most recently, EI has been studied to determine if it is a valid admission criterion for nursing programs [8,9]. Components of EI are essential skills needed for successful nursing education and preparation for professional practice. There are a limited number of studies that have examined these possibilities [8,9]. The means of how nursing and allied health students handle emotional encounters in the clinical setting is not well understood [10].

Background and Significance

Emotions are essential in the development of professional relationships and can affect clinical decision-making, and impact healthcare workers on a personal level [10]. Nursing education has evolved and changed from the initial ideas developed by Florence Nightingale to the current American Nurses Association (ANA) nursing standards used today (“ANA History,” n.d.). These evolutions are essential aspects in recognizing what skills, attributes, and attitudes influence success in nursing education

and preparation for professional practice. Due to the emotional nature of nursing, individual’s that lack self-awareness and social awareness may not respond appropriately to certain emotionally charged situations whether it be with a patient, family, physician, or co-worker [11]. How an individual process and reacts to these situations are highly suggestive of their level of EI. Failure to use and apply EI in nursing practice may result in lower patient satisfaction ratings which will impact the healthcare facility in the long-term. On an individual basis, the nurse may not develop supportive relationships with other members of the healthcare team which ultimately influences patient outcomes. Higher levels of EI have also been associated with lower stress levels in nursing; thus, less stress in the nurses have a beneficial effect of patient care and outcomes [12].

Nurse retention is an area of concern in the current healthcare climate. There is evidence to support that EI “a nontraditional intelligence measure” relates positively to retention and overall clinical performance of staff nurses [13]. Therefore, conversely, the lack of EI in staff nurses will decrease quality care delivery and cost the institution money by training nurses who leave within the first 1-2 years of practice. Initial training was on the job until organized nursing school’s introduction in mid-1800. Now, there are nursing schools of every sort across the United States (US) and internationally. Currently, nursing education uses a variety of teaching methods and strategies to prepare students for professional practice. These include a theory portion, a clinical portion, and the laboratory portion to help students apply the knowledge and skills on an on-going basis throughout the education process. However, the emotional intelligence of students is not always considered an essential component of the educational environment. Faculty expect students to manage their emotions and react to the emotions of others in a professionally appropriate manner. This purpose of this research study is to determine if there was a relationship between EI, the Testing of Essential Academic Skills Test (TEAS) which measures academic preparedness for nursing programs [14], and the success of nursing students in a first-semester nursing course as expressed by using their theory grade (exam average) and the final course grade (exams, clinical/lab, other assignments).

Problem Statement, Purpose of Study, and Research Question

With the current nursing shortage, there is a need to identify measures that influence student success in nursing school. The question: Is there a relationship between EI using The Assessment of Emotions Scale (SSEIT) developed by Schutte [4] score, the initial TEAS score, developed by ATI, the student’s theory average in the first-semester nursing course, and the students final course grade in the first-semester nursing course: Foundations of Nursing (FON) at a university-based nursing program in the Midwestern United States.

Peplau's Theory of Interpersonal Relations

Peplau's Theory of Interpersonal Relations focuses on nurse-patient relationships and the definition of the nursing role. This relationship moves along a continuum in which the initial connection is the interaction between strangers, providing nursing care allows a collaborative relationship development through continued communication [15]. Her theory posits the importance of the patient's experiences and how the nurse-patient relationship will influence those experiences [16]. She defines her theory as the interpersonal relationship between the nurse and patient but does not focus on any physiological aspects of nursing. In Peplau's approach, the nurse moves through various roles, stranger, person, teacher, and advocate, to meet the needs of the patient including physical, emotional, and spiritual well-being. The application of Peplau's theory to the current research study encompasses the central tenants of EI and the influence on student success. Not only does the approach focus on the nurse-patient relationship, but also how that relationship moves along a continuum for improved patient care experiences. Emotional intelligence impacts the ways nurses communicate, advocate, and support patients in the most vulnerable moments of their lives facilitating the healing process. Being aware of one's own emotions and the emotions of others impacts these relationships.

Peplau's theory used in conjunction with Goleman's EI framework of self-regulation, internal motivation, empathy, and social skills links the concepts to evaluate the impact and potential relationship to nursing student success. In 2013, Lyon, Trotter, Holt, Powell, and Roe published an article concerning whether EI is useful in nursing student recruitment. The report included compassion, empathy, and EI. The authors stated that EI allows more reflective nursing practice although some state that intellect is more valuable than compassion and understanding. The conclusion suggested a need for further research regarding EI and the development of a valid tool for consistency.

Design of the Study

A descriptive correlational design was used in this study as there were no interventions related to research results [17]. The data collected provided the participants' demographics, EI profile assessment, TEAS and Theory scores, and the final course grade average. The EI profile score (ranging from 33 to 165) came from the Schutte Self-Report Emotional Intelligence Test (SSEIT) tool. The Test of Essential Academic Skills (TEAS) score (ranging from 0 to 100%) is a standardized, pre-admission standardized exam that scores students on their knowledge and skills in Math, English, and Science to ensure they have acquired prerequisite knowledge prior to being admitted into the nursing program, mainly as these content areas provide the basis for nursing education. The higher the TEAS score, the more likely the student will be accepted into the nursing program [18]. The Theory grade is the average

of semester exam scores; Overall grade averages were derived from a weighted composite of the exam scores, dosage calculation quizzes, lab assignments and skills return demonstration, clinical assignments, and writing assignments.

Research Method

The study was conducted to investigate the question: "Does EI have a relationship with Nursing Student Success?" A self-report tool was provided to assess the students' EI, and NSS was reflected by the students' final grade average in the Foundation of Nursing course, representing the students' overall success in the first-semester nursing program at the university. Study variables were included in the correlation analysis, including Age and Gender. Furthermore, a linear regression analysis was conducted to determine if the study's independent variables could be used to develop an effective model to predict the outcome (NSS). Participating students were monitored throughout the semester, and scores from each of the instruments were compared to the overall course grade to determine if a relationship exists between EI and NSS, the study's primary focus, and its parts.

Design of the Study

A descriptive correlational design was used in this study as there were no interventions related to research results [17]. The data collected provided the participants' demographics, EI profile assessment, TEAS and Theory scores, and the final course grade average. The EI profile score (ranging from 33 to 165) came from the Schutte Self-Report Emotional Intelligence Test (SSEIT) tool. The Test of Essential Academic Skills (TEAS) score (ranging from 0 to 100%) is a standardized, pre-admission standardized exam that scores students on their knowledge and skills in Math, English, and Science to ensure they have acquired prerequisite knowledge prior to being admitted into the nursing program, mainly as these content areas provide the basis for nursing education. The higher the TEAS score, the more likely the student will be accepted into the nursing program [18]. The Theory grade is the average of semester exam scores; Overall grade averages were derived from a weighted composite of the exam scores, dosage calculation quizzes, lab assignments and skills return demonstration, clinical assignments, and writing assignments.

Sample Size and Sampling Plan

The population for this research, which focused on the relationship between EI and NSS, was the first semester students enrolled in the Foundations of Nursing course at a university-based nursing program in the Midwestern United States during the Fall Semester 2018. First semester students were chosen simply because they were new to the program and little exposure to the healthcare field and it comprised a convenience sample. The nursing program admits, bi-annually, 64 students to the nursing program from an average of about 163 student applicants. For

the Fall 2018 semester, there were 198 applications reviewed. The nursing department generally accepts 56-60 students from the applicant pool, with the remaining slots retained for students who may need to repeat the course. The admission criteria for this nursing program is based on a point system that is calculated through a weight-based formula using the TEAS score, retentive GPA, science GPA, and the number of science courses taken successfully at the university. Once all the applications are reviewed by the Admissions Committee, the scores are noted, and the students with the highest scores are admitted students to the program. A list of alternates is identified in case other, previously admitted students, do not remain in the program. There is no interview process used in the selection process.

Research Setting

The setting for this study was the university's on-campus Department of Nursing, which offers the Foundations of Nursing course for first-semester nursing students. The course itself was a 7- credit hour course taught over 16 weeks in the Fall Semester 2018, including class periods twice a week for five hours and five additional hours in a lab or clinical setting each week. The Course Coordinator was familiar with the data collecting procedures and assisted with the de-identification of participants before the study to ensure student anonymity. The students were asked to volunteer as study participants, and the SSEIT was administered in the classroom via paper and pencil documentation.

Instruments

The Assessing Emotions Scale

The EI diagnostic instrument, academic scores, and the demographic survey were used to provide data for the study to investigate the relationship between EI and NSS. The SSEIT, also known as the "Assessing Emotions Scale," is a 33-item, Likert scale, self-report inventory focusing on accredited EI criteria based on the Mayer and Salovey model [7,19]. The SSEIT allows students to score themselves as a self-report of their EI profile. This assessment test and the demographic survey were administered during the first week of the course. Students completed the instruments in approximately five to ten minutes. The demographic questionnaire included items concerning gender, age, and ethnicity of the participant. The total SSEIT score represented their overall EI. Scoring the SSEIT involved reverse coding values for items 5, 28, and 33; the final calculated score was the sum of all values reported. Based on these calculations, scores range from 33-165, higher scores indicating greater EI [7]. The 33-item EI inventory was subdivided into four subscales, represented by the sum of values obtained from the group of items representing each of the four categories:

- Perception of Emotion

- Appraisal and Expression of Emotion
- Regulation of Emotion
- Utilization of Emotion

Previous studies accredited the SSEIT with an internal consistency rating of 0.82-0.90 and test-retest reliability of 0.78 [19]. The SSEIT has also been used in studies with other student populations; it was noted that the inventory might be helpful recognizing and helping students who are academically or mentally at risk in performing specific tasks that require EI.

Testing Essential Academic Skills (TEAS)

The Testing of Essential Academic Skills test (TEAS) was developed by the Assessment Technology Institute (ATI) as a standardized test used for preadmission assessments for nursing and allied health. The TEAS is comprised of multiple-choice questions in the areas of reading, math, science, English, and language usage [18]. Academic success is essential in nursing education. The ability to predict a student's success potential is helpful when considering students' qualification for admission into a nursing program. According to ATI, the TEAS assessment tool is a valid and reliable predictor of nursing school success.

Often, the TEAS score is just one aspect of the admission criteria, among others, which vary by institution. The score is typically used in conjunction with the student's overall institution GPA or science GPA to determine if the student will be admitted to the nursing program. The research from ATI has demonstrated the TEAS score is an accurate predictor of nursing student success [18].

Student Success

The overall course grade, expressed as a percentage, represents Nursing Student Success (NSS) in the Foundations of Nursing course. The theory grade represents academic success for the course, which is derived from the average of exam grades, again expressed as a percentage. Nursing Student Success also includes the ability to learn and successfully master the basic nursing skills required to care for patients properly. These skills are learned in the lab and clinical settings under faculty supervision. At the end of the course, students must pass a skills return demonstration with a faculty in the areas requiring sterile technique, vital sign assessment, basic physical assessment, and medication administration to successfully pass the FON course in addition to passing the Theory portion of the class.

Data Analysis

Descriptive and inferential statistics were analyzed using IBM SPSS v. 24 to examine the data distributions and relationships among the study variables. As the study's primary focus was the relationship between EI (represented by ordinal data) and NSS

(represented by interval data), a correlational analysis, using the Spearman Rho Correlation Coefficient test, analyzed data describing the students' EI and TEAS scores and their Theory and Overall course grades. Also, a regression analysis was conducted to determine if there was a useful model, derived from these variables, to predict NSS.

Results

The results of the study on the relationship between EI and NSS were based on sophomore students in the FON course of Fall 2018. There were 64 students enrolled in the class. Of those, 59 were eligible to participate, 57 signed the informed consent form and joined the study. Five students were repeating the course during the semester of data collection; they were excluded from the study due to their previous experience with the FON course and its possible effects on NSS.

The demographic survey included information concerning age, gender, and race. The collected demographic information was compiled and entered SPSS v. 24. An analysis was completed to identify the average age of participants and frequency counts for both ethnicity and gender. Of the sample, there were 45 females (78.9%) and 12 males (21.1%) Student ages ranged from 19 years to 44 years with M = 22.09 years and an SD of 4.11 of indicating that most participants were between 18 and 26 years of age. Many students were White (78.9%); others reported being Asian (8.8%), Hispanic/Latino (5.3%), Native American (3.5%), and African American (1.8%), ((Table 1) Description of the Sample).

Male	21.10%				
Female	78.90%				
Age	19-44				
Ethnicity					
White	African American	Hispanic/Latin	Asian	Native American	Other
78.90%	1.80%	5.30%	8.80%	3.50%	1.80%

Table 1: Description of the Sample.

Statistical Analysis

The SSEITT scores, based on a possible score may range from 33 to 165, ranged from 103-150, with M= 128.70 ± 11.682, (Table 2). The TEAS scores (based on a possible 100%), ranged from 58.67% to 91.33% with M = 77.88% ± 6.268. The Theory grades, which included only the exam score averages, ranged from 63-94% with M= 82% ± .5459. The NSS, or overall course grade that included exams, clinical grades, skills lab activities, and other course required assignments ranged from, 69-94% with M= 85% ± .4795 (Table 3) Statistical Analysis of Study Variables). The descriptive statistics, it was noted that the students in the FON course are slightly older than the traditional college freshman (22). The majority are female (consistent with the nursing profession in general), who demonstrated a moderate aptitude for course work (78%), scored rather high (129 of 165) on the EI assessment, and made a solid "B" in the course.

Model	Sum of Squares	df	Mean Square	F	Sig.
1. Regression	497.583	4	124.396	8.224	.000 ^b
Residual	786.558	52	15.126		
Total	1284.14	56			
Dependent Variable overall					
Predictors: (Constant), SSEIT, Gender, TEAS, Age					

Table 2: Regression Analysis.

	Minimum	Maximum	Mean	Std. Deviation
SSEIT	N	Minimum	Maximum	Mean
	57	103	150	128.7
TEAS	58.67	91.33	77.8812	6.26817
Theory	0.63	0.93	0.8205	0.05459
Overall	0.69	0.94	0.8504	0.04795
Valid N(listwise)	57			

Table 3: Statistical Analysis of Study Variables.

The SEITT results reflected that most students reported a relatively high degree of EI, with the average score in the fourth quartile. However, approximately one-third of the subjects scored in the third quartile, indicating a lesser ability to recognize and govern their emotions and those of others. TEAS scores indicated most students were relatively well prepared for academic success in the program. There was not much grade inflation as the Theory had an M=82.2 ± .742 and the Overall grade had an M=85.12 ± .634, (Table 4). Of the 57 students participating in the study, 4 failed the course. Three of these four students failed the final skills return, making them ineligible to progress further in the nursing program. The fourth student did not have a Theory average of ≥ 76%; the minimum required to contribute along with additional course elements for an acceptable overall grade average.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
I				
1	.952	.906	.897	1.536

a. Predictors: (Constant), SSEIT, Gender, Theory, Age, TEAS

Table 4: Model Summary.

Inferential Analysis Results

Inferential statistical analyses were conducted to answer the primary research questions:

- Is there a relationship between EI and NSS?
- Is there an effective model that can be used to predict NSS using SSEIT, TEAS and Theory scores, Age, and Gender as predictor variables?

Correlational Analysis

The relationships between each of the study variables and NSS were evaluated using the Spearman Rho correlation coefficient to accommodate best the ordinal data representing most variables. A preliminary review of the data was conducted beforehand to ensure there were no violations of the assumptions for normality, linearity, and homoscedasticity. These analyses revealed a significant correlation between the TEAS score and Theory grade (Rho=.675, p=.000) and between the TEAS score and the overall grade (Rho=.616, p=.000). All other correlations were non-significant, including the relationships between EI scores and the Theory grade (Rho=.675, p=.113) and between the EI score and the overall grade (Rho=.616, p=.140), (Table 5), Correlational Analysis.

			SSEIT	TEAS	Theory	Overall
Spearman's rho	SSEIT					
		Correlation Coefficient	1	-0.113	-0.183	-0.14
		Sig. (2-tailed)		0.401	0.172	0.299
	TEAS	Correlation Coefficient	-0.113	1	.675**	6.16**
		Sig. (2-tailed)	0.401		0	0
	Theory	Correlation Coefficient	-0.183	.675**	1	.947**
		Sig. (2-tailed)	0.172	0		0
	Overall	Correlation Coefficient	-0.14	.616**	.947**	1
		Sig. (2-tailed)	0.299	0	0	
N	57	57	57	57	57	57

**Correlation is significant at the 0.01 level (2-tailed)

Table 5: Correlational Analysis.

These results reinforce the essential relationship between the TEAS and Theory scores and between the TEAS and overall grade averages. These findings are consistent with the ATI findings and validity of the TEAS as an effective predictor of student success [18]. The Theory grade is related to the Overall grade as the former is the average of exam scores, which are used in calculating the final course grade. However, the study data did not support the assertion that the EI score has a significant relationship with the TEAS, Theory grade, and the Overall grade for the course. Therefore, the first hypothesis was not supported.

Regression Analysis

To determine if the study's independent variables could be used to develop a useful model to predict NSS, a regression analysis was conducted. Relationships among the study variables were previously reported, including the subject's SSEIT score, TEAS score, theory grade, overall grade, age, and gender. These correlation analyses indicated the TEAS had a significant relationship with both the theory and overall grades; however, there was not a significant relationship between the EI score and the SSEIT score or NSS.

When conducting a linear regression analysis, the data are used in a series of calculations to develop a model summary. The analysis reveals if selected independent variables can effectively predict the outcome. In this study analysis, the model summary revealed the multiple correlation coefficient was relatively high ($R=.622$) and the R^2 value = .387. The latter value, also called the Coefficient of Determination, is the proportion of variance in the dependent variable that can be explained by the independent variables. The adjusted R^2 value (.340) indicates the relative potential for the model to predict the outcome. Based on the tabular results, the TEAS score is the only significant predictor variable of overall Success (NSS), which is consistent with the findings in the correlation analysis. The ANOVA test statistics ($F = 8.224$, $p = .000$), (Table 2), Regression Analysis, reveal the model, using the study's independent variables, is effective. Therefore, the model can be used to predict the overall grade, or NSS. The model derived from this analysis can be expressed as an algebraic equation. The larger coefficient for the TEAS value in the model once again underscores its contribution to the outcome:

$$\text{NSS} = -.037 (\text{Age}) - .389 (\text{Gender}) - .016 (\text{SSEIT}) + .462 (\text{TEAS}) + 52.781$$

The model supports the second hypothesis concerning the development of a useful model to predict NSS using SSEIT, TEAS and Theory scores, Age, and Gender. However, only the TEAS score was identified as a significant indicator of NSS, (Table 4)-Model Summary.

Review of Findings

The analysis of the study data did not find a significant relationship between EI and NSS; however, the TEAS, Theory, and Overall course grades did have a statistically significant relationship with NSS. Another finding revealed that age has a positive effect on EI scores; in other words, older students tend to demonstrate a more developed set of EI knowledge and skills. Most of this cohort was between the ages of 19-23 (87%); only seven students were between the ages of 27-44 (13.8%). There was no significant correlation between the EI score and Age, Gender, Theory, or Overall grades. However, the regression analysis did indicate a potential model to be used to predict NSS using the study variables.

Discussion

The data did not support the hypothesis of finding a significant relationship between EI and NSS. However, study data did support the second hypothesis, as TEAS and theory scores were significantly related to overall success and are thus indicators of NSS. The cohort of study participants is very representative of the students admitted to the program in recent years. The average TEAS score was 77.88% (Table 2), indicating applicants have the requisite knowledge and skills in the math and science fields. Although the cohort was primarily comprised of traditional students, the study data for older students did reveal that age of the student influenced the EI score, meaning the older the student, the higher the EI score. Also, in looking at the general data, students with higher self-reported EI scores tended not to do as well academically as those with lower scores. For example, one student self-reported an EI score of 142, yet achieved only a 69% overall course grade, which is below passing.

Conversely, a student who reported 107 for EI achieved 94% for an overall course grade. The variance in performance compared to EI score could be related to maturity and self-awareness. Regardless, this apparent contraindication may be worthy of further investigation. Age and gender were not significant indicators of success. Since the EI score was self-reported, students may have felt they were more self-aware than what was true. However, this cohort's self-reported EI scores are consistent with the Cerit and Beser [20] study, where 130-150 was considered normal, ≤ 129 was considered low, and ≥ 155 was considered high. The subscales of the SSEIT did not show any significant correlations with the TEAS, Theory, or overall course grades.

Conclusions

The topic of EI and Nursing has been broadly researched over the last decade. The literature review identified key aspects of

nursing care including effective communication, patient-centered care, and teamwork. The collaborative nature of nursing with other members of the healthcare team requires a level of self-awareness, the perception of emotions, regulation, and utilization of emotions to develop the rapport with co-workers and patient's to provide the appropriate care. Nursing school is no exception. Students are assigned to groups for the various classroom, lab, or simulation activities that require effective communication to be successful as a group inside and outside the classroom. Also, conflict resolution is also a necessary skill to have when working with a team of peers which may mean suppressing one's emotional response to allow others to feel safe during the interaction [21]. Many studies included other academic predictors of success combined with EI, while others examined what attributes make up EI as it related to nursing. The literature supports that EI is useful in nursing and a key attribute for quality nursing care; however, more research is needed on how to incorporate EI education into nursing classes. This research added support to current literature in determining the role of EI in nursing programs and in establishing more longitudinal research as to how EI relates to student success.

Recommendations

This initial analysis sets the stage for a longitudinal approach, allowing opportunities for adjustments to be made in study design and other areas that may need modification. The longitudinal nature of the study could ultimately be linked to NCLEX licensure results and perhaps to nursing performance and career retention. Based on the results of further investigation, changes in the current nursing curriculum could be made so that EI is fostered and developed by identifying specific strategies that could be implemented in promoting student success. The hands-on nature of nursing requires more than theoretical knowledge. Caring, empathy, and the ability to respond to patients in a way that supports the individual needs in the most vulnerable times is often enough to make a difference. The clinical setting may be the critical area for further research on EI and NSS since the patient care setting requires all the elements of EI to be present when providing quality patient care, effective communication, and teamwork with co-workers, physicians, and other ancillary departments. This need for additional research on EI within the clinical setting is necessary since this is where the opportunities for improvement in student-patient interactions and professional development are of utmost importance. Most students enter nursing to care for people. Nursing is not only about achieving proficient technical skills but also demonstrating softer skills, such as genuine understanding and compassion, sometimes demonstrated by fluffing a pillow or offering a drink of water, evidencing EI to those in need. Student success can, in turn, lead to successful professional practice.

Table 1

The Assessing Emotions Scale

Directions: Each of the following items asks you about your emotions or reactions associated with emotions. After deciding whether a statement is generally true for you, use the 5-point scale to respond to the statement. Please circle the "1" if you strongly disagree that this is like you, the "2" if you somewhat disagree that this is like you, "3" if you neither agree nor disagree that this is like you, the "4" if you somewhat agree that this is like you, and the "5" if you strongly agree that this is like you.

There are no right or wrong answers. Please give the response that best describes you.

	1	2	3	4	5
1. I know when to speak about my personal problems to others.	1	2	3	4	5
2. When I am faced with obstacles, I remember times I faced similar obstacles and overcame them.	1	2	3	4	5
3. I expect that I will do well on most things I try.	1	2	3	4	5
4. Other people find it easy to confide in me.	1	2	3	4	5
5. I find it hard to understand the non-verbal messages of other people.	1	2	3	4	5
6. Some of the major events of my life have led me to re-evaluate what is important and not important.	1	2	3	4	5
7. When my mood changes, I see new possibilities.	1	2	3	4	5
8. Emotions are one of the things that make my life worth living.	1	2	3	4	5
9. I am aware of my emotions as I experience them.	1	2	3	4	5
10. I expect good things to happen.	1	2	3	4	5
11. I like to share my emotions with others.	1	2	3	4	5
12. When I experience a positive emotion, I know how to make it last.	1	2	3	4	5
13. I arrange events others enjoy.	1	2	3	4	5
14. I seek out activities that make me happy.	1	2	3	4	5
15. I am aware of the non-verbal messages I send to others.	1	2	3	4	5
16. I present myself in a way that makes a good impression on others.	1	2	3	4	5
17. When I am in a positive mood, solving problems is easy for me.	1	2	3	4	5
18. By looking at their facial expressions, I recognize the emotions people are experiencing.	1	2	3	4	5
19. I know why my emotions change.	1	2	3	4	5
20. When I am in a positive mood, I am able to come up with new ideas.	1	2	3	4	5
21. I have control over my emotions.	1	2	3	4	5
22. I easily recognize my emotions as I experience them.	1	2	3	4	5
23. I motivate myself by imagining a good outcome to tasks I take on.	1	2	3	4	5
24. I compliment others when they have done something well.	1	2	3	4	5
25. I am aware of the non-verbal messages other people send.	1	2	3	4	5
26. When another person tells me about an important event in his or her life, I almost feel as though I experienced this event myself.	1	2	3	4	5
27. When I feel a change in emotions, I tend to come up with new ideas.	1	2	3	4	5
28. When I am faced with a challenge, I give up because I believe I will fail.	1	2	3	4	5
29. I know what other people are feeling just by looking at them.	1	2	3	4	5
30. I help other people feel better when they are down.	1	2	3	4	5
31. I use good moods to help myself keep trying in the face of obstacles.	1	2	3	4	5

References

1. Mayer JD, Salovey P (2007) Emotional intelligence. In: Salovey P, Brackett MA, Mayer JD (Editors.), Emotional intelligence: Key readings on the Mayer and Salovey Model. Port Chester, New York: DUDE Publishing. Pg No: 1-28.
2. Mayer JD, Salovey P (2007) What is emotional intelligence? In: Salovey P, Brackett MA, Mayer JD (Editors), Emotional intelligence: Key readings on the Mayer and Salovey Model. Port Chester, New York: DUDE Publishing. Pg No: 29-59.
3. Salovey P, Mayer JD (1990) Emotional Intelligence. *Imagination, Cognition, and Personality* 9: 185-211.
4. Schutte NS, Malouff JM, Hall LE, Haggerty DJ, Cooper JT, et al. (1998) Development and validation of a measure of emotional intelligence. *Personality and Individual Differences* 25: 167-177.

5. Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) (2014) Overview and Description.
6. Law KS, Wong C, Song LJ (2004) The construct and criterion validity of emotional intelligence and its potential for management studies. *Journal of Applied Psychology* 3: 483-496.
7. Schutte NS, Malouff JM, Bhullar N (2009) The assessing emotions scale. In: Stough C, Saklofske D, Parker J (Editors). *The assessment of emotional intelligence*. New York: Springer Publishing. Pg No: 119-135.
8. Codier E, Odell E (2014) Measured emotional intelligence ability and grade point average in nursing students. *Nurse Education Today* 34: 608-612.
9. Cadman C, Brewer J (2001) Emotional intelligence: a vital prerequisite for recruitment in nursing. *Journal of Nursing Management* 9: 321-324.
10. McCloughen A, Foster, K (2017) Nursing and pharmacy students' use of emotionally intelligent behaviors to manage challenging interpersonal situations with staff during clinical placement: a qualitative study. *Journal of Clinical Nursing* 27: 2699-2709.
11. Farshi MR, Vahidi M, Jabraeli M (2015) Relationship between emotional intelligence and clinical competencies in Tabriz nursing and midwifery school. *Research & Development in Medical Education* 4: 91-95.
12. Enns A, Eldridge GD, Montgomery C, Gonzalez VM (2018) Perceived stress, coping strategies, and emotional intelligence: a cross-sectional study of university students in helping disciplines. *Nurse Education Today* 68: 226-231.
13. Marvos C, Hale FB (2014) Emotional intelligence and clinical performance/retention of nursing students. *Asia Pacific Journal of Oncology Nursing* 2: 63-70.
14. Dunham ML, Alameida M (2017) ATI TEAS V cut score for the California community college nursing programs. *Teaching and Learning in Nursing* 12: 89-94.
15. Tomey AM, Alligood MR (2006) *Nursing Theorists and Their Work*. 6th Edition, Mosby/Elsevier, St. Louis.
16. Hagerty TA, Samuels W, Norcini-Pala A, Gigliotti E (2017) Peplau's theory of interpersonal relations: an alternative factor structure for patient experience data? *Nursing Science Quarterly* 30: 160-167.
17. Grove SK, Burns N, Gray J (2013) *The practice of nursing research: appraisal, synthesis, and generation of evidence* (7th Edition).
18. ATI (2016) TEAS.
19. Emmerling R (2017) The Schutte Self Report Emotional Intelligence Test (SSEIT).
20. Cerit E, Beser NG (2014) Levels of emotional intelligence of nursing students. *International Journal of Caring Sciences* 7: 936-945.
21. Foster K, McCloughen A, Delgado C, Kefalas C, Harkness E (2015) Emotional intelligence education in pre-registration nursing programmes: an integrative review. *Nurse Education Today* 35: 510-517.