Assessment of emotional intelligence and self-efficacy, and their relationship with academic achievement among nursing students

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This study aims to assess the emotional intelligence (EI), self-efficacy (SE), and its relationship with academic achievement (AA) at an academic institution. A cross sectional questionnaire based study was conducted. Data were collected among the nursing students at an academic institution in Saudi Arabia. A General Self-Efficacy Scale and Trait Emotional Intelligence Questionnaire was distributed among 273 nursing students. The analysis shows a positive and good emotional intelligence and self- efficacy among our subjects, as the mean scores of items in both scales are higher. Except global trait EI factor, there is no statistically significant relationship between AA levels and 4 factors of TEI scale and GSE scale. There is positive statistically significant correlation among the factors of TEI scale. Emotional intelligence and self-efficacy was prevalent among nursing students. A relationship exists between global trait EI and AA but no relationship exists between AA and other factors of EI & SE. Further, well-designed research on younger students and other populations are required to understand the extent of the relationship between SE, EI, and the academic levels of those students.

Keywords: Academic achievement; emotional intelligence; nursing students; self-efficacy; University students.

INTRODUCTION

Emotional intelligence (EI) plays a significant role in the formation and development of effective interaction. EI is an important factor that enables one to know how, when, and what form of interaction is better when employing communication strategies. The concept of EI was first introduced to understand why two people having the same Intelligence Quotient (IQ) could reach different levels of progress and prosperity (Mayer and Salovey, 1997). EI can be established and trained over time (Shanta and Gargiulo, 2014). EI is assumed to be a success predictor, as people with higher EI have a greater potential to succeed in leadership roles. Further, EI refers to the aspects that underline individual behavior that differ from rational behavior and thinking capability (Bradbury and Greaves, 2008). Thus, people with high EI scores are well-suited to high-stress careers (Salovey and Grewal, 2005; Adams and Iseler, 2014).

Self-efficacy (SE) is a person's belief in their ability to do a task required to reach a specific goal. It plays an important role in self-learning. SE has been an important factor in improving academic achievement (AA) (Zajacova

et al. 2005) and it is an approach that emerges from determination and improves operation ability (Bandura, 2000).

A study used the "Bar-On EI test" and "the learners' SE survey" on 100 students from an English as a Foreign Language (EFL) course to examine the connection between EI and academic SE. The study found that there is a strong indicator of the fundamental relationship between EI and SE beliefs, stress tolerance, and self-actualization in the learners' SE (Hashemi and Ghanizadeh, 2011). Affirming these outcomes, people who score high on EI have high SE (Chan, 2007).

Moreover, AAs are based on a set of complex elements (personal and physical), which play an important role in students' successes and failures (Nabizadeh and Mansoor, 2010). Growing evidence indicates that emotional and social factors play significant roles in students' academic successes, indicating that students who received a higher EI score performed better in academic tasks (Rodeiro et al. 2009). Further, Downey et al. (2008) found that high academic success among secondary school students was associated with a high level of EI. Similarly, in an online course that examined the

GPAs among online students, Berenson et al. (2008) stated that EI was an essential indicator of academic success. However, the combination of EI and personality was also a strong indicator of academic success among students in online courses.

EI includes the human skills of empathy, motivation, self-awareness, and control. It reflects the potential for intellectual and emotional growth as cognitive components (Por et al. 2011; Afifi et al. 2016). Afifi et al. (2016) studied a sample of 346 nursing school students and showed that EI contributes to the ability of nurses to control their emotions to avoid job stress and provide better care, which in turn affects their sense of professionalism.

Hasanvand and Khaledian (2012) conducted a study on 100 university students in Sanadaj City using the Ann-Bar questionnaire. They explored whether there is a positive relationship between EI and different types of self-esteem (e.g., social, family, total, public, and academic self-esteem) relating to AA. No significant difference existed between students of both genders in both EI and self-esteem.

Hen and Goroshit (2014) conducted a study in Israel with a sample of 287 college students. The results indicated that EI has a significant negative relationship with academic procrastination (β=-.25; $p<.05$), which implies that the higher the EI, the lower the academic procrastination. There was also an indirect significant positive relationship between GPA (β=.17; $p<.05$) and EI. This result suggests that EI has no direct relationship with GPA and academic procrastination and that academic SE serves as a full mediator between EI, GPA, and academic procrastination.

Some components of EI, such as problem-solving, social responsibility, flexibility, and self-fulfillment, were considered to influence AA (Durgut et al. 2013). Additionally, only three components of EI—self-awareness, self-motivation, and empathy—impacted AA (Yahaya, 2012). Similarly, Festus (2012) conducted a study in a secondary school and concluded that there was a significant low positive relationship between EI and AA. Fayombo (2012) demonstrated that EI was a better and significant predictor of AA.

Some studies have indicated that the relationship between EI and AA is still debatable. Amelang and Steinmayr (2006) conclude that EI cannot predict academic success. They argue that it is general intelligence and conscientiousness that can predict academic success. Kashani et al. (2012) found that there is no significant relationship between EI and students' achievement scores. Ahammed et al. (2011) from the United Arab Emirates University found that academic success is not associated with EI. Humphrey-Murto et al. (2014) found that the relationships between emotional-social intelligence and academic success are negative, indicating that EI does not appear to reliably predict future academic performance.

Furthermore, SE affects thinking, emotions, and coping with negative events (Rostami et al. 2010). SE refers to a person's belief in their ability to arrange and execute courses of action depending on their interpretations of life events and their coping skills (Souza et al. 2014). SE is a predictor of an individual's quality of life, well-being, happiness, and overall adaptation and health (Ersanli, 2015). Adeyemo (2007) suggested that there is a link between academic SE and achievement among university students. Williams and Williams (2010) found that people with high levels of SE believe in their abilities to resolve mathematical problems and in creating a strong commitment to purposefully applying their ability while understanding that failure can be the result of incomplete knowledge.

Afifi et al. (2016) state that there have been many studies relating important concepts, such as EI and SE, with academic success. They found that the score of EI increases significantly with age among nursing students, but E-sociability also significantly increases with age. This indicates that students' GPAs seem to increase significantly with age or in higher classes. Additionally, many studies found a relationship between gender and age. They found that a considerable improvement in EI correlated with an increase in age and with being a woman (Kafetsios, 2004; Mayer et al. 2008; Austin et al. 2015; Snowden et al. 2015).

In a study conducted in Rome with a sample of 92 college students, Cicei et al. (2012) showed that EI has a relationship with academic SE. These findings indicate that there is a positive relationship between managing emotions and academic SE. Thus, students with a high level of academic SE imagine themselves as having high levels of EI and can therefore use and manage their emotions effectively.

In a descriptive correlation study in Iran, with a sample of 129 students from a public health school, Gharetepeh et al. (2015). found a significant correlation between EI and SE and level of AA. Students with high AA show high EI, unlike students with low AA. They also stated that SE is interpreted through self-motivation, self-awareness, and social consciousness for students with high AA and through self-motivation and self-awareness for students with low AA. This study showed the impact of EI and SE on AA and recommended that EI and SE be taught to students with low AA.

One of the major issues in education is AA because of how closely it is related to the improvement of university quality (McDonald, 2011). In 2011, a cross-sectional study of 407 high school students in Turkey indicated that there is a negative predictor of AA with both gender and age (Yazici et al. 2011). This study found a significant difference between students' socioeconomic status and their AAs. The higher the economic status of the student, the higher their AA (Dehyadegary et al. 2013).

Dehyadegary et al (2013). studied the relationship between EI, academic SE, and academic performance in

400 high school students. They noticed a significant positive relationship between academic involvement and academic performance. Thus, a student who is closely involved in their academic pursuits finds it easier to cope with their academic responsibilities and excel in their academic performance.

Researchers have started to focus on the connection between three variables: EI, academic SE, and AA. Belanger (2005) found that although a student's EI and academic success were not directly linked together, students with higher levels of EI and who had more SE had enhanced academic performances. Adeyemo (2007) examined the impact of EI on the correlation between SE and AA among university students and indicated that EI and academic self-efficiency were largely linked to AA. A moderate impact of EI was also established on the relationship between academic SE and AA.

Mahmoudi (2012) conducted a study on 150 students and demonstrated that EI and academic SE are essentially associated with AA. In Nigeria, a study with 300 student participants by Adeyemo (2007) showed a significant relationship between EI and AA and academic SE and AA. This study aims to assess the emotional intelligence (EI), self-efficacy (SE), and its relationship with academic achievement (AA) among nursing students at an academic institution.

The nursing students in Saudi Arabia face numerous difficulties and deal with different stressors frequently (Aljohani et al. 2021). Unfortunately, many of them do not know how to deal with these issues and cannot manage their emotions, which may negatively affect their AA. Students with low efficiency feel that everything is beyond their capabilities. This indicates that students' inability to handle their everyday stressors and their lack of EI and SE might negatively affect their AA during their academic journey at the university. The results of this study are important as they will assist all Saudi students achieving higher academic GPAs by recommending that they improve their SE and EI skills.

MATERIALS AND METHODS

Design and setting

A quantitative cross sectional study design was conducted with the faculty of nursing education of an academic institution located in Jeddah City in Saudi Arabia, one that provides a baccalaureate nursing program. This faculty of nursing was selected because of the large number of students as well as the accredited program. Quantitative research was conducted to describe new situations, concepts, and events in the world to examine the relationships among variables and determine the effectiveness of treatment (Gray et al. 2016). It describes the characteristics of specific individuals, circumstances, or groups (Polit and Beck, 2012). This design provides information from respondents by means of self-report.

Sample and Sample Size

A convenient, consecutive non-random sampling technique was carried out. The inclusion criteria of study participants included nursing students from the second, third, and fourth years of the nursing baccalaureate program, aged between 19–23 years. An estimated sample size of 181 nursing students across baccalaureate and bridging programs was calculated with a 95% confidence interval and a 5% margin of error. The total number of nursing students were 393 out of which 273 had participated in this study.

Data collection and Tools

The online electronic questionnaire comprised three sections. section one included five items on demographic characteristics: age, gender, academic level, ID number, and GPA. Section two included the General Self-Efficacy Scale (GSES) (Schwarzer and Jerusalem, 1995), comprising ten items. Scoring for each item was a four-choice response from "Not at all true" (scored as a 1) to "Exactly true" (scored as a 4). The total score of GSES is calculated by dividing the sum of the 10 items by 10 (see Supplementary Figure S1). Section three included the Trait Emotional Intelligence Questionnaire (TEIQue) (Patrides and Furnham, 2003; Petrides, 2009). The TEIQue, comprised of 30 items with seven possible response on a Likert scale to each statement ranging from "completely disagree" (score of 1) to "completely agree" (score of 7). These 30 items are related to 5 factors: Well-being (6 items), Sociability (6 items), Self-control (6 items), Emotionality (8 items) and Global Trait EI (4 items). Each factor score is calculated by dividing the sum of the item scores by the total number of items (see Supplementary Figure S2). The TEIQue is a valid and reliable tool used with multiple populations and it has been translated into 21 languages, indicating an excellent internal consistency in all cases)Patrides and Furnham, 2003; Petrides, 2009(. Similarly, Cronbach's alpha coefficient of GSES ranges from 75 to 90)Schwarzer and Jerusalem, 1995(. Academic Achievement was measured by the participants' GPA. The university has a grading system with 0 being the minimum GPA and 5 being the highest. Students with a GPA of 2.75 are considered failed and 4.5 upwards as excellent in academics.

Data Collection Process

Data were collected through an online questionnaire using the Google Drive Application. The researchers introduced this study to participants via a WhatsApp group. Researchers explained the study to the participants and informed them that participation was voluntary and that they had the right to choose not to participate (see Supplementary Figure S3: Participants Consent for Online questionnaire).

Data Analysis

Data entry and analysis were performed using the Statistical Package for the Social Sciences (SPSS) version 26.0 (IBM Inc., Chicago, IL, USA). Descriptive statistics (mean standard deviation, frequencies and percentages) were used to quantify the quantitative and categorical variables. One-way analysis of variance followed by Tukey's multiple comparison test was used to compare the mean values of scores of Trait Emotional Intelligence and Generalized Self-Efficacy scales in relation to the levels of Academic achievement of subjects.. Pearson's correlation coefficient test was used to quantify the linear relationship among the four factors of TEI Que scale. The reliability of the two instruments was assessed by calculating Cronbach's alpha. A p-value of ≤0.05 and 95% confidence intervals were used to report the significance and precision of the results.

Ethical Considerations

Ethical approval was obtained from the Ethics and Research Committee on 1/3/2020 from the academic institution's faculty of nursing. After a brief electronic explanatory statement about the study, the participants were asked to consent to participate by clicking on an "I agree" icon before starting the questionnaire. Confidentiality of data collected from the participants and anonymity were guaranteed throughout the study process.

RESULTS

Characteristics of study subjects:

Out of 273 female nursing students, 99 (36.3%) were in age group of 19-20 years, 155 (56.7%) were in the age group of 21-22 years and 19 (7%) were above 22 years. The academic level of these students was second year (40.3%), third year (26%) and fourth year (33.7%). About 56.8% of them had GPA of more than 4.5, 31.5% of them had a GPA between 4.01 to 4.49 and only 11.7% had a GPA of <4.0.

Trait Emotional Intelligence assessment:

The descriptive statistics (mean and standard deviation) of each of the 30 items of the TEIQue is given in Table1.

Out of the 30 items, 14 items are negative statements in which the responses were reversed. The remaining 16 items are positive statements. For all the positive items the mean values were above 4.0 on the 7-point (1 as strongly disagree to 7 as strongly agree) Likert scale indicating that all the nursing students positively agreed to the statements. The mean score of 5.70 was for a statement "I feel that I have a number of good qualities" shows that our nursing students were having positive trait of emotional intelligence and the mean score of 3.12 for the negative statement: "I usually find it difficult to regulate my emotions" indicating that most of the nursing students were not agreeing to this statement. The mean scores of the 30 items ranged from 5.70 to 3.12. The mean values of the 4 factors of this scale (well-being, self-control, emotionality, sociability) and global trait EI indicated that the nursing students were reluctant to select "strongly disagree" to all the items under these factors. The Cronbach's alpha value of all these factors ranged from 0.686 to 0.741 which are close to the acceptable level of 0.70, but the overall scale Cronbach's alpha value was 0.867 which is statistically significant (Table 3).

Generalized Self-efficacy assessment:

The descriptive statistics (mean and standard deviation) of each of the 10 items of the GSES is given in Table 2. For the 10 items, the mean values ranged from 2.96 to 2.35 where the responses were recorded on a 4-point Likert scale (1 as not all true to 4 as exactly true). As the nursing students' responses were close to 3, which means moderately true this indicated that the level of self-efficacy among the nursing students was good. The mean total GSE score of 26.86 out of 40 also indicated overall good self-efficacy was prevalent among the students. The internal consistency of this scale was found to be 0.898 which is higher than the acceptable of 0.70 and is statistically significant.

Relationship between TEIQue scores, GSE scores and GPA (Academic achievement):

The descriptive statistics and internal consistency of TEIQue scale and its factors and the GSE scale are presented in table 3. The comparison of the mean values of 4 factors, Global trait EI and the total score of TEIQue scale in relation to the 3 level of GPA showed a statistically significant difference in the mean values of Global trait EI factor. That is the mean value of Global Trait EI of nursing students was statistically significantly higher in those students who had a GPA of >=4.50 when compared with the students who had <4.0 and 4.01-4.49 of GPA levels. The pairwise comparison analysis showed no significant difference in the mean values of global trait EI between the students with GPA of <4.0 and 4.01 to 4.49. Finally, there was no statistically significant difference in the mean scores of other factors of TEIQue scale and GSE scale as demonstrated in table 4.

Correlation analysis:

The correlation among the factors of TEIQue scale are presented in Table 5. A positive and statistically significant relationship was found between Well-being and the three other factors with Sociability [r=0.569, p<0.0001]. Self-control [r= 0.419, p<0.0001]; with Emotionality [r=0.490, p<0.0001], and with Global Trait EI Score (r=0.597, p<0.0001). Furthermore, Sociability was found to have a similar positive relationship with Self-control [r=0.312 p<0.0001] and Emotionality [r=0.513, p<0.0001] and Global trait EI score (r=0.554, p<0.0001) respectively. The positive correlation indicated that as the scores of well-being increase the scores of other factors

(sociability, self-control, emotionality and global trait) also   increase which are statistically significant.

Table 1: Descriptive statistics of Trait Emotional Intelligence Questionnaire items

Statements of Questionnaire	Mean	SD
"9. I feel that I have a number of good qualities.	5.70	1.26
"27. I generally believe that things will work out fine in my life.	5.20	1.37
"20. On the whole, I'm pleased with my life.	5.10	1.61
"24. I believe I'm full of personal strengths.	5.05	1.44
"6. I can deal effectively with people.	5.01	1.32
"11. I'm usually able to influence the way other people feel.	4.92	1.29
"15. On the whole, I'm able to deal with stress.	4.87	1.46
"29. Generally, I'm able to adapt to new environments.	4.86	1.45
"23. I often pause and think about my feelings.	4.84	1.49
"19. I'm usually able to find ways to control my emotions when I want to.	4.81	1.48
"3. On the whole, I'm a highly motivated person.	4.74	1.46
"30. Others admire me for being relaxed.	4.68	1.76
"26. I don't seem to have any power at all over other people's feelings.	4.64	1.48
"21. I would describe myself as a good negotiator.	4.47	1.44
1. Expressing my emotions with words is not a problem for me.	4.34	1.78
"25. I tend to "back down" even if I know I'm right.	4.25	1.68
"17. I'm normally able to "get into someone's shoes" and experience their emotions.	4.04	1.54
"12. On the whole, I have a gloomy perspective on most things.	3.89	1.65
"2. I often find it difficult to see things from another person's viewpoint.	3.81	1.39
"22. I tend to get involved in things I later wish I could get out of.	3.75	1.64
"28. I find it difficult to bond well even with those close to me.	3.66	1.76
"8. Many times, I can't figure out what emotion I'm feeling.	3.59	1.65
"5. I generally don't find life enjoyable.	3.50	1.91
"7. I tend to change my mind frequently.	3.37	1.59
"14. I often find it difficult to adjust my life according to the circumstances.	3.36	1.69
"10. I often find it difficult to stand up for my rights.	3.30	1.71
"18. I normally find it difficult to keep myself motivated.	3.21	1.60
"16. I often find it difficult to show my affection to those close to me.	3.20	1.93
"13. Those close to me often complain that I don't treat them right.	3.14	1.65
"4. I usually find it difficult to regulate my emotions.	3.12	1.64

Table 2: Descriptive Statistics of the Generalized Self-Efficacy Scale items

Statements of the scale	Mean	SD
1. I can always manage to solve difficult problems if I try hard enough.	2.96	0.77
2. If someone opposes me, I can find means and ways to get what I want.	2.79	0.72
3. It is easy for me to stick to my aims and accomplish my goals.	2.71	0.74
10. No matter what comes my way, I'm usually able to handle it.	2.70	0.69
9. If I am in a bind, I can usually think of something to do.	2.69	0.69
7. I can remain calm when facing difficulties because I can rely on my coping abilities.	2.69	0.90
4. I am confident that i could deal efficiently with unexpected events.	2.67	0.77
8. When I am confronted with a problem, I can usually find several solutions.	2.67	0.76
5. Thanks to my resourcefulness, I know how to handle unforeseen situations	2.64	0.78
6. I can solve most problems if I invest the necessary effort.	2.35	0.84

Table 3: Descriptive statistics and Internal consistency of TEI Que scale and its factors and GSE scale

Factors and scale	Mean	Sd.,	Minimum	Maximum	Cronbach's alpha (95% CI)
Well Being	5.00	1.02	1.50	7.00	0.741(0.69-0.77)
Self-control	4.27	0.84	1.50	6.83	0.721(0.63-0.80)
Emotionality	4.45	0.86	2.00	7.00	0.716(0.64-0.78)
Sociability	4.60	0.93	2.17	7.00	0.686(0.62-0.74)
Global Trait EI	4.54	1.04	2.00	7.00	0.687(0.60-0.76)
TEI Que scale	4.57	0.71	2.80	6.50	0.867(0.84-0.89)
GSE scale	26.86	5.55	15.0	40.0	0.898(0.88-0.91)

Table 4: Comparison of mean values of TEI Que scale and its factors and GSE scale across the GPA levels of study subjects

Factors and scale	GPA levels			F-value	p-value
	< 4.0	4.01-4.49	>=4.50		
Well Being	4.97(1.21)	4.89(1.04)	5.07(0.97)	0.815	0.444
Self-control	4.14(0.68)	4.24(0.80)	4.31(0.88)	0.589	0.555
Emotionality	4.40(0.73)	4.34(0.87)	4.52(0.88)	1.260	0.285
Sociability	4.65(0.85)	4.46(0.89)	4.66(0.97)	1.388	0.251
Global Trait EI	4.25(0.89)	4.39(0.99)	4.68(1.07)	3.536	0.030
TEI Que scale	4.49(0.65)	4.46(0.69)	4.63(0.72)	1.875	0.155
GSE scale	26.75(6.21)	26.60(6.14)	27.03(5.56)	0.179	0.836

Table 5: Correlation among the factors of TEIQue scale

Factors		Well Being Score	Sociability score	Self-Control Score	Emotionally Score	Global Trait EI Score
Well-Being Score	r- value	1	--	--	--	--
	p-value					
Sociability score	r- value	0.569	1	--	--	--
	p-value	<0.0001				
Self-Control Score	r- value	0.419	0.312	1	--	--
	p-value	<0.0001	<0.0001			
Emotionality Score	r- value	0.490	0.513	0.414	1	--
	p-value	<0.0001	<0.0001	<0.0001		
Global Trait EI Score	r- value	0.597	0.554	0.464	0.493	1
	p-value	<0.0001	<0.0001	<0.0001	<0.0001	

DISCUSSION

The study aimed to assess the emotional intelligence (EI), self-efficacy (SE), and its relationship with academic achievement (AA) among nursing students at an academic institution based in Jeddah City, Saudi Arabia. The results of this study demonstrated that nursing students have a positive trait of emotional intelligence which is consistent with the wider literature findings (Beauvais et al. 2011; Thomas and Natarajan, 2017). Further, the findings of this study also indicated that SE among nursing students was considered relatively average matching the findings of that of (Athira et al. 2017; Hassankhani et al. 2014).

The findings of this study indicate that there is no relationship between EI and AA in terms of the total score. However, the results show a statistically significant relationship between one factor, that is global trait EI. These findings are similar to those of previous studies (Mayer et al, 2000; Hen and Goroshit. 2014; Afifi et al. 2016; Behrozi et al. 2016). Mayer et al (2000) stated that EI is not always important for society, and that even people with high EI may face issues in their life. Goleman (1998) argued that there are factors other than EI that determine academic success. These findings are not compatible with studies such as those conducted by Hasanvand and Khaledian (2012), Adeyemo (2007), Cicei et al. (2012), Gharetepeh et al. (2015), and Dehyadegary et al. (2013), which found a relationship between EI and AA.

The results also indicated that there was no statistically significant relationship between SE and AA which is in contrast to the majority of previous studies which indicate a positive relationship between SE and AA (Kim, 2003; Adeyemo, 2007; Williams and Williams, 2010; Cicei et al. 2012; Gharetepeh et al. 2015; Afifi et al. 2016). SE plays an important role in self-learning; students' confidence in their ability to achieve academic success affects their passion, intelligence, and AA and how they prepare themselves for various future jobs (Bandura, 1995). Therefore, it could be argued that SE has an important influence over AA. However, there are a few other studies that match the current result findings of our study as they also did not find a significant relationship between SE and AA (Afifi et al. 2016; Behrozi et al. 2016; Arabian et al. 2004). According to Arabian et al. (2004), SE is high among university students at entrance level but tends to diminish once they are registered and guarantee there place in the program. This is a possible justification for our study results as well as students tend to exhibit much effort to achieve high scores during the foundation year to guarantee their subsequent placement within the nursing program which tends to be highly competitive.

Thus, this study has significant implications on how nursing faculty members can better understand the factors that affect AA among nursing students. The results of this study can also be used by the Ministry of Education to improve the SE and EI among all students thereby enhancing their AA. They can introduce these aspects in separate independent courses or within existing courses in the current curriculum for students at all educational levels while also considering other socioeconomic factors that may affect the EI level of students. The main limitation of this study is the small sample size; it was difficult to collect a bigger sample because of the COVID-19 pandemic. The questionnaire was distributed electronically through the WhatsApp application, which made it difficult to communicate directly with the participants and encourage them to participate in this study.

CONCLUSION

The findings of this study suggest that emotional intelligence and self-efficacy were prevalent among nursing students. A relationship existed between global trait EI and AA but no relationship existed between AA and the other factors of EI & SE. Therefore, this study has added to the evidence base by focusing on the importance of SE and EI for AA among nursing students. Further, this study demonstrates the need to develop SE and EI traits among nursing students through simple courses or workshops provided within their academic courses or through an academic advisory department in the college. The study findings contribute to the body of existing knowledge and provide justification for future studies that aim to examine the relationship between SE and nursing students' achievement success.

This study provides the following recommendations for future research with an interest in exploring the relationship between SE, EI, and AA. There is potential for future studies to be conducted that measure the effect of conducting a course, session, or workshop on nursing students and their academic success before and after. Further, this study would be valuable to education policymakers and academics who are interested in understanding the factors that may affect their students' AA. Additionally, well-designed research is required to understand the relationship between SE, EI, and academic level in younger students and other populations.

AUTHOR CONTRIBUTIONS
NAA, ASQ, EHA, MMB, and NAA (Nada A. Alsulami) conceived and designed the study, conducted research, provided research materials, and collected and organized data. MAB, ANM, and LSS analyzed and interpreted data. ASQ, EHA, MMB, and NAA (Nada A. Alsulami) wrote the

initial and final drafts of the article with NAA who provided continuous supervision and logistic support. MAB, ANM, and LSS reviewed and edited the manuscript. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

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