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Assessment of The Emotional Intelligence Level Among Public and Private Undergraduate Nursing Students and its Association with Demographic Variables

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ABSTRACT

Emotional Intelligence (EI) is mainly associated with individual thinking. The nurses' emotions and the nursing interventions are sometimes affected by such emotional abilities of nurses. **Objectives:** To explore the relationship of EI between public and private undergraduate nursing students and compare demographic variables with EI. **Methods:** A cross-sectional study was conducted in public and private nursing colleges in Karachi, Pakistan. The total sample size was (n=196) undergraduate nursing. The data collection was done through a written questionnaire. Data were analyzed through the SPSS version 29.0. Frequency and percentage were calculated for the different levels of EI among the private and public undergraduate nursing students. Moreover, the EI comparison was also done with the demographic data. **Result:** 104 (53.3%) were male and 92 (46.9%) were female. According to demographic information, 39 (19.8%) participants were ages 15-20, and 157(80.5%) were aged 21-30. 29(14.79%) participants had less than 3 CGPA in the last semester, and 167(85.5%) undergraduate students had more than 3 CGPA in the previous semester. Moreover, the mean and standard deviation of male was (126.1 ± 16.7) and female was (125.2 ± 13.4) with a t-value is 0.372 and a p-value is 0.045. **Conclusions:** It was concluded that there was a significant difference in EI among undergraduate public and private Nursing Students. This study also reveals critical insights into how demographic factors, such as age, gender, and CGPA influence the participant's emotional intelligence.

INTRODUCTION

Emotional Intelligence (EI) is mainly associated with individual thinking, The EI involves the potential to engage in the self, and others' emotions, those who have high EI can pay more attention to the tasks, and these people can understand and manage emotions so smoothly. Furthermore, the EI term was proposed by the researchers John Mayer and Peter Solevey, but later on, the EI was popularized by well-renowned psychologist Danial Goleman, who was a scientific journalist, author, and psychologist [1, 2]. In 1990 the initial work on EI stated that those who have high EI had certain abilities and skills to manage the self and others' emotions, and also stated that those who have high EI could perceive other emotions including anger and sadness in themselves and others, additionally, that people are also able to regulate other emotions including motivation and creative thinking [3]. The Emotional Intelligence (EI) theory was proposed by Danial Goleman [2]. This theory states that the five components of EI are self-awareness, self-regulation, motivation, empathy, and social skills. Moreover, there are two models of EI, the ability-based model and the trait model of EI, according to the ability-based model there are 4 branches of EI that are ability to perceive emotions, facilitate thoughts by integrating self-emotions,

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understand emotions, and promote personal growth by regulating the self-emotions. Whereas, according to the trait model, which was proposed by Petrides, self-perception and emotional traits play a significant role in self-EI. Hence the trait model breaks the idea that EI is ability but the trait model states that it is a personality-based trait in humans [4]. In a clinical and therapeutic environment, nursing students face unique issues that lead to a lot of stress during their first clinical rotation, these problems affect the students' problem-solving skills and also affect the critical thinking skills of nursing students to achieve the complex needs of healthcare setup. Whereas, the EI is a critical aspect of being a successful and professional nursing student, and nursing students face multiple issues including difficulty in building rapport with patients, poor communication skills, inability to handle stressful situations, lack of empathy with patients, and conflict with colleagues. So, to address all these issues, it's important to identify the level of EI among public and private undergraduate nursing students. According to existing studies [5], the EI is a remarkable tool in the nursing profession including the relationship between a nurse and a patient, giving effective nursing care, and the counselling role in crucial situations. Further, in nursing practice, the EI is a significant marker [6], and there is a strong relationship between the EI and nursing attributes, including leadership in the nursing discipline [7], stress management [8], and mental well-being of nursing students [9] and also important in the caring behaviour of nursing students [10]. In addition, the nurses' emotions are very necessary for decision-making in clinical areas, and in contrast, sometimes having a lack of emotional abilities in nurses can lead to negative consequences in terms of patient care [11].

Despite the recognized importance of Emotional Intelligence (EI) in nursing education and practice, limited research has compared EI levels between public and private undergraduate nursing students in Pakistan. Moreover, few studies have explored how demographic factors, such as gender, age, and academic performance, influence EI in this context. This gap highlights the need for a focused assessment to inform targeted educational interventions. This study aims to assess the emotional intelligence level among public and private undergraduate nursing students. To assess the association of demographic variables with emotional intelligence.

METHODS

A cross-sectional study was conducted in the public and private colleges of Nursing in Karachi, Pakistan. The participants were undergraduate nursing students, including both from even and odd generic semesters. Female participants were recruited from the public college of Nursing and the male participants were recruited from the private college of Nursing. The data were collected through the online questionnaire. The questionnaire was in both languages (English and Urdu). Before the data collection, the consent form was distributed among the participants in English and Urdu versions. Initially, the data were collected from the Public College of Nursing, Before the data collection all the terms and conditions were briefly described to the students. After the Public College of Nursing, the data were collected from the Private College of Nursing, from the 22nd of June 2023- to the 15th of July 2023.It almost took 10-15 minutes to fill up the questionnaire, and all the participants had the equal right to leave the study at any time. The data collection was started after the approval of the Ethics Review Committees (ERC) and after the approval of institution letters. The convenient sampling technique was used for data collection. The sample size of 196 in the study was calculated through the WHO sample size software, by taking emotional intelligence in nursing students as 74.4%, the confidence interval was 95%, and 5% margin of error [12]. All participants were involved who were enrolled in a generic BS nursing program, the minimum age of the participant was 18 years. Moreover, all those participants who were not willing to participate in the study were in the exclusion criteria. In this study, the EI was measured through the Schutte-Self report emotional intelligence test (SSEIT) having internal consistency with Cronbach's alpha of SSEIT ranges from 0.87 to 0.90. Moreover, the tool was also validated in terms of homogeneity and internal consistency in the Pakistan context [13]. In addition, there are 03 items of demographic items and 33 items in the EI questionnaire. Gender, age, and CGPA in the last semester are the demographic variables, the EI questionnaire consists of a Likert scale (1-5), 01 denoting the strongly disagree, 02 denoting the disagree, 03 denoting neither disagree nor agree, 04 denoting agree and 05 denoting strongly agree. Each sub-test score of the participants was graded and then added together to give the total score to the participants.The cut value of SSEIT was 90, those who got (90-99) were categorized as low-average EI students, those participants who got (100-109) will be categorized as high-average EI students, and those who got (110-119) scores be marked as competent students, and (120-129) were marked as a strength, (130+) were marked as a significant strength of EI among undergraduate nursing students.Moreover, those who got (70-89) scores were marked as an improvement and less than (69) scores were marked as a development in the EI (Salovey and Sluyter.Data were analyzed through the latest version of SPSS 29.0, employing descriptive statistics such as frequencies and percentages for demographic and categorical variables.The EI was compared with

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demographic variables by using an Independent sample t-test, before this the Kolmogorov-Smirnov was applied to check the normality of the data.The Chi-square test was applied to check the EI association between Public and Private Undergraduate nursing.

RESULTS

In this study, the total number of participants was 196. 104 (53.3%) were male and 92 (46.9%) were female. Moreover, according to demographic information out of 195 participants, 39 (19.8%) participants were ages 15-20, and 157 (80.5%) participants had age 21-30. Furthermore, 29 (14.79%) participants had less than 3 CGPA in the last semester, and 167 (85.5%) undergraduate students had more than 3 CGPA in the last semester. There was a significant variance found in the EI of male and female (Table 1).

Table 1: Demographic Information of the Participants (n=196)

Variables	Frequency (%)
Gender	
Male	104 (53.3%)
Female	92 (46.6%)
Age	
15-20	39 (19.4%)
21-30	157 (80.5%)
CGPA in the Last Semester	
Less Than 3	29 (14.35%)
More Than 3	167 (85.6%)
Total	196 (100.0%)

The study showed the association of demographic variables with EI total score by using an Independent sample t-test. There was no statistical variance in age with EI (Table 2).

Table 2: Association of Demographic Variables with EI Total Score by Using Independent Sample t-Test

Demographic Variables	n	Mean ± SD	t-value	p-value
Gender				
Male	104	126.1171 ± 16.72491	0.372	0.045
Female	92	125.2111 ± 13.49615		
Age				
15-20	39	123.6136 ± 19.27550	0.79	0.430
21-30	157	126.2994 ± 14.05049		
CGPA				
Less Than 3	29	120.3429 ± 20.64396	1.64	0.004
More Than 3	167	126.8434 ± 13.77524		

*Significant at α=0.05. There was a significant variance between CGPA with EI.

The above-mentioned shows that there was a significant variance found in EI with CGPA, the EI of participants who had a CGPA more than 03 had a higher score of 126.8 ± 13.7 than participants whose CGPA less than 03 had a score of 120.3 ± 20.64 (Table 3).

Table 3: Association Between Public and Private Undergraduate Nursing Students

Chi-Square Tests	Value	df	Asymptotic Significance (2-Sided)
Pearson Chi-Square	185.267[a]	49	0.002
Likelihood Ratio	253.884	49	0.006
Linear-by-Linear Association	120.566	1	0.000
N of Valid Cases	196	-	-

*Significant at α=0.05. The above-mentioned p-value showed that there was a significant difference in the level of EI between public and private undergraduate students.

The Public college participants had a more Significant strength of EI 45 (48.9%) than the participants of private college 19 (18.26). furthermore, 05 (4.8%) participants from the Private College of Nursing were included in the improvement category of EI, Whereas, 03 (3.26%) participants from the Public College of Nursing were included in the improvement category of EI. In addition to the result, no participants fall in the development category of EI (Table 4).

Table 4: Different Levels of EI among Private and Public Nursing Students

Levels of EI	Frequency (%) Public College of Nursing (Female Participants)	Frequency (%) Private College of Nursing (Male Participants)
Low Average EI students	13 (14.1%)	35 (33.65%)
High Average EI students	2 (2.17%)	06 (5.76%)
Competent students	16 (17.3%)	15 (14.4%)
Strength EI	13 (14.1%)	24 (23%)
Significant Strength of EI.	45 (48.9%)	19 (18.26%)
Improvement Category of EI.	03 (3.26%)	05 (4.8%)
Development Category of EI.	0 (0%)	0 (0%)
Total	92 (99.8%)	104 (99.8%)

DISCUSSION

According to Patel, in some studies, girls have more EI than male students [15]. Similarly, the result of this study was similar to that of Merino-Soto *et al.*, who also found that there was a statistical variance between female and male EI scores [16], and concluded that females have strong EI levels. Moreover, the result of this study contradicts Rao, and Ang, in which the study claimed that male show more EI than female [17, 18]. Some researchers stated in their studies that age is positively correlated with the level of EI [19-22], but this study shows that there is no statistical variance between age number and EI. Moreover, the CGPA result of this study was similar to Suleman *et al.*, in which the author stated that the EI is required for high academic performance [23]. The EI has had eye-catching attention in recent decades, and the EI is partly an understanding topic due to the gap that EI can be learned and developed through proper education to students [24, 25]. This study has proved that EI is directly associated with human

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emotional ability and students' academic performance. Moreover, it was suggested that the colleges of Nursing should design and implement the EI courses into the nursing curriculum, to strengthen the EI of nursing students and ultimately strengthen their academic performance at colleges of nursing. Furthermore, during arranging the sessions of EI, special attention must be important to identify the level of EI branches of students including 'managing emotion' and facilitating thoughts.

This study was limited by its cross-sectional design and convenience sampling, which may restrict the generalizability of the findings. Future research could involve longitudinal studies across multiple regions to examine the development of EI over time and evaluate the impact of structured EI training programs on academic performance and clinical competence among nursing students.

CONCLUSIONS

It was concluded that the students of nursing interact with different backgrounds and cultures people. Hence, to guarantee outstanding medical care, they need to acquire new abilities and information. Moreover, In the nursing discipline, the EI plays an important role. Concerning the results, it was recommended that Emotional Intelligence (EI) instruction be incorporated into the curriculum for nursing as an entire discipline and that treatments concentrate on the functions of promoting EI's thinking and controlling its feelings. Furthermore, through this study, it has been confirmed that Public undergraduate female nursing students have a higher EI than male undergraduate nursing students. In addition to this, international studies such as randomized control trials (RCTs) have recently been conducted to evaluate the impact of Emotional Intelligence (EI) training initiatives.

Authors' Contribution

Conceptualization: ASA
Methodology: ASA, MK
Formal analysis: SB
Writing and Drafting: ASA
Review and Editing: ASA, SB, MK

All authors approved the final manuscript and take responsibility for the integrity of the work.

Conflicts of Interest

All the authors declare no conflict of interest.

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