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EVALUATING EMOTIONAL INTELLIGENCE AND ITS ROLE IN ACADEMIC SUCCESS AMONG UNDERGRADUATE NURSING STUDENTS

Yasir Ali[1]*, Saeeda Khan[2], Urooj Fatima[3], Hafsa Ali[4], Mahnoor Ejaz[5], Nasreen Raheem Zada[6], Nazmina Zareef [7]

[1]MSN at Ziauddin University, Faculty of Nursing and Midwifery, Karachi, Pakistan

ORCID: https://orcid.org/0009-0006-6284-9546

[2]MSN Scholar at Ziauddin University, Faculty of Nursing and Midwifery, Karachi, Pakistan

ORCID: https://orcid.org/0009-0006-7699-7806

[3,4,5,6,7] GBSN Student, Qatar College of Nursing (Female), Karachi, Pakistan

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Corresponding Author:

Yasir Ali, MSN, Ziauddin University, Faculty of Nursing and Midwifery, Karachi, Pakistan**,**

Email:yrose638@gmail.com

ORCID:

https://orcid.org/0009-00066284-9546

ABSTRACT

Background: Emotional Intelligence (EI) is recommended as one of the metrics that predicts a person's overall growth and achievement. A nurse with strong emotional intelligence may find it easier to maintain and enhance self-control and confidence.

Objective: The study aimed to evaluate the level of emotional intelligence and its role in academic success among undergraduate nursing students.

Methodology: The analytical cross-sectional study was conducted at six nursing institutions (three public and three private) from November 2024 to February 2025 in Karachi, Pakistan. The sample size was calculated by Open Epi version 3.0. The data were collected from 378 undergraduate nursing students by using an open-ended, validated, and structured questionnaire, named the Schutte Self-Report Emotional Intelligence Test (SSEIT), through a multistage sampling technique. All male and female undergraduate nursing students above than 16 years of age currently enrolled in the 5th, 6th, 7^{th,} and 8th semester of Bachelor of Science in Nursing (GBSN) program were included while all other students of midwifery, post RN, technicians and students from other disciplines were excluded from the study.

Results: Among total participants, 57.8% had average EI, 28.8% had low EI, and surprisingly, only 13.4% reported a high level of EI. Furthermore, a weak positive correlation ($\rho = 0.142$, p-value = 0.006) between intelligence scores and CGPA was found.

Conclusion: The study concludes that Emotional Intelligence (EI) among undergraduate nursing students is mainly average, with a surprisingly lower proportion of EI.

INTRODUCTION

Intelligence Quotient (IQ) was the gold standard for student success in many settings until recently. It is considered a universal utilized for any academic examinations. Though the majority of such individuals sidestep tough circumstances and avoid communicating with others. Regrettably, as a result, many students fail in both their professional and personal lives. Therefore, Emotional Intelligence (EI) was recommended as one of the emotional intelligence (EI) was suggested as one of the metrics that predicts a person's overall growth and achievement (1). Self-awareness, emotional regulation, motivation, empathy, and conflict management relations are the five components of EI, which is defined as the ability to recognize the meaning of emotions and their relationships and to use them as a basis for reasoning and problem solving (2). In the modern era, Professional Nursing education encounters significant challenges due to its tough academic requirements, clinical responsibilities and high stress environment (3). In order to effectively manage stress, emotions, and relationships with patients, families, and other healthcare professionals, nurses must apply emotional intelligence. A nurse with strong emotional intelligence may find it easier to maintain and enhance selfcontrol and confidence (4). Technical and communication abilities supported by a solid knowledge basis define clinical competence in pre licensure health professionals. At the same time, a variety of underlying factors, including personality qualities and cognitive ability, influence how students acquire essential competencies (5). Academic performance in a variety of occupations has been increasingly associated with one of these qualities, emotional intelligence (EI). Building a bridge between patients and health care systems is the primary responsibility of nurses and nursing students in a hospital setting. It is vital for them to be learning Emotional Intelligence in order to become a skilled, capable, and compassionate nurse (6). All nursing individuals especially student nurses play a very significant role in health care system(7). Numerous studies have shown that those with emotional intelligence (EI) skills gave better consultations, were more sympathetic to patients, communicated better, and produced better therapeutic outcomes (8). Nursing students face state anxiety from the very early stage of their education, as they require rigorous course work, clinical rotations and high pressure patient care situations (9, 10). Improving understanding of emotional intelligence enhances patient care currently, nursing students seem ill-prepared for this emotional intelligence. Although it is crucial that they are ready, this is not always the case, and the instructional materials are occasionally inadequate. Stress levels among nursing students are high, and feelings associated with clinical training, especially during the first year (11). Higher EI performance levels must help to cope with every student’s better handle exam-related stress, which would improve their academic performance (AP) scores. Whereas, individuals who lack EI will ultimately face difficulties and experience

interpersonal issues in their educational journey, which may aggravate their anxiety, or experience a lack of peer support that impacts their AP scores. Higher social networks and stronger friendships are linked to happier and more positive social relationships among students who are better at managing their emotions. Quality in the classroom may foster a suitable social setting for improved group learning, cooperative work, peer support, and teacher-student relationships. An improved disposition of learningoriented skills and an academic environment involving classmates and instructors may be linked to a higher AP (12). Students' academic learning is significantly impacted by their emotional intelligence. When it comes to handling academic difficulties, students who possess higher emotional intelligence are more confident. As a result, emotional intelligence is thought to be a strong indicator of how well students will perform academically in college (13). Numerous stressors, including an unfavorable learning environment, a lack of resources for support, inadequate teacher and parental assistance, exams, and more, affect students' cognitive and emotional functioning today. Students who are exposed to these stressors regularly may develop apathy or disinterest in their education, which results in poor academic performance(14). This study aimed to assess the level of emotional intelligence among undergraduate nursing student and examine the relationship between emotional intelligence and academic success among undergraduate nursing students.

MATERIALS AND METHODS

The study was conducted at six nursing institutions (three private and three public) at Karachi, Pakistan. A descriptive cross sectional study design was used for this study. This study was completed within 4 months (November, 2024 to February, 2025) after the approval of synopsis from the IR&EC of Qatar College of Nursing (Female), Karachi. The calculated sample size was 362, calculated by using software OpenEpi version 3.0 with previous study(14), anticipated frequency of 62%, level of significance 5% with the 95% of confidence interval. The sample size had been increased to 372 with 62 participants form each cluster institute to achieve equal representation from all six participating institutions.

A multistage sampling technique involved cluster and simple random sampling was used to collect data. All male or female undergraduate nursing students above than 16 years of age from public and private sector nursing colleges recognized by PNC, currently enrolled in the 5^{th}, 6^{th}, 7^{th} and 8^{th} semester of Bachelor of Science in nursing (GBSN) program were included while all students of midwifery, post RN, technicians and students from other disciplines were excluded from the study.

Data Collection Procedure

A multistage sampling technique was employed which included cluster sampling and simple random sampling. Permission was granted form the head of the respective institutes before data

collection while data was collected in three phases. In initial phase, six nursing colleges (three public and three private) was identified as clusters. In second stage, 62 participants from each college were randomly selected through simple random sampling while choosing 62 students from each college were the target. Once the required sample size is finalized the questionnaires was administered to the selected participants to measure their emotional intelligence. Data was collected by using an open excess, validated and structured questionnaire; named Schutte Self Report Emotional Intelligence Test (SSEIT) (31). It was a widely used tool to measure emotional intelligence (EI). It was consists of 33 items, each rated on a 5-Likert Scale where 1= strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree.

Validation and Reliability of the Instrument

In current study the instrument's validity was ensured through expert evaluation for content validity and participant review for face validity. Construct validity was assessed using factor analysis, and criterion validity was established by comparing the instrument's scores with standardized measures. Reliability was confirmed through a pilot study, yielding a Cronbach's alpha of 0.892, indicating strong internal consistency.

Data Analysis

The data was analysed in software SPSS 21.0 version. The frequency and percentage was calculated for all demographic variables. P-value < 0.05 was considered as level of significance. Person's correlation was used to explore the relationship between emotional intelligence and GPA, testing whether higher EI correlates with better academic performance.

Ethical Considerations

Before the data collection, approval of the study was taken from Institutional Research and Ethics Committee of QCON. Permission was taken from head of the institutes of all the selected nursing colleges. Furthermore, all participants were required to sign a written informed consent. Confidentiality and data integrity were strictly followed throughout the analysis process and privacy were protected.

RESULTS

A total of 372 subjects participated in the study, showing a higher proportion of males (71.0%) than females (29.0%), with most students aged 21-25 years (73.9%). The majority is unmarried (86.5%) and enrolled in the 6th semester (83.6%). The distribution between public (50.3%) and private (49.7%) institutions is nearly equal. Visual/Auditory learning (59.1%) is the most preferred style, followed by Reading/Writing (32.3%) and Kinesthetic (8.6%). Financially, 59.1% rely on their father's income, while 32.3% are self-earning**.** Nearly half (49.5%) have part-time jobs, and 28.2% engage in sports**.** students aged 21-25 and those from private institutions may have slightly higher CGPAs. (Table I)

Characteristics	f (%)
Gender	264 (71.0)
Male	
Female	108 (29.0%)
Age	58 (15.6%)
16-20	
21-25	275 (73.9%)
26-30	39 (10.5%)
Marital Status Married	50 (13.4%)
Unmarried	322 (86.5)
Semester	311 (83.6)
6th semester	
8th semester	61 (16.4)
Type of Institute Public	187 (50.3%)
Private	185 (49.7%)
Preferred Learning Style	
Visual/Auditory	220 (59.1%)
Kinesthetic	32 (8.6%)
Reading/Writing	120 (32.3%)
Source of Income Father income	220 (59.1%)
Mother income	32 (8.6%)
Self-earning	120 (32.3%)
CGPA	
< 3.5	
≥ 3.5	
Other Activities	184 (49.5%)
Part time job	
Sports	105 (28.2%)
CR of Class	45 (12.1%)
Others	38 (10.2%)

Table 1: Demographic characteristics of the study participants

Table 2 shows level of emotional intelligence among generic BSN students; out of the total participants, 57.8% had average EI, 28.8% had low EI, and surprisingly, only 13.4% reported high level of EI.

Table 2: Level of Emotional Intelligence

Level of EI	**f (%)**
Low	107 (28.8%)
Average	215 (57.8%)
High	50 (13.4%)
Total	372 (100)

The study examines the relationship between CGPA and intelligence score using Spearman's rank correlation. The findings of the test indicated a statistically significant weak positive correlation ($\rho = 0.142$, p-value = 0.006) between intelligence scores and CGPA **(Table 3)**.

Table 3: Spearman's Correlation between Emotional Intelligence and CGPA

		Emotional Intelligence
CGPA	Correlation Coefficient	0.142^{**}
	p-value	**0.006**
	N	372

To check the association of demographic characteristics with emotional intelligence levels, chisquare test of association was applied. The type of institute was found in statistically significant association with emotional intelligence (p = 0.003). Students from public institutes had a higher percentage of high EI (23.5%) and a lower percentage of low EI (9.1%). In contrast, students from private institutes had a higher proportion of low EI (21.1%) and a lower proportion of high EI (16.2%). Moreover, extracurricular activities were also found in statistically significant association with emotional intelligence (p = 0.002). Students involved in "other" activities (39.5%) had the highest percentage of high EI, part-time job holders (21.7%) and sports participants (15.2%) also showed notable levels of high EI. Interestingly, Class Representatives (CRs) had a higher percentage of low EI (22.2%) and the lowest proportion of high EI (6.7%). No other variable reached the significance level (p-value > 0.05) **(Table 4)**.

Table 4: Association of Demographic Characteristics with Emotional Intelligence Levels of Participants

	Emotional Intelligence			p-value~
	low	Moderate	High	
Gender				0.648
Male	42(15.9%)	168(63.6%)	54(20.5%)	
Female	14(13.0%)	74(68.5%)	20(18.5%)	
Age				0.378
16-20	9(15.5%)	43(74.1%)	6(10.3%)	
21-25	42(15.3%)	174(63.3%)	59(21.5%)	
26-30	5(12.8%)	25(64.1%)	9(23.1%)	
Marital Status				0.509
Married	7(14.0%)	30(60.0%)	13(26.0%)	
Unmarried	49(15.2%)	212(65.2%)	61(18.9%)	
Semester				0.072
6th semester	41 (13.2)	206 (66.2)	64 (20.6)	
8th semester	15 (24.6)	36 (59.0)	10 (16.4)	
Type of institute				**0.003***
Public	17(9.1%)	126(67.4%)	44(23.5%)	
Private	39(21.1%)	116(62.7%)	30(16.2%)	
Preferred Learning Style				0.085
Visual/Auditory	28(12.7%)	155(70.5%)	37(16.8%)	
Kinesthetic	5(15.6%)	17(53.1%)	10(31.2%)	
Reading/Writing	23(19.2%)	70(58.3%)	27(22.5%)	
Source of Income				0.085
Father Income	28(12.7%)	155(70.5%)	37(16.8%)	
Mother Income	5(15.6%)	17(53.1%)	10(31.2%)	
Self-earning	23(19.2%)	70(58.3%)	27(22.5%)	
Other Activities				**0.002***
Part time job	32(17.4%)	112(60.9%)	40(21.7%)	
Sports	10(9.5%)	79(75.2%)	16(15.2%)	
CR	10(22.2%)	32(71.1%)	3(6.7%)	

Others	4(10.5%)	19(50.0%)	15(39.5%)	

~ Chi-square test, values presented as row n (%)

Table 5: Association of Demographic Characteristics with CGPA

To check the association of demographic characteristics with CGPA, chi-square test of association was applied. Results of the test revealed that no variable showed a statistically significant association with CGPA (all p-values > 0.05). Students in age group 21–25 and those enrolled in private institutions had a higher proportion of CGPA ≥ 3.5. Female students (62.0%) also showed slightly better academic performance compared to males (56.1%). Additionally, class representatives (68.9%) and those involved in other activities (65.8%) had a higher percentage of students with CGPA ≥ 3.5. **(Table 5)**.

Variables	**CGPA**		**p-value**
	<3.5 n (%)	**≥ 3.5 n (%)**	
Gender			0.289
Male	116 (43.9)	148 (56.1)	
Female	41 (38.0)	67 (62.0)	
Age (Years)			0.054
16-20	31(53.4%)	27(46.6%)	
21-25	106(38.5%)	169(61.5%)	
26-30	20(51.3%)	19(48.7%)	
Marital Status			0.734
Married	20(40.0%)	30(60.0%)	
Unmarried	137(42.5%)	185(57.5%)	
Semester			0.356
6th semester	128 (41.2)	183 (58.8)	
8th semester	29 (47.5)	32. (52.5)	
Type of Institute			0.057
Public	88(47.1%)	99(52.9%)	
Private	69(37.3%)	116(62.7%)	
Preferred Learning Style			0.621
Visual/Auditory	90(40.9%)	130(59.1%)	
Kinesthetic	16(50.0%)	16(50.0%)	

Reading/Writing	51(42.2%)	69(57.5%)	
Source of Income			0.621
Father income	90(40.9%)	130(59.1%)	
Mother income	16(50.0%)	16(50.0%)	
Self-earning	51(42.5%)	69(57.5%)	
Other Activities			0.239
Part time job	82(44.6%)	102(55.4%)	
Sports	48(45.7%)	57(54.3%)	
CR	14(31.1%)	31(68.9%)	
Others	13(34.2%)	25(65.8%)	

Table 5: Association of Demographic Characteristics with CGPA

Chi-square test, values presented as row n (%)

DISCUSSION

The current study aimed to evaluate the level of EI and its role in academic stress among undergraduate nursing students. The findings revealed that majority 57.8% of the participants had moderate level of emotional intelligence followed by low level of EI in 28.8% and only 13.4% of the participants reported high level of EI. The results indicate a concerning percentage of undergraduate nursing students displaying low level of EI which may alter their ability to cope with their educational, clinical and interpersonal challenges throughout their academic journey.

In comparison of the current results with other studies conducted worldwide, a remarkable gap is noted. In Nepal (2021), the study conducted by Shrestha and Mandahal found a significant 81.8% of nursing student's participants had high EI while only 18.2% had an average level of EI and none of them reported low level of EI. The findings remarkably contrast with current results pointing cultural or contextual factors that may influence emotional development (15) . Likewise one of the study that is conducted in India (2022) by Meti P., revealed an overwhelming 96.25% of the nursing students had high level of EI while surprisingly only 3.75% had average level of EI (16). Another study in Kerala, India (2024) claimed that 87.58% had average EI and only 7.45% reported low level of EI, which is again lower than the current results (28.8%) low level EI (17). These comparison highlights a notably discrepancy in psychosocial or emotional training in the academic environment. In Palestine (2024), another study reported 91.3% of nursing students had high level of EI supporting the global trend that nursing students generally to exhibit strong emotional competencies (18). The results of Paneur

and Kafe (2024) in Kathmandu revealed 74.5% of students with high level of EI suggesting that EI development is stronger in many nursing cohorts globally (19).

In 2023, a local study from Karachi was conducted by Fatimah and Ali reported that 24.4% of the study participants required development in EI (20) which closely aligns with the 28.8% of low level EI in the current result findings. The similarity in the findings highlight the regional tendency in the emotional.

Although the results differ in the level of EI on a global scale, one common outcome in various studies including the current study, is the positive association between EI and academic performance. Studies conducted by Fatimah and Ali (2023) and Paneru and Kafle (2024) identified a significance positive relation between EI and academic success (17, 19, 20). These study findings reinforce the hypothesis that EI plays a vital role in developing academic success, particularly in nursing education. Similarly, a study from Oman (2023) by Thomat et al., claimed EI among undergraduate nursing students was positive associated with demographic variable (21).

Dissimilarly, study conducted by Ycaza S., in Australia (2021) yielded no any association between EI and academic success and clinical performance (22). These study results suggest that EI can be enhanced through appropriate training and experience regardless of inherent demographics. However, another study executed by Belay and Kassie (2022) reported no any notable relationship between EI and social demographic characteristics (23).

Conclusion

The study conclude that Emotional Intelligence (EI) among undergraduate nursing students is mainly average with a surprisingly lower proportion of EI. EI can play a very significant role in promoting nursing professionalism by enhancing critical components i.e. clinical practice, leadership and management, and patient care.

Recommendations

Workshops on stress management, confidence building and emotional well-being are recommended to enhance the EI competencies of the nursing students. Further research should be done on longitudinal and interventional-based models to evaluate how EI can be refined and sustained throughout nursing education.

REFERENCES

1. Budler LC, Gosak L, Vrbnjak D, Pajnkihar M, Štiglic G, editors. Emotional intelligence among nursing students: findings from a longitudinal study. Healthcare; 2022: MDPI.

2. Wang X, Liu M, Tee S, Dai H. Analysis of adversity quotient of nursing students in Macao: A cross-section and correlation study. International Journal of Nursing Sciences. 2021;8(2):204-9.

3. Ali Y, Khan S, Alamgir A, Younas M, Qayyum S. Prevalence of Workplace Violence against Female Nurses at Tertiary Care Hospital Karachi, Pakistan: Prevalence of Workplace Violence against Female Nurses. Pakistan Journal of Health Sciences. 2023:296-300.

4. Singh N, Kulkarni S, Gupta R. Is emotional intelligence related to objective parameters of academic performance in medical, dental, and nursing students: A systematic review. Education for Health. 2020;33(1):8-12.

5. Ali Y, Khan S, Mustafa G, Hussain K, Akhter A. Mentoring Student Nurses–Are Nurses Prepared, Recognized, and Supported to Teach Nursing Students in Clinical Settings? Indus Journal of Bioscience Research. 2025;3(2):111-5.

6. Jahan SS, Nerali JT, Parsa AD, Kabir R. Exploring the association between emotional intelligence and academic performance and stress factors among dental students: a scoping review. Dentistry journal. 2022;10(4):67.

7. Ali Y, Khan S, Ali J, Ejaz K, Fatima K, Qayyum S, et al. Knowledge and practices of nurses regarding blood transfusion in a public sector hospital. Pakistan Journal of Population and Therapeutics and Clinical Pharmacology https://doi org/1053555/jptcp v31i2. 2024;4238.

8. Vasumathy M, RoselinKiruba R, Shritharanyaa J, Sarah S. Enhancing Healthcare Management With Emotional Intelligence and Collaborative Leadership Through Chatbot Integration. Chatbots in Educational Leadership and Management: IGI Global Scientific Publishing; 2025. p. 205-34.

9. Ahmed F, Ali Y, Malik AA, Khan AU. Investigating The Level of State Anxiety Among Newly Enrolled Undergraduate Female Nursing Students in Karachi, Pakistan. Indus Journal of Bioscience Research. 2024;2(02):1267-72.

10. Hussain S, Ali Y, Khan SU, Khan N, Ullah A, Abas S, et al. MENTAL HEALTH ISSUES: STRESS, ANXIETY, AND DEPRESSION IN DIPLOMA AND DEGREE HEALTH CARE STUDENTS. Journal of Medical & Health Sciences Review. 2025;2(1).

11. Iqbal J, Qureshi N, Ashraf MA, Rasool SF, Asghar MZ. The effect of emotional intelligence and academic social networking sites on academic performance during the COVID-19 pandemic. Psychology research and behavior management. 2021:905-20.

12. Altwijri S, Alotaibi A, Alsaeed M, Alsalim A, Alatiq A, Al-Sarheed S, et al. Emotional intelligence and its association with academic success and performance in medical students. Saudi journal of medicine & medical sciences. 2021;9(1):31-7.

13. Ononye U, Ndudi F, Bereprebofa D, Maduemezia I. Academic resilience, emotional intelligence, and academic performance among undergraduate students. Knowledge and Performance Management. 2022;6(1):1.
14. Neel MK. An Examination of the Correlational-Predictive Relationship of Online Faculty Emotional Intelligence and Student Success: Grand Canyon University; 2024.
15. Shrestha M, Mandal PK. Emotional intelligence among nursing students of a government campus in eastern Nepal. Journal of Kathmandu Medical College. 2021.
16. Meti P. A Cross Sectional Study of Emotional Intelligence among Nursing Students in Selected Nursing College at Bagalkot. Galore International Journal of Applied Sciences and Humanities. 2022;6(3):87-91.
17. da Silva TMHR. Ensuring Excellence in Nursing Education: Accreditation and Evaluation of Programs Specialising in Care for Older Adults. Academic Accreditation and Evaluation in Higher Education: Practices, Experiences, and Quality Assurance: IGI Global Scientific Publishing; 2025. p. 263-92.
18. Batran A. The emotional intelligence and the associated factors among nursing students. Open Journal of Nursing. 2024;14(3):114-26.
19. Paneru N, Kafle A. A cross-sectional study on the association between emotional intelligence and academic performance among nursing students of selected nursing colleges in Kathmandu. Int J Educ Humanit Soc Sci. 2024;7(01):261-7.
20. Fatima A, Ali SK. Relationship of Emotional Intelligence with academic scores and gender in students of Masters in Health Professions Education (MHPE) at a Public Sector University. Pakistan Journal of Medical Sciences. 2023;39(6):1725.
21. Thomas DS, Natarajan J, Valsaraj BP. Emotional intelligence and its associated factors among nursing students in a middle eastern university. International Journal of Nursing Education. 2021;13(1):61-7.
22. Ycaza S. Emotional Intelligence and Clinical Performance in Psychiatric Nursing Students. Celebes Nursing Journal. 2024;1(1):1-10.
23. Belay AS, Kassie A. Emotional intelligence and clinical performance of undergraduate nursing students during obstetrics and gynecology nursing practice; Mizan-Tepi University, South West Ethiopia. Advances in medical education and practice. 2021:913-22.