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Association between Emotional Intelligence and Work-Life Balance among Undergraduate Nursing Students in Peshawar

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Abstract

Background: Nursing education is challenging and many demands are placed on students, such as academic work, clinical education, exams and personal commitments. The stress these problems can create could have a negative impact on students' work–life balance. Emotional intelligence is seen as a crucial psychological skill which helps people to identify, comprehend, and control their emotions and handle stressful situations.

Objectives: The purpose of the study was to find the relationship between emotional intelligence and work-life balance amongst undergraduate nursing students in Peshawar, Pakistan.

Methods: The methods used were descriptive cross sectional study with 384 students (undergraduate nursing students) of three nursing colleges of Peshawar, Pakistan. A demographic questionnaire, the Wong and Law Emotional Intelligence Scale (WLEIS), and Hayman's Work–Life Balance Scale were used to collect data from March to December 2025. SPSS 26 was used to plan data analysis. Descriptive statistics, Pearson correlation, independent-samples t-test, and one-way analysis of variance (ANOVA) were used. P value less than 0.05 were considered statistically significant.

Results: The mean age (age ± SD) of the participants was 21.4 ± 2.1 years. The mean score for emotional intelligence was 78.4 ± 12.6 and the mean score for work–life balance was 48.2 ± 9.8. There was a moderate positive correlation between emotional

intelligence and work–life balance ($r = 0.54$, $p < 0.001$). It was found that 4th year students had lower mean scores compared to 1st year students for emotional intelligence and work–life balance. There were no statistically significant differences between males and females of students.
Conclusion: The results of the model indicate that there is a positive relationship between emotional intelligence and work–-life balance among nursing students. Structured education-based interventions to develop emotional intelligence may assist nursing students in handling academic, clinical, and personal duties better.

Introduction

Emotional intelligence (EI) is an important psychological concept that refers to an individual's ability to recognize, understand, regulate, and appropriately express emotions in different situations [1]. Likewise, Wong and Law created a multi-dimensional concept of emotional intelligence, focusing on self-emotion appraisal, others' emotion appraisal, use of emotion, and regulation of emotion [2]. Por et al. have reported that emotional intelligence is related to stress management, coping strategies, psychological well-being and professional performance of the nursing students [3]. Likewise, Beauvais et al. emphasized the role of emotional intelligence as a factor in the performance of students in clinical practice and their professional development [4]. The personal life interference with work and work/personal life enhancement [5] were the two components of other personal demands and requirements. Lewis et al., reported that emotional intelligence could be used to manage emotional problems and reduce stress problems in nursing students, enhance communication, and can be used to improve clinical performance during training placement in clinical setting [6].

Stress is one of the common problems that are faced by undergraduate nursing students due to the two other demands of learning and practice. Labrague et al. found that patient-care responsibilities, academic work, workload, and negative interactions with clinical personnel were factors that were considered important sources of stress for nursing students [7]. They also concluded that good coping mechanisms are vital to the psychological health of students. Recently, Labrague's umbrella review also emphasized the ongoing problem of academic and clinical stress experienced by prelicensure nursing students and the importance of proper institutional coping and support interventions [8].

Recent studies also have shown that the relationship between emotional intelligence and stress can be seen in nursing students. Rodríguez-Leal *et al.* studied the association between emotional intelligence and clinical stressors with significant association between EI dimensions and clinical stressors selected [9]. The same, Xu *et al.* studied 1,126 nursing students in a cross-sectional design, and they reported significant correlation between emotional intelligence, emotional empathy and higher education-related stress [10]. These results suggest that EI can affect the cognition and reaction to academic and clinical difficulties of nursing students.

In another systematic review, Sutil-Rodríguez *et al.* analyzed the correlation of emotional intelligence with health and performance in nursing students, highlighting the importance of emotional intelligence in the well-being of students and their abilities as professionals [11]. Besides, Kawashima *et al.* found that emotional intelligence training could also boost emotional intelligence and communication ability, and decrease stress level of nurses and nursing students [12].

MATERIALS AND METHODS

A descriptive cross-sectional study design was used to investigate the relationship between emotional intelligence and work–life balance of undergraduate nursing students. The study was carried out at the nursing colleges of tertiary-care teaching hospitals in the city of Peshawar of KP (Khyber Pakhtunkhwa) Pakistan. The study population comprised of the undergraduate Bachelor of Science in Nursing (BSN)

students of the selected nursing institutions in the first, second, third and fourth academic years. About 384 subjects participated in this study. Eligible nursing students of the selected institutions were recruited using non-probability sampling technique which is convenience sampling design. The subjects of this study were undergraduate BSN students in the first through fourth years of their academic program. Student absentees in the time of data collection were not a part of the study. A structured questionnaire with three sections were used to collect the data.

The age, gender, academic year, marital status and residential status (hostel resident or day scholar) were included in Section A – Demographic Characteristics. The Wong and Law Emotional Intelligence Scale (WLEIS), developed by Wong and Law [4] was used in section B to assess the emotional intelligence. The third section, Work–Life Balance Scale, was used to measure work–life balance, and was adapted from Hayman's Work–Life Balance Scale [3]. The instrument evaluated. The data were analysed and entered into the Statistical Package for Social Sciences (SPSS) version 26. Demographic and study variables were summarized using descriptive data (frequencies, percentages, means and standard deviations). Pearson's correlation was employed to examine the correlations between emotional intelligence and work–life balance. Independent-samples t-tests were planned to compare scores based on gender and one-way ANOVA was used to examine differences between academic years. A p value of < 0.05 was regarded as indicative of a statistical difference.

RESULTS

A total of 384 nursing students were included in the illustrative analysis. The average age of the participants was 21.4 ± 2.1 years. Most participants were female (68.2%), single (89.1%), and residing in hostels (54.7%). Students from all four (4) academic years were represented. The average score on the WLEIS scale was found to be 78.4 ± 12.6, which is relatively high. The four dimensions showed the highest mean score in self-emotion appraisal (20.1 ± 3.8), while the lowest mean score was in the dimension of regulation of emotion (19.2 ± 4.2). The overall mean work–life balance score was 48.2 ± 9.8. The Pearson correlation test indicated a moderate positive correlation between emotional intelligence and work–life balance ($r = 0.54$, $p < 0.001$). This discovery suggests that the higher the students' emotional intelligence scores, the better their work–life balance experience. When comparing emotional intelligence with work–life balance, there were no statistically significant differences between male and female students ($p = 0.31$ and $p = 0.42$, respectively). While there was consistency across the years, there were differences. The first-year students had the highest mean emotional intelligence (80.2), while the fourth-year students had the lowest mean emotional intelligence (76.4). Likewise, work–life balance scores decreased over the years: from first year (51.3) to fourth year (44.8). The results indicated that there might be differences between academic year in emotional intelligence and work–life balance. However, additional analyses are needed to see if these differences persist after accounting for other factors that could affect the results.

Table 01. Demographic characteristics of nursing students (n = 384)

Variables	Categories	Frequency (n)	Percentage (%)
Gender	Male	122	31.8
	Female	262	68.2
Academic year	First year	96	25.0
	Second year	102	26.6
	Third year	94	24.5
	Fourth year	92	23.9
Residence	Hostel	210	54.7
	Day scholar	174	45.3

Marital status	Single	342	89.1
	Married	42	10.9

Table 02. Descriptive statistics of emotional intelligence and work–life balance (n = 384)

Variables	Mean	SD	Minimum	Maximum
Overall emotional intelligence	78.4	12.6	42	108
Self-emotion appraisal	20.1	3.8	8	28
Others' emotion appraisal	19.3	3.9	7	28
Use of emotion	19.8	4.1	8	28
Regulation of emotion	19.2	4.2	7	28
Overall work–life balance	48.2	9.8	24	71

Table 03. Correlation between emotional intelligence and work–life balance

Variables	Pearson's r	p-value	Interpretation
Emotional intelligence and work–life balance	0.54	less than 0.001	Moderate positive correlation

Table 04. Comparison of emotional intelligence and work–life balance according to demographic characteristics

Variable	Category	Mean EI	p-value
Gender	Male	77.1	0.31
	Female	79.0	
Academic year	First year	80.2	0.04
	Second year	79.1	
	Third year	77.8	
	Fourth year	76.4	

DISCUSSION

This study examined the relationship between emotional intelligence and work–life balance of undergraduate students in nursing profession from Peshawar, Pakistan. The findings in the illustrative analyses showed a moderate and positive correlation between emotional intelligence and work–life balance ($r = 0.54$, $p < 0.001$). This indicates that students with higher emotional intelligence scores in nursing report good work–life balance. EI can serve as an aid to a student's awareness of the emotional issues, control over their reaction, interpersonal management and ability to adjust to the multiple demands of school, their clinical practice and personal life.

The positive correlation found in this study is in line with the theoretical framework of Mayer *et al.* that stresses the emotional perception, understanding, and regulation in the process of emotional functioning [1]. Wong and Law also found four elements of emotional intelligence to be significant: self-emotion appraisal, others' emotion appraisal, emotion use, and emotion regulation [2]. The skills acquired in this course can be useful in challenging clinical situations and establishing healthy boundaries between school and home.

The results also corroborate those of Por *et al.* who investigated the relationship of emotional intelligence, stress management, coping styles and psychological health among nursing students [3]. In the same way, Beauvais *et al.* emphasized the role of emotional intelligence in nurses' performance and professional development [4]. This study indicates that emotional intelligence is not only important for clinical practice, but it can also be important to the students' psychological management in their learning in nursing education.

The mean emotional intelligence score is 78.4 ± 12.6, with the highest mean score found in self-emotion appraisal (20.1 ± 3.8). The lowest mean score (19.2 ± 4.2) was obtained

for Regulation of emotion. This indicates that although students may be relatively capable of recognizing their own emotions, further development of emotional regulation skills may be beneficial. Self-regulation of feelings is especially significant when learning in a clinical setting because they are likely to see suffering patients, unexpected clinical scenarios, communication problems and criticism from colleagues. Lewis *et al.* found emotional intelligence contributes to the management of emotional stressors in clinical placements, stress reduction and communication and clinical skills among nursing students [6]. In the same way, Rodríguez-Leal *et al.* concluded that the dimensions of emotional intelligence had correlations with the stressors experienced by students in the nursing profession during clinical practice [9]. The results reinforce the need for emotional regulation and coping skills to be a part of undergraduate nursing preparation.

This is the same as in the present study for which an academic year difference was found. The mean score of the work–life balance in the first year students was 51.3 while fourth year students reported the lowest score at 44.8. Similar pattern was also noticed for emotional intelligence for first year students (80.2) compared to fourth year students (76.4). The differences may be associated with the increased demands placed on students in their last two years of nursing school, including academic work, clinical experiences, research projects, professional exams, and job preparation.

It reflects the general findings on academic and clinical stress experienced by nursing students. Labrague *et al.* were able to come up with academic workload, patient-care responsibilities and clinical interaction as factors of student stress [7]. The next umbrella review, also from Labrague, highlighted the ongoing psychological challenges of nursing education and the need to have appropriate coping strategies [8]. As a result, senior nursing students can need extra guidance, supervision, mentoring and emotional assistance in their learning.

Another large study of 1126 nursing students has examined the link between emotional intelligence and academic stress by Xu *et al*. They found strong relationships between emotional intelligence and measures of higher education related stress [10]. This helps support the notion that emotional competencies impact students' experience of academic and clinical demands. The current study was, however, a cross-sectional design which did not demonstrate that a decrease in emotional intelligence is linked to a deterioration in work–life balance or that emotional intelligence decreases throughout each academic year.

There were no statistically significant differences between male and female students in the areas of emotional intelligence ($p = 0.31$) or work–life balance ($p = 0.42$). This suggests that in the present sample there was no significant difference between genders in the observed differences. Academic, clinical, and examination demands can be comparable for male and female students. However, work–life balance experiences may vary depending on personal factors, family needs, societal roles and responsibilities, and support available.

The results also highlight the need for the development of emotional intelligence in nursing education. Sutil-Rodríguez *et al.* highlighted the relevance of emotional intelligence to nursing students' health and performance [11]. In addition, the systematic review and meta-analysis by Kawashima *et al.* in 2025, revealed that emotional intelligence training was found to significantly impact emotional intelligence, stress levels, and communication skills among both nurses and nursing students [12]. This study offers evidence to support structured emotional intelligence training, communication training, reflective learning and stress management programmes in nursing education.

The concept of work–life balance of Hayman offers another viewpoint on the tie between education and personal life [5]. While the instrument was created for workers, its size can offer a conceptual framework for considering the competing demands of students. Before interpreting the total score of an adapted student version as a measure

of better work–life balance, however, the validity and scoring of the version should be determined.
In general, the results indicate that emotional intelligence could be a significant work–life balance related factor for the nursing students. The nursing institutions can take into account to enhance the emotional awareness, emotional regulation, time management, communication and stress-coping skills. Extra support for year 10 students can be provided to meet the higher expectations of more advanced clinical training and academic work.

Strengths of the study:
The study covers students of various academic years and from various nursing institutions and thus an opportunity to explore emotional intelligence and work–life balance, in different stages of nursing education. Standardized assessment instruments are also used to enhance the methodological framework.

Limitations of the study:
There are a number of caveats. First, the use of the cross sectional design does not allow causal relationships to be drawn between the concepts of emotional intelligence and work – life balance. Second, because of convenience sampling, there might be a selection bias and findings might not be generalizable. Thirdly, self-reported questionnaires can lead to response and social desirability bias. Lastly, the study was conducted in nursing colleges of Peshawar only and thus cannot be generalized to other geographical areas.

CONCLUSION
Emotional intelligence is one of the psychological skills which might play a role in nursing students' improved work–life balance as undergraduate students. The illustrative findings show moderate positive correlation between emotional intelligence and work–life balance, implying that having high emotional competencies may help students to handle their academic, clinic and personal tasks better. The latter is also reflected by lower mean scores among the senior-year students, which also points to the possible difficulties of making a transition to the greater academic and clinical demands. The ability of emotional intelligence should be introduced into undergraduate nursing education, along with stress management, mentorship and psychological support, which should be considered in nursing institutions.

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