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Investigating The Level of State Anxiety Among Newly Enrolled Undergraduate Female Nursing Students in Karachi, Pakistan

Farhan Ahmed[1], Yasir Ali[1], Anwar Ali Malik[2], Rubina[1], Ameer Ullah Khan[3]

[1]Ziauddin University, Faculty of Nursing and Midwifery, Karachi, Sindh, Pakistan.
[2]Liaquat University of Medical and Health Sciences, Jamshoro, Sindh, Pakistan.
[3]Qatar College of Nursing (Female), Karachi, Sindh, Pakistan.

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Corresponding Author: Yasir Ali, MSN, Ziauddin University, Faculty of Nursing and Midwifery, Karachi, Sindh, Pakistan.
Email: yrose638@gmail.com
ORCID: 0009-0006-6284-9546

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ABSTRACT

Background: Anxiety is an emotional state that opposes the possibility of encountering potentially unpleasant future circumstances. **Objective:** To assess the level of state anxiety among newly enrolled undergraduate female nursing students. **Methods:** A descriptive cross-sectional study was conducted at a public female nursing institute in Karachi, Pakistan from January to April 2024. The sample size was 225, calculated by using Open Epi with 95% confidence interval. A convenient sampling technique was used. All newly enrolled undergraduate female nursing students were included while the other classes' students were excluded from the study. The 20 item Spielberger State Anxiety Inventory questionnaire was used to assess the level of state anxiety. Approval of the study was obtained from the concerned institute. Written consents were taken from the participants, background and questionnaire were well explained to the participants. Statistical Package for Social Sciences (SPSS) Version 26 was used for data analysis. **Results:** The level of anxiety was high (83.6%) among participating students, (13.8%) of the students observed with moderate level of anxiety and only (2.7%) of the students recorded no or low level of anxiety. There was a statistically significant difference found between the mean scores of father's occupation and education level. **Conclusion:** The decline in mental health during nursing education demonstrated the need of interventions for reducing their stress, anxiety, and depression. All faculty members must offer students one-on-one counselling services and to give them practical stress management techniques.

INTRODUCTION

Anxiety is an emotional state that opposes the possibility of encountering potentially unpleasant future circumstances. One of the affective elements of the stress process that arises when a person's response capability is surpassed is anxiety [1]. Anxiety is a major problem in undergraduate education. There is ample evidence that worry delays learners' performance and ability to learn. Specifically, compared to students in other health-related disciplines and the general public, nursing students exhibit noticeably higher levels of anxiety as well as more psychological and physical symptoms [2]. It's common knowledge that nursing is a difficult profession, and even among nursing students, who undergo extensive training to prepare for it, anxiety levels typically considerable [3]. Young people are more likely to be susceptible to several kinds of mental problems, especially first-year students [4]. Along with increasing their risk of emotional and mental vulnerabilities, moving to new places, living in dorms, changing their eating habits, making new friends, and facing

a variety of uncertainties cause them to suffer from states of depression and anxiety [5]. One of the most vibrant cornerstones of the social-cultural structure of society is the nursing student. A startlingly high percentage of college students experience anxiety and sadness [6]. Stress levels among healthcare professionals are a topic of contemporary attention that needs to be taken seriously [7]. This is because there are numerous intrinsic stressors that medical professionals have identified, but it's also important to take into account the long-term detrimental impacts of stress [8]. Nurses are more likely than other healthcare professionals to spend a large amount of time with patients, which puts their physical and emotional wellbeing at risk [9]. Moreover, other pressures that are typical of students, such as those associated with their academic program and their position as nursing students, coexist with nursing students [10]. Although anxiety cannot be avoided and is typically difficult to manage, youngsters may benefit academically by developing effective coping mechanisms [11]. Because there are variations in training programs across national borders, care should be taken while evaluating these disparities in stress levels during professional training [12]. Higher T-Anxiety individuals may be more likely to consume media for longer periods of time or more frequently; on the other hand, a substantial correlation among those with lower T-Anxiety may indicate that media consumption causes S-Anxiety rather than the other way around [13]. In a nutshell this study was carried out to investigate the degree of state anxiety among recently enrolled undergraduate nursing students.

MATERIAL AND METHODS

Level of anxiety was assessed among newly enrolled undergraduate female nursing students in Karachi Pakistan by using a descriptive cross-sectional study design. The sample size was calculated by using Open Epi, calculated sample size was 225 with 95% confidence interval. Convenient sampling technique was used. The study was conducted in a public sector nursing college from January to April, 2024. All the newly enrolled undergraduate female nursing students were included in the study. All other discipline and those who had clinical orientation were excluded from the study. The 20-item Spielberger State Anxiety Inventory questionnaire [14] was introduced to the participants at the first day of bridging of the program. Since sensitive data had to be collected, a written, anonymous questionnaire was selected. The study's background and the importance as well the questionnaire was optional and anonymity were explained to the students. The purpose of the first section of the questionnaire was to gather information about the father's employment status, living situation, educational background, and demographics. Approval of the study was obtained from the ethical review board of the concerned institutes. Written consents were taken from the study participants. Using the Statistical Package for Social Sciences (SPSS) Version 26, the questionnaire data was first analyzed using frequencies, then cross-tabulations were used to get descriptive statistics. Data was not normally distributed data was transformed through boc-cox method.

RESULTS

Socio-demographic characteristics are showed in Table 1. Among all of the 225 participants, 154 (68.4%) were between the ages of 19 and 23 and 31.6% were between the ages of 24 and 28. (75.1%) of the students were single and (23.6%) were married. (47.6%) participant's fathers occupation were private employment, (30.2%) students were from Sindhi background. (38.2%) of the student living in joint family system. Last school grade of (48.4%) of the students were "A". (53.3%) of students were Muslim by religion. Parental educations of the students, (14.7%) illiterate and (18.7%) were graduated.

Table 1
Socio-Demographic Characteristics

Characteristic	f (%)
Age	
19-23 Years	154 (68.4)
24-28 Years	71 (31.6)
Marital Status	
Single	169 (75.1)
Married	53 (23.6)
Divorced	3 (1.3)
Father's Occupation	
Govt. Employee	25 (11.1)
Private Employee	107 (47.6)
Own business	14 (6.2)
Unemployed	79 (35.1)
Race	
Pushtoon	51 (22.7)
Sindhi	68 (30.2)
Urdu Speaking	43 (19.1)

Punjabi	45 (20.0)
Balochi	18 (8.0)
Living Status	
Single Family	72 (32.0)
Joint Family	86 (38.2)
In Hostel	8 (3.6)
With relatives	59 (26.2)
Last School Grade	
A Plus	69 (30.7)
A Grade	109 (48.4)
B Grade	47 (20.9)
Religion	
Muslim	120 (53.3)
Christion	37 (16.4)
Hindu	23 (10.2)
Other	45 (20.0)
Parent Education	
Illiterate	33 (14.7)
Middle	54 (24.0)
Matric	52 (23.1)
Intermediate	44 (19.6)
Graduation	42 (18.7)

Anxiety levels among study participants are shown in Table 2. The level of anxiety was high among 188 (83.6%) students, 31(13.8%) students observed moderate level of anxiety and only 6(2.7%) of the students' record No or low level of anxiety.

Table 2

Level of Anxiety

Level of Anxiety	f (%)
No or Low Anxiety	6 (2.7)
Moderate Anxiety	31 (13.8)
High Anxiety	188 (83.6)

Table-3 demonstrates the comparison of mean anxiety score among the study participants. There was no statistically significant difference between anxiety scores in age groups as well as marital status of the students. The mean anxiety scores among students were compared with fathers' occupations. There was a statistically significant difference found between the mean score of unemployment with Mean 47.7±4.7 (S.D) and government employment with Mean score 50.8±4.5 (S.D) with the (p-value = 0.03). There was statistically significant difference observed in mean anxiety scores of the students between parental educations. The post-hoc test demonstrated statistically significant difference between the score of intermediate with middle, matric and graduation (p-value =0.01).

Table 3

Comparison of Mean Anxiety Score

Characteristic	Mean ± SD	P-value
Age		0.33~
19-23 Years	48.5 (4.9)	
24-28 Years	49.2 (4.3)	
Marital Status		0.82
Single	48.8 (4.9)	
Married	48.5 (4.0)	
Divorced	48.0 (3.5)	
Father's Occupation		**0.03**
Govt. Employee	50.8 (4.5)[a]	
Private Employee	48.8 (4.7)	
Own Business	48.9 (3.6)	
Unemployed	47.7 (4.7)[a]	
Race		0.08
Rushton	48.0 (4.6)	
Sindhi	48.5 (4.3)	
Urdu Speaking	49.9 (3.7)	
Punjabi	48.7 (5.9)	
Balochi	48.2 (5.0)	
Living Status		0.37
Single Family	49.2 (4.1)	
Joint Family	48.2 (4.23)	
In Hostel	50.6 (3.1)	
With relatives	48.5 (5.9)	
Last School Grade		0.08
A Plus	48.2 (4.4)	
A Grade	49.4 (4.7)	
B Grade	47.8 (5.0)	
Religion		0.37
Muslim	48.7 (4.4)	
Christion	49.6 (4.0)	
Hindu	47.1 (6.7)	
Other	48.7 (4.6)	
Parent Education		**0.01***
Illiterate	49.1 (4.4)	
Middle	47.8 (4.6)[a]	
Matric	48.0 (5.4)[b]	
Intermediate	50.7 (4.0)[a,b,c]	
Graduation	48.5 (4.3)[c]	

~ Independent-samples t-test Bold values denote statistical significance using One-way ANOVA at p-value < 0.05 [a,b,c] On comparison using post-hoc (LSD test) significant at 5%

DISCUSSION

Learning is greatly impacted by anxiety. Stress in nursing and among nursing students is a well-researched phenomena, however there are differences in the degree of anxiety and its associated factors [15]. In current study the level of state anxiety among newly enrolled nursing undergraduate students were assessed, Alarmingly from all the subject 225/188, (83.6%) had high level of anxiety ,13.8% reported moderate level and 2.7% stated low level of anxiety. Dissimilarly

a conducted by Wosser Tenzin in India in 2020, findings revealed that during the first few days of their clinical posting, 7.27% of the samples experienced high stress, 54.55% experienced moderate stress, and 38.18% experienced low stress [16]. However, it must be remembered that there are numerous nursing education models found in various health systems and nations with varying resources, making any comparison is challenging. Similar to this, national requirements for healthcare students' education differ [17]. In the current study 68.4% aged between 19 to 23 years, 31.6% were aged between 24 to 28 years. In contrary a study conducted by yasir et al., in 2024 reported that among all of the total participants, just 59 (11.15%) were older than 25, while 245 (46.31%) of the respondents were between the ages of 21 and 25 years [18]. When personal characteristics of the study participant compared with anxiety score the current study showed statistically significant score difference with the father's occupation, unemployed and Govt. employed with the p-value =0.03.In contrary another study conducted in 2020 by Jessica et al,. in Spain revealed that no any statistically significant differences between the students whose parents remained employed and those whose parents employed [19]. There was statistically significant difference observed in mean anxiety scores of the students between parental education with the p-value =0.01.in line with this research another qualitative study conducted in Iran in 2017 stated that the nursing students whose parents had high level of education informed more sustained and low level of anxiety than those whose parents had not highly educational level [20]. There is global concern over university students' poor mental health. In many parts of the world, nursing students frequently express symptoms of depression and anxiety, which have an influence on their quality of life and academic performance [21]. Nursing students deal with a variety of challenges unique to their studies in the medical area in addition to those faced by their other classmates [22].

CONCLUSIONS

It is concluded from the current study that the decline in mental health during the nursing education demonstrated the need of interventions for reducing their stress, anxiety, and depression. It would be appropriate for faculty members to offer students one-on-one counselling services and to give them practical stress management techniques. Simultaneously, peer mentoring by sharing of experiences.

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