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## ORIGINAL STUDY

# Magnitude of Depression, Anxiety, Stress Factors among Undergraduate Nursing Students

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## Abstract

**Background:** The profession of nursing is always recognized as an increasingly stimulating profession than other professions. Stress, anxiety, and depression are being shown to have a detrimental effect on both personal and academic outcomes in nursing students. This study aimed to measure the magnitude of depression, anxiety, and stress among nursing students.

**Methodology:** Descriptive cross-sectional research was carried out at a private nursing college in Karachi. The time of the study was three months from January to March 2024. Students of both genders who were enrolled in Bachelor of Science in Nursing programs were requested to join the research. 223 was the designed sample size. A non-probability convenient sampling method was developed to access research applicants. A validated and structured questionnaire "Depression, Anxiety, and Stress Scale-21" was developed to show depression, anxiety, and stress.

**Results:** Of a total of 223 participants, almost half 110 (49.32%) of them were male, and the mean age of the study participants was 23.2±4.2 years. Most of the participants 130 (58.30%) were not married. In this research, the frequency of depression 22 (9.86%), anxiety 32 (14.34%), and stress 43 (19.28) was stated.

**Conclusion:** It is concluded that nursing students during their study were experiencing major degrees of depression, anxiety, and stress. The stress level was greater in participants followed by anxiety and depression.

## Keywords

Depression, Anxiety, Stress, Nursing Students, Education



## Introduction

Undergraduate nursing students may have advanced levels of stress, anxiety, or depression. This not only can affect their well-being or academic routine, but also during conversations with clients at clinical placement and maintaining throughout quality and safety of the healthcare delivered<sup>1</sup>. Depression 24.3%, anxiety 39.9%, and stress 20.0% have been well-known as prevalent in Islamabad among studying nursing students. Moreover, in female nursing graduates anxiety and depression were seen far more prevalent while in male nursing graduates' depression was seen<sup>2</sup>. According to the Goldberg Anxiety Scale (GAS), an average score of  $4.50 \pm 2.44$  and  $3.58 \pm 2.34$  as per GDS in the students of China indicate high levels of anxiety and depression<sup>3</sup>.

Moreover, depression's specific origin is uncertain, and a variety of biological, psychological, and social variables are suspected to play a crucial role. In recent years, depression has become more common among people of all ages and genders worldwide. Additionally, depression has been identified as the main contributor to successful suicide<sup>4</sup>. While depression affects the majority of college and university students, it is becoming a rising public health issue for most undergraduate students.

Because of their heavy academic load and exposure to stress, nursing students may develop depression. The nursing students experience significant pressures that put their physical and mental health at risk and have adverse effects on both. Due to the intense academic load, students of nursing may experience depression as an outcome of exposure to stress. According to several types of research, the nursing profession is highly stressful globally and described to be ranked as an extremely stressful profession all over the world<sup>5</sup>.

Generally, symptoms of depression are not always easy to recognize. Although depression may occur only once during a person's lifetime, some others may have multiple episodes, with symptoms occurring most of the day, nearly every

day<sup>6</sup>. Bachelor of Science in Nursing (BSN) students are more prone to depression due to the demanding nature of a BSN degree associated with lots of assignments, tough and demanding educational tasks, prolonged theory and clinical credit hours, and the stress of GPA so all these stressors can push BSN students towards depression anxiety and stress<sup>7</sup>. Therefore, this research was conducted to examine the frequency of depression anxiety, and stress among students of nursing.

## Methodology

This descriptive study of cross-sectional was done in a private sector which is a nursing college, in Karachi. The research was conceded out for 3 months of the period from January to March 2024.

The targeted population was nursing students studying BS Nursing at a private nursing college. Nursing students of both genders and willing to contribute were included. Participants, having any chronic illness were excluded from the study like Diabetic Mellitus (DM) or Hypertension (HTN). Additionally, those on psychotic medications were omitted too.

The sample size was calculated by an online sample size calculator taking 64.2% of depression through using OpenEpi version 3.0 with a 95% confidence level and 5% margin of error. The sample size was calculated at 223 by specifying the population of 600 participants of both genders. Sampling technique convenient Non-probability was used to assess the participants<sup>6</sup>.

All students were physically approached for the questionnaire to fill out at their institute. Printed consent was obtained from total contributors. Initially, all scholars were requested to attend the starting conference, after that, a survey form self-administered was circulated among them and taken from them back almost after half an hour.

The validated questionnaire, structured and Open-accessed "Depression, Anxiety, and Stress Scale-21" (DASS-21)<sup>8</sup> was circulated. The grading

of the tool is mentioned in Table 1 (Table 1). SPSS version 21 was used for data entry and analysis; mean  $\pm$  standard deviation was computed for all quantitative variables and frequency and percentages for all qualitative variables.

## Result

In this study, a total of 223 participants were included, almost half 110 (49.32%) of them were male. The mean age of the participants was

23.2 $\pm$ 4.2 years. There is a dominance of 130 (58.30%) of the single and only 93 (41.7%) were married. As for smoking status is concerned, only 13 (5.82%) study subjects were smokers. Moreover, the majority of 156 (69.95%) were living with family, and only 33 (4.8%) were in hostel accommodation (Table 2).

In this study, the magnitude of depression was reported at 9.88%, anxiety at 14.38%, and stress at 19.23% (Table 3).

**Table 1: Scoring category of subscale.**

	<b>Depression</b>	<b>Anxiety</b>	<b>Stress</b>
<b>Normal</b>	0-9	0-7	0-14
<b>Mild</b>	10-13	8-9	15-18
<b>Moderate</b>	14-20	10-14	19-25
<b>Severe</b>	21-27	15-19	26-33
<b>Extremely Severe</b>	28+	20+	34+

**Table 2: Demographic information of study participants.**

<b>Variable</b>	<b>Frequency (%)</b>
<b>Age (Years)</b>	<b>23.2<math>\pm</math>4.2</b>
<b>Gender</b>	
Male	110 (49.32)
Female	113 (50.68)
<b>Marital Status</b>	
Single	130 (58.30)
Married	93 (41.70)
<b>Smoking</b>	
Yes	13 (5.82)
No	210 (94.18)
<b>Residency</b>	
With family	156 (69.95)
With relative	23 (10.31)
With Friends	11 (4.94)
Hostel	33 (4.80)

**Table 3: Magnitude of depression, anxiety, and stress.**

Categories	Levels of depression	Levels of anxiety	Levels of stress
	Frequency (%)	Frequency (%)	Frequency (%)
<b>Normal</b>	201 (90.14)	191 (85.65)	180 (80.71)
<b>Mild</b>	21 (9.42)	27 (12.10)	31 (13.9)
<b>Moderate</b>	01 (0.44)	03 (1.4)	09 (4.0)
<b>Severe</b>	0	01 (0.44)	02 (0.89)
<b>Extremely Severe</b>	0	01 (0.44)	01 (0.44)

## Discussion

Nursing students represent the future of the nursing profession, so their mental and physical health is crucial for providing optimal care. Poor health among students can impede their education and, in turn, result in lower clinical skills. This research is designed to assess the frequency of depression, anxiety, and stress amongst nursing graduates, along with identifying associated factors.

The study found that 9.86% of nursing students experienced depression. In contrast, this figure is much lower than the 57.9% reported in a Chinese study<sup>9</sup>, 38.2% found in Nepal<sup>10</sup>, other Nepali research<sup>11</sup> reported 22.27% and a Malaysian study<sup>12</sup> found 21%, prevalence of studies significantly higher than our findings. Anxiety was reported in 14.3% of the students in this study. This rate is lesser than the 51.6% reported in other studies<sup>9</sup>, 46.9%, and 28.25% observed in Nepal<sup>9,10</sup>, and the 50% found in Nepal<sup>11</sup>. Stress affected 19.2% of nursing students in our study<sup>9</sup>. This rate is lower than the 55.6% reported in another study but very close to 24.1% and far 6.52% found in Nepal<sup>9,10</sup> and the 12% reported in Malaysia<sup>12</sup>.

Factors contributing to these mental health issues may include the pressures of final exams. Additionally, a study in Pakistan<sup>13</sup> indicated that nursing students lack awareness about their mental health, which may result in insufficient focus on psychological well-being. Despite this, the incidence of mental health issues in Pakistani nursing students is still lower than among other medical students in Pakistan<sup>14</sup>.

A meta-analysis of interventions like yoga, mindfulness, and meditation found significant reductions in depression, stress, and anxiety among members as associated with controls. Such interventions should be implemented periodically in educational institutions to improve mental health among students. Healthy students are better equipped to excel academically and clinically, leading to improved patient care outcomes<sup>15</sup>. Generalization of the findings from this research study should require caution because of a few limitations; firstly, absence of random sampling, secondly, no larger sample size, thirdly, this study was conducted only in one institution.

## Conclusion

It was concluded that the students of nursing are experiencing a major degree of depression, anxiety, and stress. The magnitude of stress is greater in contestants followed by anxiety and depression.

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