

PREVALENCE AND FACTORS ASSOCIATED WITH ANXIETY AND DEPRESSIVE SYMPTOMS AMONG MALE NURSING STUDENTS: A CROSS-SECTIONAL STUDY

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DOI: <https://doi.org/10.5281/zenodo.17374324>

Keywords

Anxiety, Depressive, Socio-demographic, Nursing

Article History

Received: 27 August 2025

Accepted: 05 October 2025

Published: 17 October 2025

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Abstract

Background: Anxiety and depression are common health issues, which have been on the increase globally in the past era. The presence of either of them often increases the having of the other. Statistics have indicated that anxiety and depression has been affecting nursing students at an alarming rate around the globe

Objectives: To find out the prevalence and factors associated with anxiety and depression symptoms among nursing students.

Methods: The research study design was cross-sectional, involving a sample of 190 male nursing students from College of Nursing, Sindh Government Hospital, Liaquatabad, Karachi. Data were collected using a socio-demographic questionnaire and the Aga Khan University Anxiety and Depression Scale (AKUADS). Kolmogorov-Smirnov test was used to assess the normality of the data, Independent t-test and ANOVA were used as a statistical test to analyze data.

Results: The findings of the research study showed that 43.7% of nursing student had anxiety and depressive symptoms. The age group did not significantly associated with anxiety and depressive score (p -value = 0.696). No significant difference were found in terms of resident (p -value: 0.124). The family income, family type and substance abuse were also reported to have no significant association with anxiety and depression score (p -values: 0.967, 0.330, and 0.223). The only significant association was found between academic level and anxiety, depressive score (p -value= 0.006).

Conclusion: The current study showed that more than one-third of nursing students were experiencing symptoms of anxiety and depression. Intervention to lower the anxiety and depression should be carried out. The psychologist should be there to enhance and support students' mental health.

INTRODUCTION

Anxiety and depression are common health issues, which have been on the increase globally in the past era. The presence of either of them often increases the having of the other. Anxiety is an emotional state in

which there is a fear of unpredictable situations or events, while depression is a mood disorder marked by persistent feelings of sadness, loss of interest or pleasure, and emotional numbness. [1] Statistics have

indicated that depression has been affecting nursing students at an alarming rate around the globe. Depression is known as the disease of the 21st century. Research has shown that class assignments and workload are the major causes of stress in students; clinical exposure was also one of the basic causes of stress among students. [2] Students with anxiety and depression have negative self-esteem and feel difficulty in coping with stressful situations; they experience symptoms such as nervousness, restlessness, and worrying. Anxiety can affect their academic and clinical performance as well. [3] The results of a research study conducted in Taiwan revealed that the prevalence of depressive symptoms among junior nursing students was 32.6%. Significant associations of depressive symptoms were found with grade point average, interest in nursing, and interest in their clinical placement. Sleep quality and stress are the major variables that can significantly predict depressive symptoms. [4] The cross-sectional research study conducted in China showed that the prevalence of depressive symptoms was 60.3% among nurses. Nurses who had an inadequate sleeping pattern were more prone to develop the symptoms; shift work and high dissatisfaction were also found to be factors related to depression, while higher education, physical activity, and work experience were considered protective factors against depression. [5] Moreover, the results of a past study conducted in the USA showed that the prevalence of depression symptoms among nursing students was 16%, while the prevalence of anxiety was found to be 10%. Additionally, the previous studies have shown that women are at higher risk for developing anxiety and depression as compared to men. [6] The factors such as smoking habits, infected friend, fear, stress are considered as a major contributor for developing anxiety and depression. [7] Clinical placements have a significant association with the development of anxiety in nursing students. Male students were found to have a higher tendency for anxiety symptoms, and lack of confidence and environment also play vital roles in the development of anxiety. The preceptor-student connection played a critical role in students' learning opportunities in clinical settings. [8] The systemic review based on studies of reducing anxiety and depression among undergraduate nursing students revealed that significant reductions in stress,

anxiety, and depression were found in students who have participated in the intervention targeting these symptoms. Mindfulness-based interventions are the most effective in dealing with anxiety and depression symptoms. [9] Fatigue, Irritability, somatic concerns, and sleep disorders were the major depressive symptoms that frequently occurred, while the anxiety symptoms that occurred frequently were nervousness, feeling scared, and abdominal discomfort. [10] Furthermore, the results of the systemic review showed that one in every three nursing students suffered from depressive symptoms. The meta-analysis also revealed that the prevalence of depression was significantly associated with age and the geographical region where the student studied. The younger nursing students had a higher prevalence of depression in comparison with older nursing students. [11] The mental health problems occurred mostly due to factors such as lack of physical activity, poor sleep patterns, experience of negative life events, and poor self-perceived mental health. [12] The objective of this study is to find out the prevalence of anxiety and depressive symptoms among male nursing students.

METHODS:

A cross-sectional research design was used in the study. The research was conducted at the College of Nursing, Sindh Government Hospital, Liaquatabad, Karachi. The target population consisted of male undergraduate nursing students. A convenient sampling technique was used to select the sample. The sample size was calculated using OpenEpi software, prevalence of anxiety was 47.1% among medical students [13], with a 95% confidence interval, 80% power, a 5% margin of error, and the required sample size was calculated to be 190 participants. The study was conducted between July and August 2025. Inclusion criteria involve male nursing students registered in the BSN program who agreed to participate in the study. Exclusion criteria consist of students who were not willing to fill the consent form and students who were suffering from any psychiatric illness. Signed Informed consent was mandatory for all the participants to maintain ethical consideration. Confidentiality and anonymity were maintained throughout the study. The Aga Khan University Anxiety Depressive Scale (AKUADS), comprising 25

items with a cutoff value of 19, was used to collect data. The Cronbach alpha was used to measure the reliability and internal consistency of the questionnaire; the value was found to be greater than 0.80. Data were analyzed using SPSS version 27. Descriptive statistics uses frequency tables, mean, and standard deviation to report findings. The Kolmogorov-Smirnov test was used to assess the normality of the data; since the data was normally distributed, parametric statistical tests such as the independent t-test and ANOVA were applied to analyze it.

RESULTS:

The table 1 showed the socio-demographic characteristics of the 190 research participants. The majority of the individuals fall within the 18 - 22 age

group (73.2%), followed by 23-27 (22.1%) and (4.7%) were in age group 28-Above. The gender distribution of sample were entirely male (100%). The academic year distribution showed that (29.5%) of nursing students were in year 1, (31.1%) in year 2, (21.6%) in year 3 and (17.9%) in year 4. The majority of the participants lived with their family (84.7%), (7.9%) and (7.4%) lived with relatives and in hostels, respectively. About family income, (49.5%) earnings were below 50,000, (33.2%) between 50,000 - 100,000, (13.2%) between 100,000 and 200,000, while (4.2%) incomes were above 200,000. The family types were mainly extended (58.9%) and (41.1%) belonged to nuclear families. Regarding substance abuse, (77.9%) were indicated no substance abuse, (22.1%) reported substance abuse.

Table 1: Socio-demographic variables (n=190)

Socio-Demographic Variables	Characteristics	N (%)
Age	18 - 22	139 (73.2%)
	23-27	42 (22.1%)
	28-Above	9 (4.7%)
Gender	Male	190 (100%)
	Female	0
Academic Year	First year	56 (29.5%)
	Second year	59 (31.1%)
	Third year	41 (21.6%)
	Fourth year	34 (17.9%)
Resident	Family	161 (84.7%)
	Relatives	15 (7.9%)
	Hostel	14 (7.4%)
Family Income	Below 50,000	94 (49.5%)
	50,000 - 100,000	63 (33.2%)
	100,000 - 200,000	25 (13.2%)
	200,000 - Above	8 (4.2%)
Family Type	Nuclear	78 (41.1%)
	Extended	112 (58.9%)

Substance Abuse	Yes	42 (22.1%)
	No	148 (77.9%)

The findings of table 2 revealed that 43.7% of nursing student had anxiety and depressive symptoms, 56.3%

of nursing students reported no symptoms of anxiety and depression.

Table 2: Anxiety and Depressive Symptoms

ADS	Percentage	Scores Obtained
Symptoms present	43.7%	Above 19
Symptoms absent	56. 3%	Below 19

The results of table 3 showed the association of socio-demographic variables with anxiety and depression scores. The age group did not significantly associated with anxiety and depressive score (p-value = 0.696). No significant difference were found in terms of resident

(p-value = 0.124). The family income, family type and substance abuse were also reported to have no significant association with anxiety and depression score (p-values: 0.967, 0.330, and 0.223). The only significant association was found between academic level and anxiety, depressive score (p-value= 0.006).

Table 3: Association of demographic variables with anxiety and depressive score

Socio-Demographic Variables	Characteristics	Mean $\pm$ S.D	N	p-value
Age	18 - 22	18.87 $\pm$ 9.67	139	0.696
	23-27	18.38 $\pm$ 9.85	42	
	28-Above	16.16 $\pm$ 8.41	9	
Academic Year	First year	20.13 $\pm$ 10.31	56	0.006*
	Second year	17.78 $\pm$ 9.17	59	
	Third year	14.95 $\pm$ 7.45	41	
	Fourth year	22.09 $\pm$ 10.22	34	
Resident	Family	18.55 $\pm$ 9.39	161	0.124
	Relatives	22.60 $\pm$ 11.17	15	
	Hostel	15.36 $\pm$ 9.89	14	
Family Income	Below 50,000	18.65 $\pm$ 8.92	94	0.967
	50,000 - 100,000	18.40 $\pm$ 8.72	63	
	100,000 - 200,000	18.64 $\pm$ 12.87	25	
	200,000 - Above	20.25 $\pm$ 14.20	8	
Family Type	Nuclear	19.45 $\pm$ 10.12	78	0.330
	Extended	18.06 $\pm$ 9.28	112	
Substance Abuse	Yes	20.24 $\pm$ 8.93	42	0.223
	No	18.18 $\pm$ 9.80	148	

DISCUSSION:

This study examines the prevalence and factors associated with anxiety and depressive symptoms among male nursing students. The findings of current study revealed that 43.7% were suffering from anxiety, depressive symptoms. Similar findings were found in other research study. [14] The current study showed that academic level was significantly associated with anxiety, depressive score. The previous studies also showed a significant difference in anxiety and depression among nursing students based on academic level. [15, 16]. The socio-demographic variables were not significantly associated with anxiety and depression in the findings of current study. These findings are also consistent with other research. [17, 18]. The some research studies also revealed that anxiety and depression were found in junior students, while other studies contradict these findings and showed that the rate of prevalence was higher in senior students. [19] The participants of current study were entirely male, the findings of another research study indicated that the female nursing students suffered more from anxiety and depression. [20]

CONCLUSION:

The current study showed that more than one-third of nursing students were experiencing symptoms of anxiety and depression. The nursing students are the upcoming workforce of the nursing career; for effective and efficient nursing care, it is essential to overcome their mental health problems. Intervention to lower the anxiety and depression should be carried out. The psychologist should be there to enhance and support students' mental health.

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