Depression, Anxiety, and Stress among Nursing Students at Hai Phong University of Medicine and Pharmacy in 2025

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ABSTRACT

Background: Mental health challenges, including depression, anxiety, and stress, are common among nursing students due to the demanding nature of their education. This study aims to assess the prevalence and severity of these mental health issues among nursing students using the Depression, Anxiety, and Stress Scale-21 (DASS-21). **Methods:** A cross-sectional study was conducted with nursing students. Participants completed the DASS-21, a validated self-report questionnaire assessing the severity of depression, anxiety, and stress. Data were analyzed to determine the prevalence of these conditions and their severity levels. **Results:** The findings revealed that 46.6% of nursing students reported experiencing anxiety, 45.0% reported stress, and 27.8% reported depression. Moderate anxiety was the most common, followed by moderate stress and depression. Severe and extremely severe symptoms were less frequently reported, with anxiety being the most commonly experienced mental health issue among participants. **Conclusions:** The findings revealed a significant presence of anxiety and substantial levels of stress and depression among nursing students, highlighting the psychological challenges they face. These findings suggest the need for targeted mental health interventions to support the well-being and academic success of nursing students.

Keywords: Stress, Anxiety, Depression, DASS-21, Nursing

RATIONAL

Mental health is a crucial component of overall health, encompassing physical, cognitive, and social well-being, as defined by the World Health Organization (WHO) [1]. In recent years, mental health issues, particularly stress, anxiety, and depression, have been increasingly prevalent, particularly among young people. These issues can negatively impact cognitive functioning, social skills, academic performance, work productivity, and overall quality of life [1].

Medical students, particularly nursing students, are considered a vulnerable group due to the intense academic and clinical demands they face [2]. These students often contend with a heavy workload of theoretical knowledge, stressful examinations, demanding clinical schedules, insufficient rest, and significant societal and familial pressures [3]. Moreover, early exposure to clinical settings-where illness, suffering, and death are frequent-can lead to emotional strain, especially when students lack coping skills or sufficient experience to manage such stressors [2].

In Vietnam, several studies have highlighted concerning rates of mental health problems among medical students. For example, Nguyen Bich Ngoc and Nguyen Van Tuan reported that nearly half of the nursing students experienced varying levels of stress [4]. Nguyen Thi Thu Huong et al. (2021) reported that 45.7% of third-year medical

students in northern Vietnam exhibited moderate to severe depression, 53.2% had anxiety, and 48.9% experienced stress [5]. Similarly, Tran Thi Thuy Linh (2020) found that 38% of nursing students reported stress, 42% had anxiety, and 30% suffered from depression. The identified risk factors included academic year, academic performance, financial stability, and family support [6].

Hai Phong University of Medicine and Pharmacy is a key institution in northern Vietnam for training healthcare professionals, with nursing students comprising a significant portion of the student body. However, there is a lack of systematic studies assessing the mental health status-particularly stress, anxiety, and depression-of nursing students at this university. Early detection and intervention for psychological issues are crucial to improving training quality, enhancing academic outcomes, and preventing long-term mental health consequences for these students.

Given this context, the research team conducted a study titled "Status of Stress, Anxiety, Depression among Nursing Students at Hai Phong University of Medicine and Pharmacy in 2025" to assess the prevalence of stress, anxiety, and depression among nursing students.

METHODS

We conducted a cross-sectional survey. Nursing students were selected using a convenience sampling method. The questionnaire was sent to all nursing students studying at Haiphong University of Medicine and Pharmacy from January to May 2025. The DASS-21 scale assessed DAS.

The following data collection measurements were used to obtain the relevant data.

Tool 1: Demographic characteristics

It consisted of 15 questions and was developed to collect information on the sample characteristics. The characteristics included: gender, year of students, academic performance, time spent in the classroom, sleep duration, outdoor activities, school transportation, part-time job, parents' marital status, witnessed family conflicts, family's economic situation, and number of siblings.

Tool 2: DASS-21 scale

The DASS-21 is a 21-item self-report tool designed to assess the severity of general psychological distress and symptoms related to depression, anxiety, and stress in adults [7]. The scale includes 21 questions, with seven items each for depression, anxiety, and stress, rated on a 4-point scale. Each of the total scores obtained for DASS-21 is multiplied by 2. The reliability score of the DASS-21 is greater than 0.90 [8].

Subscale scores are categorized by severity. For depression, 0-9 is normal, 10-13 is mild, 14-20 is moderate, 21-27 is severe and ≥28 is extremely severe. For anxiety, 0-7 is normal, 8-9 is mild, 10-14 is moderate, 15-19 is severe, and ≥20 is extremely severe. For stress, 0-14 is normal, 15-18 is mild, 19-25 is moderate, 26-33 is severe, and ≥34 is extremely severe.

Severity level	Depression score	Anxiety score	Stress score
Normal	0 - 9	0 - 7	0 - 14
Mild	10 - 13	8 - 9	15 - 18
Moderate	14 - 20	10 - 14	19 - 25
Severe	21 - 27	15 - 19	26 - 33
Extremely severe	≥28	≥20	≥34

The questionnaire in Google Forms version was sent to all nursing students in HPMU via Zalo, Facebook, and email.

All statistical analyses were performed using Stata/SE 18.0 (Stata Corp LLC, College Station, TX). Descriptive statistics were defined by frequency and percentage.

RESULTS

Table 1. Characteristics of the participants

Variables		Frequency	Percentage
Gender	Male	89	24.0
	Female	282	76.0
Academic year	Year 1	131	35.3
	Year 2	64	17.3
	Year 3	64	17.3
	Year 4	112	30.2
Academic performance	Excellent	12	3.2
	Good	46	12.4
	Fair	172	46.4
	Average	99	26.7
	Poor	42	11.3
Time spent in classroom/hospital (hours per day)	≤ 6	217	58.5
	> 6	154	41.5
Sleep duration (hours per day)	≤ 7	243	65.5
	> 7	128	34.5
Community activities (times per month)	≤ 2	232	62.5
	> 2	139	37.5
Transportation to school	Walking	39	10.5
	Bicycle	42	11.3
	Motorbike	279	75.2
	Car	11	3.0
Part-time job	Yes	265	71.4
	No	106	28.6

Comments: A majority of respondents were female (76%), and most were in their first (35.3%) or fourth (30.2%) year of academic study. Regarding academic performance, a significant portion of students rated themselves as having "fair" (46.4%) performance. The majority spent 6 hours or fewer in the classroom or hospital daily (58.5%) and slept 7 hours or fewer per day (65.5%). In terms of community involvement, 62.5% of participants engaged in activities less than twice a month. School transportation was predominantly by motorbike (75.2%), and most students (71.4%) held part-time jobs.

Table 2. Family information and lifestyle of participants

Variables		Frequency	Percentage
Parents' marital status	Living together	269	72.5

	Not living together	102	27.5
Witnessed family conflicts	Never	73	19.7
	Rarely	90	24.3
	Occasionally	108	29.1
	Frequently	61	16.4
	Always	39	10.5
Family's economic situation	Poor	14	3.8
	Near poor	45	12.1
	Average	205	55.3
	Wealthy/rich	107	28.8
Number of siblings	≤ 2	212	57.1
	> 2	159	42.9
Playing sport	No sports	44	11.9
	Rarely	98	26.4
	Occasionally	122	32.9
	Frequently	69	18.6
	Always	38	10.2
Internet/Social Media use	Do not use	13	3.5
	Rarely	37	10.0
	Occasionally	78	21.0
	Frequently	140	37.7
	Always	103	27.8
Alcohol consumption	Do not use	108	29.1
	Rarely	113	30.5
	Occasionally	105	28.3
	Frequently	34	9.2
	Always	11	3.0

Comment: The table provides insights into students' family backgrounds. A majority of students (72.5%) reported that their parents live together, while 27.5% indicated that their parents do not. When it comes to family conflicts, 29.1% of students occasionally witnessed them, with 19.7% never observing any. Regarding family economic status, most students (55.3%) came from average-income households, while 28.8% came from wealthier families, and 3.8% identified as coming from poor households. Additionally, the majority (57.1%) had two or fewer siblings, while 42.9% had more than two siblings. This data reflects the diverse family situations that may impact students' experiences and perspectives. Regarding lifestyle, most students reported engaging in sports occasionally (32.9%) or rarely (26.4%). Regarding internet and social media use, the majority frequently (37.7%) or always (27.8%) used them. For alcohol consumption, a large portion of students rarely (30.5%) or occasionally (28.3%) consumed alcohol, while 29.1% reported never drinking alcohol. These trends highlight varying levels of engagement in physical activity, digital consumption, and substance use among the participants.

Table 3. Prevalence of depression, anxiety, and stress

Mental health status	Frequency	Percentage
Stress	167	45.01
Anxiety	173	46.60
Depression	103	27.80

Comment: The table shows the prevalence of stress, anxiety, and depression among participants. Stress was reported by 45.01% of individuals, with a slightly higher percentage (46.60%) indicating symptoms of anxiety. Depression was the least prevalent, affecting 27.80% of the sample.
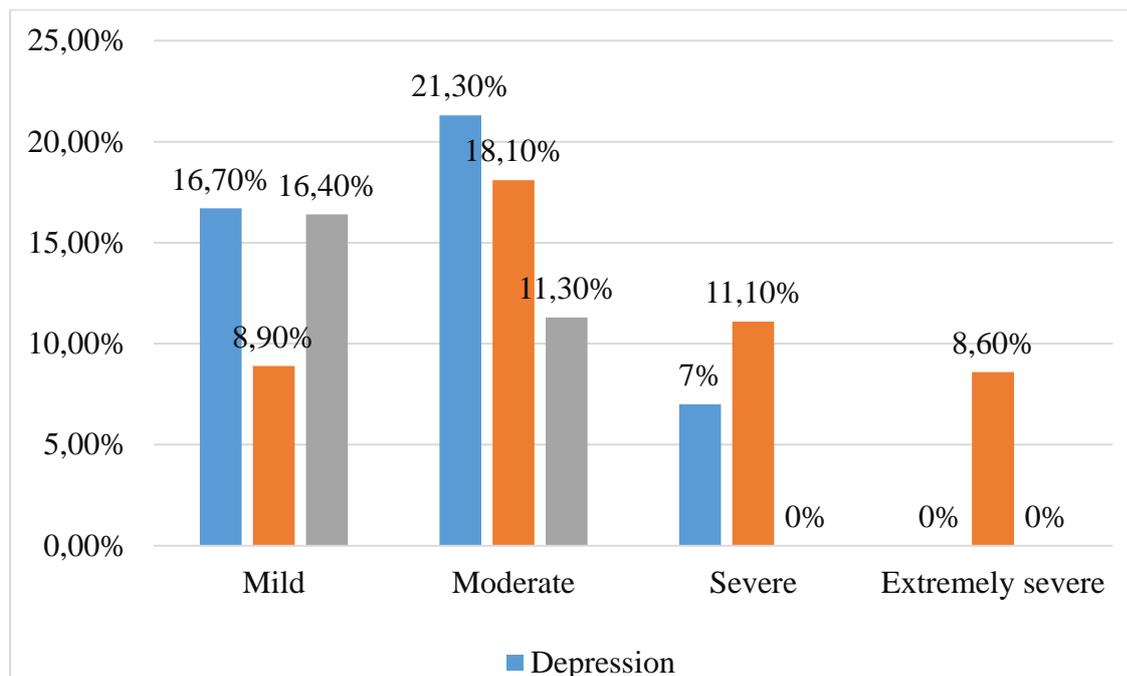

Figure 1. Classification of Depression, Anxiety, and Stress

Comment: Moderate anxiety was the most prevalent, affecting 21.3% of individuals, followed by moderate depression (16.7%) and moderate stress (18.1%). Mild levels of stress and depression were similarly reported by 16.4% of participants, while mild anxiety was less common, affecting only 8.9%. Severe symptoms were reported by 11.1% of participants for both depression and stress, with no individuals experiencing severe anxiety. Extremely severe symptoms were rare, with anxiety showing the highest rate at 8.6%. Overall, anxiety was the most commonly encountered issue, particularly at moderate levels, while severe and extremely severe symptoms were relatively uncommon.

DISCUSSION

This study examined the prevalence and severity of depression, anxiety, and stress among nursing students using the Depression, Anxiety, and Stress Scale-21 (DASS-21). The findings indicate that a proportion of nursing students experienced symptoms of mental health, with anxiety being the most prevalent condition, followed by stress and depression. Notably, moderate levels of anxiety (21.3%) were more common than moderate levels of depression (16.7%) and stress (18.1%), while severe and extremely severe cases were less frequent. International research has consistently reported high levels of psychological distress

among nursing students. For instance, an umbrella review synthesis of meta-analysis evidence from 375 primary studies and a total of 171,828 nursing students reported that overall prevalence of mental health issues was 27% (95%CI: 25%-30%), depression was 29% (95%CI: 21%-38%), anxiety was 29% (95%CI: 17%-40%), and stress was 27% (95%CI: 17%-37%) [9]. Similarly, a cross-sectional study in Vietnam reported that nearly half of the students were stressed at various levels [4].

These results highlight the significant psychological burden faced by nursing students, aligning with prior studies that identified anxiety as the most commonly reported mental health issue in this population [10].

The high prevalence of anxiety may be attributable to the academic and clinical demands of nursing education. Nursing students are often required to balance heavy academic workloads, clinical placements, and personal responsibilities, all of which can increase psychological distress [3, 11]. Furthermore, the transition from classroom learning to high-pressure clinical environments can exacerbate stress and anxiety, particularly among students in their early years of training [2]. The moderate levels of depression and stress observed in this study are consistent with findings from previous research conducted in similar contexts, which reported comparable rates of psychological distress among health sciences students [10, 12].

The results also emphasize the need for targeted interventions to support nursing students' mental health. Evidence suggests that coping strategies such as mindfulness training, peer support programs, and stress management workshops can significantly reduce symptoms of depression, anxiety, and

stress [13]. Nursing faculties may benefit from incorporating mental health promotion activities into their curricula to foster resilience and coping skills. Moreover, early screening using tools such as the DASS-21 could help identify at-risk students and enable timely interventions [14].

This study adds to the growing body of literature documenting the mental health challenges of nursing students, yet some limitations should be acknowledged. First, the use of a self-report measure may be subject to response bias, as participants may underreport or overreport symptoms. Second, the cross-sectional design limits causal inference, making it difficult to determine whether academic demands directly contribute to mental health difficulties. Future studies employing longitudinal designs are recommended to understand better the trajectories of depression, anxiety, and stress throughout nursing education. Additionally, qualitative studies could provide deeper insights into students' lived experiences and coping mechanisms.

In summary, the findings demonstrate that nursing students experience substantial levels of depression, anxiety, and stress, with anxiety being the most prominent concern. Addressing these challenges through institutional support, preventive programs, and early interventions is essential for promoting student well-being and ensuring academic success.

CONCLUSION

The present study revealed a significant presence of depression, anxiety, and stress among nursing students at Hai Phong University of Medicine and Pharmacy, with anxiety being the most common issue. These findings underscore the psychological challenges faced by nursing students. Early

detection and intervention are crucial for improving student well-being and scholarly and educational outcomes.

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