

Original articles

Mental health status and help-seeking intentions among pharmacy students

Ngo Thi Kim Cuc¹, Nguyen Thi Thuy Phuong², Nguyen Thi Thanh Hong²,
Le Thuy Tien², Tran Nhu Minh Hang³, Le Tran Tuan Anh^{3*}

¹Faculty of Pharmacy, Hue University of Medicine and Pharmacy, Hue University

²Student of Hue University of Medicine and Pharmacy, Hue University

³Department of Psychiatry, Hue University of Medicine and Pharmacy, Hue University

*Corresponding author: Le Tran Tuan Anh; Email: lttanh@huemed-univ.edu.vn, letrantuananh@hueuni

Received: 12/02/2026; Accepted: 12/05/2026; Published: 25/08/2026

DOI: 10.34071/jmp.2026.4.766

Abstract

Background: The prevalence and severity of mental health problems among university students are increasing. Pharmacy students, with their intensive curriculum, are identified as a high-risk group. Studies indicate that pharmacy students often have high rates of anxiety yet are less likely to seek professional help due to barriers such as stigma. At Hue University of Medicine and Pharmacy, understanding this situation is essential for providing an evidence-based foundation for appropriate psychological interventions.

Objectives: (1) To assess the mental health problems and the help-seeking intentions among pharmacy students; and (2) to identify factors associated with these mental health conditions.

Materials and methods: A cross-sectional descriptive study was conducted from September to December 2024. We surveyed 611 pharmacy students (Years 1-5) at Hue University of Medicine and Pharmacy using an online questionnaire (Google Forms). The survey included demographic information, the validated Vietnamese version of the DASS-21, and the General Help-Seeking Questionnaire (GHSQ), which was translated into Vietnamese by our research team. Data were analyzed using descriptive statistics and univariate logistic regression ($p < 0.05$).

Results: The DASS-21 results (moderate to extremely severe levels) showed 22.2% of students experienced stress, 51% experienced anxiety, and 32.6% experienced depression. Notably, 14.56% of students exhibited comorbidity across all three conditions. Students prioritized informal help sources: 69.5% (very/often) sought help from family and 67.8% from friends, while professional sources were less utilized (<50% for psychologists). Alarmingly, 14.8% of students very/often sought no help from anyone. Factors such as academic year, history of mental disorders, the number of reliable people to rely on, and support from neighbors were significantly associated with stress, anxiety and depression ($p < 0.05$).

Conclusion: Pharmacy students at Hue University of Medicine and Pharmacy face significant mental health challenges, particularly anxiety and depression, yet primarily intend to seek informal rather than formal support. Targeted interventions are urgently needed to promote the utilization of professional mental health services.

Keywords: pharmacy students; mental health; help-seeking intentions; anxiety; depression; stress.

1. INTRODUCTION

Mental health is a state of equilibrium, encompassing both internal harmony within the body and harmony with the environment. Physical, psychological, social, cultural, spiritual, and other related factors all contribute to achieving this mental health balance. It serves as the foundation for the well-being and effective functioning of every individual [1-3]. In Vietnam, recent large-scale studies highlight a concerning escalation in mental health issues among university students. For instance, a 2024 survey among over 8,300 university students in Ho Chi Minh City reported that 77.7% experienced varying levels of depressive symptoms, and 58.8% exhibited signs of anxiety [4]. Similarly, another

cross-sectional assessment of Vietnamese university students revealed high proportions of mild to severe stress (51.84%), anxiety (81.55%), and depression (57.09%) [5]. Research by Eisenberg et al. indicates that the university student population is also a critical group currently showing increasing signs of mental health-related problems [6]. Accordingly, the estimated prevalence of depressive and anxiety disorders was recorded at 15.6% for undergraduate students and 13.0% for graduate students [6]. These findings highlight the significant need for mental health attention among young adults navigating the highly demanding higher education environment.

Pharmacy students' mental health is of increasing concern to faculty, administrators, and students [7].

The pharmacy curriculum is inherently intensive, and students face academic challenges similar to those in other health science fields. This is evidenced by the fact that pharmacy and medical students consistently report high levels of academic-related stress and psychological burden during their training [7, 8]. Furthermore, a study in the United States on health science students noted that pharmacy and medical students had similar rates of depressive symptoms (18%), but pharmacy students reported higher rates of anxiety symptoms. However, pharmacy students were also reported to have higher levels of stigma associated with mental health treatment [9].

While mental health challenges are well-documented, a significant research gap remains regarding the help-seeking intentions and behaviors of university students, particularly in Vietnam. Recent evidence suggests a severe underutilization of professional mental health services among Vietnamese students; despite high prevalence rates of psychological distress, only a small fraction, approximately 12.5% in some student cohorts, actually seek formal mental health services. Often, students prioritize informal support networks, such as parents and friends, over formal university counseling due to pervasive social stigma and a lack of mental health literacy. Although counseling and mental health service providers at educational institutions have recorded an increase in the severity of mental health problems [9], comprehensive data specifically addressing the barriers and help-seeking intentions among pharmacy students in Vietnam remains scarce [4]. At the local level, a 2019 study by Hung and Lan [10] conducted at Hue University of Medicine and Pharmacy highlighted a high prevalence of psychological distress and poor help-seeking attitudes. However, several critical gaps necessitate a new investigation at this institution. First, the 2019 study was limited exclusively to first-year medical students and utilized the ATSPPH scale to measure general attitudes. Pharmacy students face a distinctly different, highly intensive curriculum spanning five years, creating a unique academic burden that warrants specific investigation. Furthermore, unlike the previous research, the current study expands the demographic scope to encompass pharmacy students across all academic years (Years 1-5) and employs the General Help-Seeking Questionnaire (GHSQ) to measure specific help-seeking intentions across both formal and informal sources, alongside a deeper analysis of associated psychosocial factors. Therefore,

conducting a comprehensive reassessment at the same institution is essential for providing a basis for developing specific, appropriate solutions to address their mental health needs. This study was conducted with two objectives:

(1) To assess the mental health problems and the help-seeking intentions of pharmacy students.

(2) To identify factors associated with mental health problems in this population.

2. SUBJECTS AND RESEARCH METHODS

2.1. Study subjects:

- Inclusion criteria: Students enrolled in the pharmacy program from year 1 to year 5 at Hue University of Medicine and Pharmacy, Hue University, during the study period.

- Exclusion criteria: Students enrolled in non-regular programs (such as part-time, bridging, or continuing education programs) were explicitly excluded to ensure the homogeneity of the sample regarding academic workload and curriculum structure, or if the students did not consent to participate in the study.

2.2. Study Period and Design

- Study period: From September 2024 to December 2024.

- Study format: An online survey conducted via a structured questionnaire on Google Forms.

2.3. Research Methods

The study was conducted using a cross-sectional design.

Sampling method: Total population sampling.

The minimum sample size was estimated using the formula for a single proportion:

$$n = Z_{(1-\frac{\alpha}{2})}^2 \times \frac{p(1-p)}{d^2}$$

Where:

+ n: Required sample size

+ p: The proportion of students with mental health problems. We selected $p = 0.5$ to maximize the sample size.

+ Confidence level selected: 95%

+ $Z_{(1-\frac{\alpha}{2})}^2$: The Z-score corresponding to a 95% confidence level, which is 1.96.

+ d: The margin of error between the sample parameter and the population parameter, set at $d = 0.05$

The minimum calculated sample size was $n = 384$.

All pharmacy students from Year 1 to Year 5 were invited to participate in the survey. Of the 1,093 students who received the questionnaire, 611 consented to participate and fully completed the survey, yielding a response rate of 55.9%.

2.4. Assessment tools

Data were collected using a structured questionnaire, which included: (1) demographic information (e.g., age, gender, academic year, living area, ethnicity, religion, marital status, income, etc.), (2) help-seeking intentions, and (3) mental health assessment.

2.4.1. Survey of help-seeking intentions

The General Help-Seeking Questionnaire (GHSQ), developed by Wilson, Deane [11], was used to assess self-reported likelihood of seeking help from various sources if experiencing a mental health problem. The instrument was translated into Vietnamese by the research team, consisting of psychiatrists who has extensive knowledge of Vietnamese culture and excellent proficiency in English, one of whom had extensive training period in Australia. Following the original authors' recommendation to modify the questionnaire for specific target populations and contexts [11], two main adaptations were made. First, the list of help sources was adjusted to nine items considered relevant for Vietnamese pharmacy students: family members, friends, spouse/partner, psychologist, psychiatrist, hospital, telephone counselling service, colleagues, and not seeking help from anyone. Second, the original 7-point Likert scale (from "extremely unlikely" to "extremely likely") was changed to a 5-point Likert scale ranging from 1 ("Never") to 5 ("Very often").

This modification was implemented because extensive empirical evidence from Monte Carlo simulations and comparative studies demonstrates that 5-point scales provide psychometric properties (reliability and validity) comparable to 7-point scales, while offering substantial practical advantages including reduced respondent fatigue, lower cognitive burden, fewer item omissions, greater ease of completion, and potentially higher response rates - advantages that are particularly relevant for online surveys among university students with demanding academic schedules [12-16]. These considerations were intended to enhance practicality and cultural appropriateness for the target population, although the adapted Vietnamese version has not yet undergone formal back-translation or full psychometric validation in this specific group. In the current study, this modified GHSQ demonstrated good internal consistency, with a Cronbach's alpha coefficient of 0.799.

2.4.2. Assessment of mental health status

The study used the Vietnamese version of the Depression, Anxiety, and Stress Scale - 21 (DASS-

21), originally developed by Lovibond [17]. This instrument has been validated and confirmed as suitable for the Vietnamese context by Tran et al [18]. The scale comprises 21 items, divided into three subscales, all of which had a Cronbach's $\alpha > 0.8$ in our study: depression (Cronbach's $\alpha = 0.895$), anxiety (Cronbach's $\alpha = 0.862$), and stress (Cronbach's $\alpha = 0.869$), with 7 items per subscale. Responses were rated on a 4-point Likert scale, from 0 (Did not apply to me at all) to 3 (Applied to me very much, or most of the time). The scores for each subscale were summed and then multiplied by two to produce the total score for each condition. Severity levels were defined as follows [19]:

- Depression: Normal (0 - 9), Mild (10 - 13), Moderate (14 - 20), Severe (21 - 27), and Extremely severe (≥ 28).

- Anxiety: Normal (0 - 7), Mild (8 - 9), Moderate (10 - 14), Severe (15 - 19), and Extremely severe (≥ 20).

- Stress: Normal (0 - 14), Mild (15 - 18), Moderate (19 - 25), Severe (26 - 33), and Extremely severe (≥ 34).

The status of each problem (stress, anxiety, depression) was categorized into two representative groups based on severity:

- (1) No problem: Normal and Mild levels.

- (2) Problem: Moderate, Severe, and Extremely severe levels.

For the purpose of binary logistic regression analysis, the severity levels were dichotomized into two distinct groups. Participants categorized as having 'normal' or 'mild' levels were grouped as having 'no significant problem', whereas those with 'moderate', 'severe', and 'extremely severe' levels were classified as having 'moderate-or-higher symptom levels'. The rationale for this categorization relies on the premise that the DASS-21 is a dimensional screening instrument that measures psychological distress along a continuum, rather than a categorical diagnostic tool [17, 20]. According to psychometric evaluations in large non-clinical samples, DASS severity labels represent percentile-based descriptors rather than diagnostic categories [21]. Specifically, a 'mild' score indicates that the respondent is above the population mean but still significantly below the typical severity of individuals seeking professional clinical help, and therefore does not inherently imply a mild psychiatric disorder [22]. Consequently, utilizing the 'moderate' threshold to identify symptom levels that warrant attention—and indicate a need for preventive strategies—is a well-supported, pragmatic approach in epidemiological studies among university students [23]. This

approach minimizes the risk of overestimating the prevalence of meaningful mental health problems in non-clinical student populations [21-23].

2.4.3. Assessment of social support

Social support was assessed using the three items of the Oslo Social Support Scale (OSSS-3) [24]. This brief, widely used instrument in epidemiological and population-based studies measures both structural (number of close confidants) and functional (perceived concern from others and practical help from neighbors) aspects of social support. The OSSS-3 was translated into Vietnamese by the research team, consisting of psychiatrists with extensive knowledge of Vietnamese culture and excellent proficiency in English, one of whom had extensive training in Australia. Response categories were kept identical in meaning and structure to the original English version to ensure comparability with published normative data and one-factor structure [24].

In line with the exploratory objective of the study and to provide more granular information on individual facets of social support (structural versus functional) as potential protective factors for pharmacy students—particularly given the high proportion living in rented housing and the rural-to-urban transition—the three items were analyzed separately as categorical variables in the univariate logistic regression models rather than being summed into a total score (range 3 - 14). For presentation in [Table 1](#), item 20 was recoded into three categories (None/little; Uncertain; Some/A lot); this recoding was performed post-data collection solely for descriptive purposes and did not affect the regression analyses. Because the items were not combined into a composite score, internal consistency (Cronbach's alpha or McDonald's omega) was not computed for the current sample. The conventional sum-score approach, its normative data (mean = 10.16, SD = 2.25), acceptable internal consistency in the original German general population (Cronbach's α = 0.640), and clear one-factor structure have been described in detail elsewhere [24]. Multicollinearity among the three OSSS-3 items was assessed using Pearson correlation coefficients and variance inflation factors (VIF) derived from linear regression models (see section 2.5). The adapted Vietnamese version has not yet undergone formal back-translation or full

psychometric validation beyond the current sample.

2.5. Statistical analysis

Data were stored and processed using Microsoft Excel 2016 and IBM SPSS Statistics 20.0. Qualitative variables were presented as frequencies and percentages. Continuous quantitative variables with a normal distribution were presented as mean and standard deviation (Mean SD), while those without a normal distribution were presented as median and interquartile range (IQR 25%, 75%). Univariate logistic regression analysis was used to identify factors significantly associated with mental health problems, with statistical significance set at $p < 0.05$.

Multicollinearity among the three OSSS-3 items was assessed using Pearson correlation coefficients and variance inflation factors (VIF) derived from linear regression models for each outcome, including the OSSS variables and the same covariates used in the univariate logistic regressions. All VIF values were below 5, indicating no significant multicollinearity.

Missing data were handled using an available-case analysis approach to maximize statistical power and retain as much valuable data as possible. Because the associated factors for stress, anxiety, and depression were evaluated in separate univariate logistic regression models, complete-case screening was applied on a per-model basis. Specifically, a participant was included in the regression analysis for a particular outcome (e.g., stress) as long as they provided complete responses for that specific DASS-21 subscale and the relevant independent variables, regardless of whether they had missing items in the other subscales (e.g., anxiety or depression). This approach ensured that valid responses were not unnecessarily discarded.

2.6. Research Ethics

This study was approved by the Institutional Review Board in Biomedical Research of Hue University of Medicine and Pharmacy, Hue University, under approval number H2024/586.

3. RESULTS

3.1. General characteristics of pharmacy students

The study successfully collected 611 survey responses from pharmacy students from Year 1 to Year 5 at the Faculty of Pharmacy, Hue University of Medicine and Pharmacy, Hue University (Table 1).

Table 1 General characteristics (N = 611)

Characteristics	Frequency (n)	Percentage (%)
Gender		
Male	142	23.2
Female	469	76.8
Hometown		
Rural	369	60.4
Urban	242	39.6
Academic year		
Year 1	148	24.2
Year 2	53	8.7
Year 3	143	23.4
Year 4	109	17.8
Year 5	158	25.9
Current residence		
Rented housing	367	60.1
Living with parents	223	36.5
Living with relatives	21	3.4
A pre-existing history of mental health disorders	87	14.2
Acute illness (cough, cold, fever, etc.)	166	27.2
Family history of mental health problems	30	4.9
Part-time job (outside of study)	180	29.5
Total family income/month (million VND)		
Unknown	118	19.3
1 - 10	188	30.8
11 - 20	192	31.4
21 - 30	67	11
> 30	46	7.5
Number of close people to rely on when having major problems		
None	56	9.1
1 - 2 people	323	52.9
3 - 5 people	174	28.5
Over 5 people	58	9.5
Perception of others' care		
None/little	96	15.7
Uncertain	155	25.4
Some/A lot	360	58.9
Ability to receive help from neighbors		
Very difficult	43	7.0
Difficult	89	14.6
Possible	382	62.5
Easy	81	13.3
Very easy	16	2.6

The study sample (N = 611) was predominantly female (76.8%), reflecting the demographic characteristics of the pharmacy major. The majority of the sample was of Kinh ethnicity (95.9%), reported no religion (81.3%), and was single (99.8%). A large proportion of students (60.1%) were living in rented

accommodation and 60.4% were from rural areas. Notably, 14.2% of students reported a pre-existing history of mental health problems. In terms of social support, 9.1% of students reported having “None” to rely on for major personal issues, and 15.7% perceived “None / little” care from others (Table 1).

3.2. Assessment of mental health problems and the help-seeking intentions of pharmacy students

The findings indicate that, if they were to experience a mental health problem, pharmacy students would express the strongest intentions to seek support from family members, friends, and psychologists. However, a notable proportion of students still reported that they would ‘often’ or ‘very often’ choose not to seek help from anyone. (Table 2)

Table 3.2 Help-seeking intentions among students if experiencing a mental health problem

Help source	Never	Rarely	Uncertain	Often	Very often	Missing
1. Family members	12 (2.0%)	52 (8.5%)	91 (14.9%)	267 (43.7%)	158 (25.8%)	31 (5.1%)
2. Friends	10 (1.6%)	52 (8.5%)	101 (16.5%)	334 (54.7%)	80 (13.1%)	34 (5.6%)
3. Spouse/Partner	50 (8.2%)	56 (9.2%)	200 (32.7%)	169 (27.7%)	68 (11.1%)	68 (11.1%)
4. Psychologist	28 (4.6%)	72 (11.8%)	170 (27.8%)	220 (36.0%)	78 (12.8%)	43 (7.0%)
5. Psychiatrist	39 (6.4%)	78 (12.8%)	192 (31.4%)	179 (29.3%)	72 (11.8%)	51 (8.3%)
6. Hospital	33 (5.4%)	88 (14.4%)	187 (30.6%)	188 (30.8%)	60 (9.8%)	55 (9.0%)
7. Telephone counseling service	99 (16.2%)	132 (21.6%)	223 (36.5%)	67 (11.0%)	29 (4.7%)	61 (10.0%)
8. Colleagues	85 (13.9%)	122 (20.0%)	225 (36.8%)	94 (15.4%)	19 (3.1%)	66 (10.8%)
9. Not seeking help from anyone	140 (22.9%)	115 (18.8%)	194 (31.8%)	64 (10.5%)	26 (4.3%)	72 (11.7%)

Based on the DASS-21 scale, the results revealed that 22.2%, 51.0%, and 32.6% of the students experienced moderate-to-severe stress, anxiety, and depression, respectively (Table 3).

Table 3 Assessment of students’ mental health based on the DASS-21 scale

Mental Health Problem	Stress	Anxiety	Depression
Normal	346 (56.6%)	218 (35.7%)	279 (45.7%)
Mild	88 (14.4%)	43 (7.0%)	91 (14.9%)
Moderate	74 (12.1%)	146 (23.9%)	126 (20.6%)
Severe	46 (7.5%)	62 (10.1%)	34 (5.6%)
Extremely severe	16 (2.6%)	104 (17.0%)	39 (6.4%)
Missing information	41 (6.8%)	38 (6.3%)	42 (6.8%)

The proportion of students experiencing comorbid stress-anxiety-depression (from moderate to extremely severe) (89 students, 14.56%) and comorbid anxiety-depression (from moderate to extremely severe) (82 students, 13.4%) was high, and considerably higher compared to single-problem or other combination groups (Figure 1).

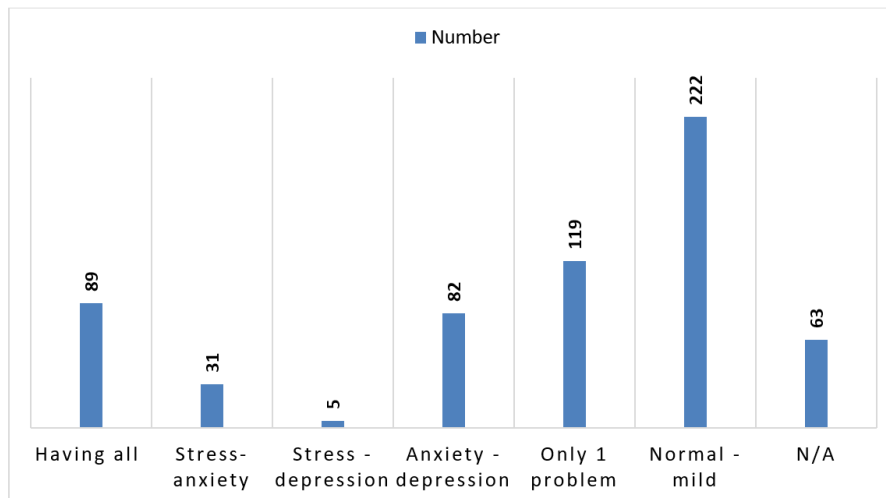


Figure 1. The number of students encountering groups of problems related to stress - anxiety - depression at moderate - severe - extremely severe levels.

3.3. Factors associated with mental health problems in pharmacy students

Factors associated with stress among students included a pre-existing history of mental health issues ($p < 0.001$), having at least 1 - 2 close people to rely on ($p < 0.05$), and the perceived ability to “possibly,” “easily,” or “very easily” receive help from neighbors ($p < 0.05$). (Table 4). No significant multicollinearity was detected among the OSSS-3 variables (all VIF values ranged from 1.13 to 1.17).

Table 4 Univariate logistic regression analysis of factors related to stress (N = 570)

Characteristics		OR (95% CI)	P
A pre-existing history of mental health disorders	No	1	-
	Yes	2.50 (1.54 - 4.07)	< 0.001
Number of close people to rely on when having major problems	None	1	-
	1 - 2 people	0.47 (0.26 - 0.86)	0.014
	3 - 5 people	0.29 (0.15 - 0.58)	< 0.001
	Over 5 people	0.34 (0.14 - 0.83)	0.018
Ability to receive help from neighbors	Very difficult	1	-
	Difficult	0.72 (0.33 - 1.55)	0.396
	Possible	0.35 (0.18 - 0.69)	0.003
	Easy	0.22 (0.09 - 0.56)	0.001
	Very easy	0.09 (0.01 - 0.77)	0.028

Reference category with odds ratio (OR) set to 1.

Factors associated with anxiety among students included being in year 4 or year 5 ($p < 0.05$), a history of mental health issues ($p = 0.011$), current acute illness ($p = 0.002$), having 3 to 5 close people to rely on for major personal problems ($p < 0.05$), and the perceived ability to “possibly,” “easily,” or “very easily” receive help from neighbors ($p < 0.05$). (Table 5)

Table 5 Univariate logistic regression analysis of factors related to anxiety (N = 573)

Characteristics		OR (95% CI)	P
Academic year	Year 1	1	-
	Year 2	1.09 (0.55 - 2.14)	0.810
	Year 3	0.70 (0.43 - 1.15)	0.158
	Year 4	0.50 (0.29 - 0.84)	0.009
	Year 5	0.59 (0.37 - 0.96)	0.032
A pre-existing history of mental health disorders	No	1	-
	Yes	1.90 (1.16 - 3.10)	0.011
Acute illness	No	1	-
	Yes	1.82 (1.24 - 2.66)	0.002
Number of close people to rely on when having major problems	None	1	-
	1-2 people	0.77 (0.42 - 1.43)	0.408
	3-5 people	0.41 (0.21 - 0.78)	0.007
	Over 5 people	0.74 (0.33 - 1.62)	0.444
Ability to receive help from neighbors	Very difficult	1	-
	Difficult	0.76 (0.33 - 1.74)	0.514
	Possible	0.42 (0.20 - 0.87)	0.019
	Easy	0.30 (0.13 - 0.70)	0.005
	Very easy	0.17 (0.05 - 0.61)	0.006

Reference category with odds ratio (OR) set to 1.

Factors associated with depression among students included being in year 3 or year 5 ($p < 0.05$), a pre-existing history of mental health issues ($p < 0.001$), having more than 3 close people to rely on ($p < 0.05$), and the perceived ability to receive help from neighbors ($p < 0.05$). (Table 6)

Table 6 Univariate logistic regression analysis of factors related to depression (N = 569)

Characteristics		OR (95% CI)	P
Academic year	Year 1	1	-
	Year 2	1.27 (0.66 - 2.43)	0.470
	Year 3	0.60 (0.37 - 1.0)	0.049
	Year 4	0.74 (0.44 - 1.26)	0.269
	Year 5	0.46 (0.28 - 0.76)	0.002
A pre-existing history of mental health disorders	No	1	-
	Yes	2.34 (1.47 - 3.74)	< 0.001
Number of close people to rely on when having major problems	None	1	-
	1 - 2 people	0.74 (0.41 - 1.32)	0.306
	3 - 5 people	0.29 (0.15 - 0.55)	< 0.001
	Over 5 people	0.51 (0.23 - 1.12)	0.092
Ability to receive help from neighbors	Very difficult	1	-
	Difficult	0.26 (0.12 - 0.58)	0.001
	Possible	0.24 (0.12 - 0.48)	< 0.001
	Easy	0.19 (0.08 - 0.44)	< 0.001
	Very easy	0.16 (0.04 - 0.60)	0.006

Reference category with odds ratio (OR) set to 1.

Based on the univariate logistic regression results, several factors are significantly associated with stress, anxiety, and depression among students. The findings indicate that fourth- and fifth-year students generally exhibit lower odds of anxiety and depression compared to first-year students ($p < 0.05$). A pre-existing history of mental health issues emerged as the most significant associated factor across all three conditions ($p < 0.05$). Additionally, concurrent acute illness was specifically identified as a significant risk factor for anxiety ($OR = 1.82$; $p = 0.002$). Furthermore, having a support network of 3 - 5 close people significantly decreases the likelihood of all three conditions, with OR values ranging from 0.29 to 0.41. Interestingly, even having a smaller circle of just 1 - 2 close individuals significantly reduces the odds of stress ($OR = 0.47$). Lastly, students who find it very easy to receive practical help from neighbors demonstrate a 91% lower odds of stress ($OR = 0.09$; $p = 0.028$) and an over 80% reduced odds of anxiety and depression ($p = 0.006$) compared to those who find such support very difficult to obtain.

4. DISCUSSION

4.1. General characteristics of pharmacy students

The survey of 611 pharmacy students revealed a female predominance (76.8%), which is consistent with historical enrollment trends for pharmacy programs. More than half of the students originate from rural areas and currently live in rented accommodations. The transition from a rural to an urban environment, coupled with independent living, can act as a psychological risk factor; students often face intense academic pressure and homesickness while lacking immediate familial support. Furthermore, a substantial 70.5% of pharmacy students do not engage in part-time work. This is likely attributable to the rigorous, full-time nature of the pharmacy curriculum, which leaves students with minimal free time. Notably, 14.2% of the cohort reported a pre-existing history of mental health problems. This is a critical proportion that warrants attention, as the current study demonstrates that a prior psychiatric history is strongly associated with higher odds of stress, anxiety, and depression.

4.2. Assessment of mental health problems and the help-seeking intentions of pharmacy students

Regarding help-seeking intentions for mental health problems, the findings indicate that pharmacy students have various support options but heavily prioritize informal sources over formal ones. Specifically, students were more likely to “often” or “very often” seek help from friends and

family members compared to formal services like psychologists or psychiatrists. This trend suggests a prevailing hesitancy among the surveyed students to utilize formal psychological support, a finding that aligns closely with previous literature [10, 25, 26].

Furthermore, it is noteworthy that 14.8% of students ($n = 90$) reported they would “often” or “very often” choose not to seek help from anyone. While this represents a minority, this vulnerable subgroup requires special attention and proactive screening for mental health issues. This avoidance behavior mirrors findings from a similar cohort at Thai Nguyen University of Medicine and Pharmacy, where students also exhibited a strong tendency to rely on individuals without mental health expertise rather than seeking professional care [26]. Although university-based psychological counseling services and student support centers are being developed, the low intention to utilize these formal resources highlights significant underlying barriers. Within the highly demanding environment of a medical and pharmacy university, students may hesitate to seek professional help due to strict concerns regarding confidentiality and the fear of potential academic repercussions. Furthermore, the enduring social stigma associated with mental health treatment, coupled with practical constraints such as dense academic schedules and unfamiliarity with the booking procedures for these counseling services, likely deters students from accessing the help they need [27, 28].

Based on the DASS-21 assessment, a concerning proportion of the surveyed pharmacy students experienced mental health challenges. The most prevalent issue was anxiety (51.0%), followed by depression (32.6%) and moderate-to-severe stress (22.2%). However, these rates are lower than those reported in a similar study at the Vietnam College of Industry and Trade [29]. They are also notably lower than the overall prevalence rates previously recorded among the broader student population at Hue University, which were 81.55% for anxiety, 57.09% for depression, and 51.84% for stress [30]. Nevertheless, these DASS-21 findings highlight significant psychological problems and underscore the need for comprehensive mental health evaluations among pharmacy students at the Hue University of Medicine and Pharmacy, Hue University.

A particularly alarming finding of this study is the high comorbidity rate, with 14.6% of the surveyed pharmacy students simultaneously experiencing moderate to severe levels of stress, anxiety, and depression. The co-occurrence of these conditions

is well-documented in psychiatric literature [31], and such comorbidity is particularly prevalent among health science students, driven by intensive academic demands, clinical rotations, and ongoing personal stressors [32]. Consequently, this specific comorbid subgroup represents the most vulnerable tier within the student population. Furthermore, within psychopathological frameworks such as the tripartite model, this comorbidity is linked to a shared core of negative affect. This reflects a general vulnerability to psychological distress that complicates the clinical picture and significantly increases the overall psychological burden [33].

4.3. Factors associated with mental health problems in pharmacy students

Regarding the factors associated with these conditions, the univariate analysis identified the academic year, a pre-existing history of mental health issues, and the availability of social support as measured by the individual items of the Oslo Social Support Scale (OSSS-3) [24] as statistically significant predictors. Among these, a pre-existing history of mental health problems exhibited the strongest association across all three domains: students with a prior psychiatric history were 1.9 to 2.5 times more likely to experience stress, anxiety, and depression compared to those without such a history ($p < 0.05$). This strong association can be explained by the high risk of recurrence inherent in many mental health conditions. Furthermore, robust social support emerged as a vital protective factor. The likelihood of experiencing psychological distress decreased significantly as the size of a student's support network increased, particularly for those with 3 to 5 close people to rely on ($p < 0.001$). Similarly, the perceived ease of receiving practical support from neighbors significantly reduced the odds of experiencing all three conditions ($p < 0.05$). These findings align with research conducted at the Vietnam College of Industry and Trade [29] and reaffirm the essential role of family and community support in mitigating psychological problems.

Academic progression also played a critical role in students' psychological well-being. Senior students (Years 4 and 5) demonstrated a significantly lower risk of anxiety compared to first-year students ($p < 0.05$), a trend consistent with findings by Votta et al. [34]. Similarly, third- and fifth-year students had a lower risk of depression than first-year students ($p < 0.05$). This vulnerability among freshmen is likely due to the stressful transition into a new university environment, combined with the rigorous academic demands of the pharmacy training program. Given that first-year

students are particularly vulnerable to psychological distress compared to their senior counterparts, early and proactive intervention is crucial. It is highly recommended that the university designs and implements targeted 'psychological orientation' programs specifically tailored for freshmen right from their initial enrollment. Conversely, physical health directly impacted psychological stability; the presence of an acute illness significantly exacerbated anxiety, resulting in 1.82 times higher odds ($OR = 1.82$; 95% $CI = 1.24 - 2.66$; $p = 0.002$).

4.4. Limitations of the study

This study has several limitations. First, the cross-sectional design precludes establishing causal relationships, limiting findings to associations. Second, the online survey methodology is susceptible to selection and non-response biases. Third, reliance on self-report data introduces potential information bias, as stigma may lead to under-reporting of symptoms. Additionally, while the available-case analysis approach effectively maximized the sample size for each regression model, it may introduce potential selection bias. If the omitted responses were inherently linked to the severity of the participants' psychological distress (i.e., missing not at random), the reported prevalence and the strength of the observed associations might be slightly underestimated. Fourth, the DASS-21 is a screening instrument, not a diagnostic tool; consequently, the findings reflect symptom prevalence rather than clinically diagnosed disorders, which would require direct clinical assessment. Fifth, the statistical analysis primarily relies on univariate logistic regression. Although multivariable models were initially computed to control for confounders, significant multicollinearity among the highly correlated social support variables (e.g., support from close confidants and neighbors) caused most factors to lose independent predictive value. Therefore, the unadjusted models were prioritized to fulfill the study's exploratory objective of comprehensively identifying all potential psychosocial factors to better inform university counseling programs.

Although the OSSS-3 is conventionally scored as a sum (range 3 - 14) with established normative data, acceptable internal consistency (Cronbach's $\alpha = 0.640$), and a clear one-factor structure [24], the current study analyzed the three items separately. This decision was made to provide more granular information for designing targeted university interventions (structural versus functional support) and to avoid loss of detail due to multicollinearity among the highly correlated social support

variables. The recoding of item 20 was performed post-data collection solely for analytical and tabular purposes. Consequently, direct comparisons with studies using the conventional sum score should be interpreted with caution. The adapted Vietnamese version has not yet undergone formal back-translation or full psychometric validation beyond the current sample.

The General Help-Seeking Questionnaire (GHSQ) used in this study assessed hypothetical help-seeking intentions rather than actual behaviours. Although intentions are strong predictors of future actions, a well-documented gap exists between stated intentions and real-world utilisation of mental health services. In addition, the original 7-point Likert scale was modified to a 5-point scale (ranging from 1 = “Never” to 5 = “Very often”) and the help-source list was culturally adapted for Vietnamese pharmacy students. While this modification was supported by empirical evidence from Monte Carlo simulations and comparative studies demonstrating that 5-point scales maintain comparable psychometric properties (reliability and validity) to 7-point scales while reducing respondent fatigue, cognitive burden, and item omission rates — advantages especially relevant for online student surveys — the adapted version has not yet undergone formal back-translation or full psychometric validation in this specific population. As a result, direct comparability with international studies using the original GHSQ framework may be limited.

5. CONCLUSIONS

In conclusion, a concerning proportion of pharmacy students at Hue University of Medicine and Pharmacy experience symptoms of stress, anxiety, and depression. When facing potential mental health problems, these students showed a higher intention to seek support from informal networks, such as family and friends, and reported a lower intention to utilize formal professional resources. Consequently, it is necessary to implement targeted educational interventions to promote mental health awareness and encourage the future utilization of professional psychological counseling services and university-based psychotherapy centers.

ACKNOWLEDGMENTS

The authors would like to express their gratitude to all pharmacy students at Hue University of Medicine and Pharmacy who agreed to participate in the study, and to the faculty members of the

Faculty of Pharmacy for their assistance during the implementation of this research.

Funding for this research was supported by Hue University of Medicine and Pharmacy.

7. CONFLICT OF INTEREST

The authors declare no conflict of interest.

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