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HEALTH SERVICE UTILIZATION AND ASSOCIATED FACTORS AMONG INDIAN MEDICAL STUDENTS IN VIETNAM

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ABSTRACT

Objective: To describe the current status of health service utilization and explore associated factors among Indian medical students in Vietnam.

Methods: A cross-sectional study was conducted in April 2026 among all first-year Indian medical students at Dai Nam University, Vietnam. Of 192 eligible students, 190 participated (response rate: 99.0%). Data were collected using a structured self-administered questionnaire via Google Forms. Descriptive statistics were used to summarize the data, and Chi-square tests were applied to examine associations between variables and health service utilization.

Results: Most participants reported good or fair self-rated health (79.48%), and the prevalence of chronic diseases was low (6.84%). Health-related behaviors were generally positive, with 97.37% being non-smokers, 94.21% reporting no alcohol consumption, and 88.42% engaging in physical activity at least once per week. Only 24.74% of students reported using health services in the past 12 months. Among service users, private clinics or hospitals were the most utilized (42.55%), followed by public hospitals (36.17%). Acute illness was the leading reason for healthcare utilization (42.55%). No statistically significant factors associated with health service utilization were identified ($p > 0.05$).

Conclusion: Indian medical students in Vietnam demonstrated relatively good health status and positive health behaviors; however, health service utilization remained low. Strategies to promote access to healthcare services, particularly preventive and mental health services, for international students are needed.

Keywords: Health service utilization; medical students; international students; health behavior; healthcare access.

1. INTRODUCTION

Medical students are considered a high-risk population for both physical and mental health problems due to academic pressure and demanding training environments. Previous studies in Vietnam have reported considerable prevalence of depression and anxiety among medical students, ranging from 14.5% to over 40% depending on the context [1, 2]. In addition, common health issues such as headaches, poor sleep quality, and reduced quality of life have also been widely documented [3, 4]. Despite these health needs, the utilization of healthcare services, particularly mental health services, remains limited, with only about 12.5% of students with depressive or anxiety symptoms seeking professional care [5].

Most existing studies, however, have focused on Vietnamese medical students. International students, particularly Indian students studying in Vietnam, may face additional challenges related to language barriers, cultural differences, and unfamiliar healthcare systems. To date, there is a lack of evidence describing healthcare utilization and its associated factors among this population. Therefore, this study aims to describe the current status of health service utilization among Indian medical students in Vietnam and to explore some associated factors.

2. METHODS

2.1. Study design: This is a cross-sectional descriptive study.

2.2. Study setting and duration: The study was conducted at Dai Nam University, Vietnam, in April 2026.

2.3. Study population: The study population included all first-year Indian medical students currently studying at Dai Nam University, Vietnam, at the time of the survey.

2.4. Sample size and sampling method: A total population sampling approach was used. All 192 eligible students were invited to participate, of whom 190 completed the questionnaire, yielding a response rate of 99.0%.

2.5. Variables and measurements: The dependent variable was health service utilization in the past 12 months (yes/no). Independent variables included socio-demographic characteristics (age, gender, marital status, Vietnamese language proficiency, GPA, and monthly living expenses), health status (self-rated health and presence of chronic disease), and health-related behaviors (smoking status, alcohol consumption, and physical activity). Self-rated health was measured using a 5-point Likert scale ranging from very poor to very good. Chronic disease was defined as any condition diagnosed by a doctor. Smoking and alcohol use were categorized based on frequency.

2.6. Data collection methods and tools: Data were collected using a structured, self-administered

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questionnaire developed based on previous studies and adapted to the study context. The questionnaire was distributed online via Google Forms. It included sections on socio-demographic characteristics, health status, health behaviors, and health service utilization. Participation was voluntary, and responses were collected anonymously.

2.7. Data management and analysis: Data were reported and analyzed using Stata software. Descriptive statistics were used to summarize the data, including frequencies and percentages for categorical variables and means with standard deviations for continuous variables. Chi-square tests were applied to assess associations between independent variables and health service utilization. A p-value of less than 0.05 was considered statistically significant.

2.8. Ethical considerations: Participation in the study was voluntary, and informed consent was obtained from all participants prior to data collection. The questionnaire was anonymous, and no personally identifiable information was collected. All data were used solely for research purposes and kept confidential. The study complied with ethical standards for research involving human participants.

3. RESULTS

Table 1. Socio-demographic characteristics of Indian medical students (n = 190)

Characteristics		N	%
Gender	Male	61	32.11
	Female	129	67.89
Marital status	Single	188	98.95
	Married	1	0.53
	Other	1	0.53
Vietnamese language proficiency	Very poor	25	13.16
	Poor	68	35.79
	Fair	76	40.00
	Good	20	11.06
	Very good	1	0.53
		Mean ± SD	**Min – Max**
Age (years)		20.20 ± 1.38	18 – 25
GPA (last semester)		3.08 ± 0.25	1.60 – 3.75
Monthly living expenses (USD)		89.38 ± 99.12	0 – 1000

Participants were dominantly female (67.89%) and single (98.95%). Most participants reported limited Vietnamese proficiency, with levels primarily rated as fair (40.00%) and poor (35.79%). There is little variation in the mean age (20.20 ± 1.38 years) and GPA (3.08 ± 0.25). There is a wide range in monthly expenses (89.38 ± 99.12 USD).

Most participants rated their health as good (40.53%) or fair (38.95%). The majority reported no chronic disease (93.16%). Nearly all students were non-smokers (97.37%) and reported no alcohol consumption (94.21%). Most participants engaged in physical activity at least once per week (88.42%) (Table 2).

Table 2. Health status and health-related behaviors of Indian medical students

Characteristics		N	%
Self-rated general health status	Very poor	6	3.16
	Poor	16	8.42
	Fair	74	38.95
	Good	77	40.53
	Very good	17	8.95
Chronic disease	No	177	93.16
	Yes	13	6.84
Smoking status	Never	185	97.37
	Former smoker	2	1.05
	Current smoker	3	1.58
Alcohol consumption frequency	Never	179	94.21
	Monthly or less	7	3.68
	2–3 times/week	1	0.53
	≥4 times/week	3	1.58
Physical activity (≥30 min/session per week)	No (0 times/week)	22	11.58
	Yes (≥1 time/week)	168	88.42
	Total	190	100

Table 3. Health service utilization among Indian medical students

Characteristics		N	%
Health service utilization (past 12 months, n=190)	No	143	75.26
	Yes	47	24.74
Type of health facility used (n = 47)	Public hospital	17	36.17
	Private clinic/ hospital	20	42.55
	Pharmacy	5	10.64
	Other	5	10.64
Main reasons for healthcare utilization (n = 47)	Acute illness	20	42.55
	Mental health	2	4.26
	Routine check-up	3	6.38
	Injury	5	10.64
	Other	17	36.17

Overall, 24.74% of participants reported using health services in the past 12 months. Among service users (n = 47), private clinics or hospitals were the most popular choice (42.55%), followed by public hospitals (36.17%). Acute illness was the most frequently reported reason for healthcare utilization (42.55%), while mental health-related reasons were the least common (4.26%).

Table 4. Factors associated with health service utilization among Indian students in Vietnam

Characteristics		Have used service n (%)	Have not used servicen (%)	p-value
Gender	Male	13 (21.31)	48 (78.69)	0.452
	Female	34 (26.36)	95 (73.64)	
Marital status	Single	47 (25.00)	141 (75.00)	0.717
	Married	0 (0.00)	1 (100.00)	
	Other	0 (0.00)	1 (100.00)	
Vietnamese language proficiency	Very poor	8 (32.00)	17 (68.00)	0.401
	Poor	16 (23.53)	52 (76.47)	
	Fair	17 (22.37)	59 (77.63)	
	Good	5 (25.00)	15 (75.00)	
	Very good	1 (100.00)	0 (0.00)	
Self-rated general health condition	Very poor	2 (33.33)	4 (66.67)	0.257
	Poor	6 (37.50)	10 (62.50)	
	Fair	22 (29.73)	52 (70.27)	
	Good	15 (19.48)	62 (80.52)	
	Very good	2 (11.76)	15 (88.24)	
Chronic disease	No	43 (24.29)	134 (75.71)	0.601
	Yes	4 (30.77)	9 (69.23)	
Smoking status	Non-smoker	45 (24.32)	140 (75.68)	0.423
	Smoker	2 (40.00)	3 (60.00)	
Alcohol consump-tion	No	44 (24.58)	135 (75.42)	0.841
	Yes	3 (27.27)	8 (72.73)	
Physical activity (≥30 min/session per week)	No (0 times/ week)	18 (23.68)	58 (76.32)	0.700
	Yes (≥1 time/ week)	29 (25.44)	85 (74.56)	
	Total	47 (24.74)	143 (75.26)	

No statistically significant associations were observed between socio-demographic characteristics, health status, or health behaviors and health service utilization (all $p > 0.05$). The proportion of health service use was 21.31% in males and 26.36% in females. Higher utilization was also observed among participants with very poor (33.33%) and poor (37.50%) self-rated health, those with chronic disease (30.77%), and smokers (40.00%).

4. DISCUSSION

This study provides an overview of health status, health-related behaviors, and health service utilization among Indian medical students at Dai Nam University, Vietnam. Overall, participants reported relatively good self-rated health, a low prevalence of chronic diseases, and generally favorable health behaviors, including low rates of smoking and alcohol consumption and high levels of physical activity. However, only about one-quarter of participants reported using health services in the past 12 months. No statistically significant factors associated with healthcare utilization were identified.

The relatively positive self-rated health observed in this study may reflect the young age and low burden of chronic disease in the study population. However, previous studies conducted among Vietnamese medical students have reported a considerable burden of mental health problems, including depression and anxiety, with prevalence rates ranging from 14.5% to over 40% depending on context [1, 2]. Additional health concerns such as headaches and poor sleep quality are also common [3, 4]. These discrepancies suggest that self-rated health alone may not fully capture underlying health issues, particularly mental health conditions, in student populations.

The health behaviors reported in this study appear generally favorable. While this study found a very high non-smoking rate (97.37%) among Indian students, studies on Vietnamese medical student populations show more varied results. For example, one study found a smoking prevalence of 19.2% among males and 2.9% among females [6], though another found that 96.7% of students reported being non-smokers or smoking less [7]. Furthermore, while physical activity was high in our sample, previous studies indicate that a significant proportion (42.5%) of Vietnamese medical students are physically inactive [6]. Regarding sleep, previous findings show that poor sleep quality remains a notable issue, affecting over a third (36.6%) of medical students [4]. In addition, evidence suggests that healthy behaviors such as regular exercise and balanced diet are associated with reduced levels of anxiety and depression, while smoking is linked to increased psychological distress. Although the present study shows a high level of physical activity, further investigation into the quality and consistency of these behaviors is warranted.

The proportion of students using health services in the past 12 months was relatively low (24.74%), and utilization was mainly driven by acute illness rather than preventive care. This pattern is consistent with previous findings indicating that healthcare utilization among students is often reactive rather than proactive. Notably, prior research has shown that only a small proportion (12.5%) of students with mental health problems seek professional care [5]. Financial constraints and perceived barriers to accessing healthcare have also been identified as key determinants of service utilization [8]. These factors are also associated with poorer mental health outcomes and reduced quality of life [7, 9, 10]. Although no statistically significant associations

were identified in this study, descriptive trends suggest higher utilization among students with poorer health status and risk behaviors.

This study has several limitations. The cross-sectional design limits causal inference, and the use of self-reported data may introduce recall bias. The sample was limited to a single institution and may not be representative of all international students in Vietnam. Importantly, there is a lack of existing studies focusing specifically on international medical students in Vietnam, which restricts direct comparisons. Most available evidence relates to Vietnamese medical students, whose experiences and contextual factors may differ significantly from those of international students.

5. CONCLUSION

In conclusion, Indian medical students in Vietnam demonstrate relatively good health status and positive health behaviors, yet healthcare utilization remains limited. The findings underscore the importance of improving access to healthcare services, particularly preventive and mental health services, for international students. Given the lack of prior research on this population in Vietnam, further studies are needed to better understand the unique healthcare needs and barriers faced by international students.

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