

Prevalence of alexithymia among medical students in Nepal: A cross-sectional study based on a self-administered questionnaire

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Abstract

Background and Aims: Alexithymia is a state in which one cannot comprehend and put their emotions or feelings into words. It is a disturbance that is common among general population as well as people with mental health disorders. Medical students are at higher risk of developing alexithymia due to the extensive nature of their course and clinical postings. The presence of alexithymia is negatively correlated with the self-efficacy of the students eventually affecting self-care and patient care in the future. The aim of this study is to find the prevalence of alexithymia among medical students in Nepal and know its associated factors.

Methods: This cross-sectional study used convenient sampling for selecting responders and the TAS-20 tool for data collection. Data were analyzed by using SPSS 20. Frequency was calculated for all the variables. Prevalence with 95% confidence interval [CI] is reported and the χ^2 test is used to see the difference in alexithymia status among different categories of dichotomous independent variables.

Results: Out of 386 students, 380 of them responded. The ratio of male and female was 1.8 with the mean age of 22.22 ± 1.77 years. The prevalence of alexithymia was found to be 22.89% (95% CI, 18.9–27.1). There was no statistically significant difference between the presence and absence of alexithymia among categories of sex, year of study, staying at hostel, involvement in extracurricular activities, involvement in daily exercise/yoga/outdoor sports, and smoking habit.

Conclusion: The prevalence of alexithymia in our study was 22.89% with no association with known factors.

KEYWORDS

affective symptom, alexithymia, emotional disturbance, medical students, prevalence

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1 | INTRODUCTION

Alexithymia, first used by Sifneos in 1973, is a word used to describe the personality trait of not being able to comprehend and put emotions or feelings into words.¹ Such trait was noticed by Sifneos frequently among patients with psychosomatic disorders. Alexithymia is a disturbance that is common to the general population as well as people with mental health disorders. However, the prevalence of alexithymia is higher among patients with psychosomatic disorders than in the common public implying that alexithymic patients are more vulnerable to psychiatric illness.² Further, the prevalence of mental health disorders among medical students is three times that of the general population^{3,4} yet again implying that medical students tend to have alexithymia more commonly. It is believed to be a personality trait that along with other environmental factors worsens somatic diseases and contributes to the emergence of mental illness.⁵

Medical students are at higher risk of developing alexithymia due to the extensive nature of their course and clinical postings.^{6,7} Prevalence among medical students is found to be as high as 49% in one study.⁶ This condition is negatively correlated with the self-efficacy of the students eventually affecting self-care and patient care in the future.⁸ This suggests the reason why this study will be important. First, to be a nidus to future research and development in the literature on alexithymia in Nepal, and second, to plant awareness among medical students that something as common as alexithymia is still a new topic to be uncovered.

This is a cross-sectional study to find out the prevalence of alexithymia among the medical students of Nepal.

2 | METHODS

2.1 | Ethical consideration

Ethical clearance for this study was received from the institutional review committee of Nepalese Army Institute of Health Sciences (NAIHS-IRC) with reference number 466. Ethical clearance was taken from the board before starting the data collection.

2.2 | Study design and setting

This is a cross-sectional study based on a Toronto Alexithymia Scale (TAS-20)⁹ questionnaire, which is a self-administered questionnaire. This study was carried out among undergraduate medical students of Nepal. A list of students from 20 medical colleges was accessed and after the random selection of respondents from the list, they were sent the weblink to Google Forms containing the questionnaire. An informed consent form was included in the study tool and those who voluntarily agreed to be part of the study could access the questionnaire.

2.3 | Sample size

We used Cochran's formula¹⁰ for sample size calculation, with the expected prevalence of students having alexithymia being 50% with a 5% margin of error. The sample was adjusted as per the population of medical students in Nepal, then considering the nonresponse rate of 5%, the final sample size was 386. The details of the sample size calculation is available in Supplementary file 1.

2.4 | Sampling technique

Convenient sampling method was applied in this study. A total of 386 students were selected in total through this method.

2.5 | Study tool

In this study, TAS-20 questionnaire was used to assess the prevalence of alexithymia. This self-administered questionnaire consists of 20 questions in a 5-point Likert scale where 1 = strongly disagree, and 5 = strongly agree. For the diagnosis of alexithymia, the cut-off score is ≥ 61 . Scores between 52 and 60 indicate possible alexithymia and a score ≤ 51 means no alexithymia.¹¹ The study tool used in this study is available as Supporting Information: File 1.

2.6 | Dependent and independent variables (IVs)

All the variables, both IVs and dependent variables (DV) were categorical and dichotomous except for age. The DV is the presence of alexithymia or not. IVs include age, sex, year of study, stays at a hostel or not, being involved in extracurricular activities or not, daily exercise/yoga/outdoor sports, and smoking habits.

2.7 | Analytical strategy

Data is refined in Microsoft Excel and analysed by using SPSS 20. Frequency is calculated for both dependent and IVs. The prevalence of alexithymia is calculated with a 95% confidence interval (CI). χ^2 test is done to see if the presence of alexithymia differs among categories of IVs.

3 | RESULTS

Out of 386 students, 380 students responded, out of which the majority of the respondents were males (63.68%), studying in the clinical phase (62.89%), staying hostel (63.16%), involved in extracurricular activities (65.26%), involved in daily exercise/yoga/outdoor sports (52.11%), and non-smokers (90.53%). The respondents had a

TABLE 1 Characteristics of the included sample.

Characteristics	Sample group (N = 380)	
	n	%
Age (in years)		
Late Teen (17–19)	19	5.00
Early twenties (20–23)	267	70.26
Mid-twenties (24–26)	90	23.68
Late twenties (27–28)	4	1.05
Sex		
Male	242	63.68
Female	138	36.32
Year of study		
Preclinical	141	37.10
Clinical	239	62.89
Stays at hostel		
Yes	240	63.16
No	140	36.84
Involved in extracurricular activities		
Yes	248	65.26
No	132	34.74
Involved in daily exercise/yoga/outdoor sports		
Yes	198	52.11
No	182	47.89
Smoking habit		
Yes	36	9.47
No	344	90.53

TABLE 2 Prevalence of Alexithymia.

Type of alexithymia	Sample group (N = 380)			
	n	%	95% Confidence Interval	
			Lower	Upper
Alexithymia	87	22.89	18.9	27.1
Possible alexithymia	160	42.10	37.6	47.4
No alexithymia	133	35.00	30.3	39.5
Total	380	100	-	-

mean age of 22.22 ± 1.77 years (Mean \pm SD). The sociodemographic details are listed in Table 1.

This study found the prevalence of alexithymia to be 22.89% (95% CI, 18.9–27.1). Out of three possible diagnoses, respondents diagnosed with possible alexithymia were in majority. Details are showcased in Table 2.

To see if the difference existed between diagnoses of alexithymia (1 = Yes, 2 = No) among categories of IVs, the χ^2 test was carried

out and it showed there was no statistically significant difference. Details follow in Table 3. The Cronbach's alpha value in this study is 0.785 which shows good internal consistency.

4 | DISCUSSION

This study aims to find the prevalence of Alexithymia among medical students in Nepal and its association with different factors such as sex, year of study, hostel stay, involvement in extracurriculars, involvement in daily exercises or yoga or outdoor sports, and smoking. The prevalence of Alexithymia in the present study is 22.89%, which is much lower than a study in Saudi Arabia (49%),⁶ but similar to several other studies done in Jordan (24.6%)¹² and Iran (21.8%),¹³ and higher than that done in Tunisia (16.5%).¹⁴ This wide variation may be due to differences in study populations (some only include students from the foundation year, others have much more study populations from preclinical years than clinical years), associated co-morbidities, and differences in curriculum among different geographics and universities.

Our study shows no significant difference in the prevalence of alexithymia among males and females well supported by other studies done at King Abdulaziz University⁶ and the Japanese community people.¹⁵ The results are contrary to studies done in China¹⁶ where males were found to have a higher percentage of alexithymia than females. However, other studies^{12,17} have shown the prevalence of alexithymia to be significantly high in females. A meta-analysis by Levant et al.¹⁸ included 13 clinical samples (10 of which showed no significant difference between males and females) and 32 nonclinical samples (14 studies found no difference), however, the results showed that the average score was higher for men than women. As per the meta-analysis, the exact cause for gender difference (male > female) is yet not known but it could align with the “Normative Male Alexithymia (NMA) hypothesis,” partially, fully, or not at all. The NMA hypothesis explains why men often find it difficult to express or vocalize their emotions, because of the traditional practice they have been brought up with, by discouraging them to express how they feel since boyhood to preserve their masculinity.^{18,19}

As per one study, alexithymia is found to be higher in the initial years of medical school.⁶ They attribute the difference to the huge loads of lectures in the foundation years and difficulty coping with the new stressful academics. However, the present study shows no such difference. This may suggest that medical students, regardless of the year of study, go through a certain level of stress due to the need for adherence to studies and good academic performance, which this course demands throughout medical school.

The present study shows no association between alexithymia and decreased physical activity. However, many studies^{14,16,20} have found that students not involved in physical activities are at higher risk of the disease. This should not go unnoticed that still a huge population of medical students live a sedentary life and are thus at risk of various systemic disorders. According to Park et al. sedentary lifestyle behaviors show “increased all-cause mortality, cardiovascular disease mortality, cancer risk, and risks of metabolic disorders such as

TABLE 3 Results of pearson χ^2 .

Analyses	Pearson χ^2	Asymptotic significance
Diagnosis of alexithymia* sex	0.747	0.387
Diagnosis of alexithymia* year of study	0.472	0.492
Diagnosis of alexithymia* stays at a hostel	0.071	0.790
Diagnosis of alexithymia* involved in extracurricular activities	0.939	0.333
Diagnosis of alexithymia* involved in daily exercise/yoga/outdoor sports	0.106	0.745
Diagnosis of alexithymia* smoking Habit	0.537	0.464

diabetes mellitus, hypertension, and dyslipidemia; musculoskeletal disorders such as arthralgia and osteoporosis; depression; and cognitive impairment."²¹ It has become really important to promote physical activity and sports among medical students for their physical and mental health despite their hectic academic and clinical routines.

Smoking is an important risk factor for alexithymia. Studies from medical students in China,¹⁶ Saudi Arabia,⁶ and Tunisia¹⁴ show a higher score of TAS-20 among smokers than non-smokers. Moreover, this study found the percentage of possible alexithymia to be 42.10. These are the population we would like to follow, to observe if they progress to alexithymia or gets resolved.⁶

Our study is one of its kind as it includes students from 20 medical colleges, thus giving us a bit of benefit regarding the generalizability however, this study has some limitations. Firstly, a single report is not enough to support or reject the association. It requires multiple studies to make one new claim. Next, there might have been a social desirability bias when being asked about smoking habits or involvement in activities and exercises. We have tried reducing it by ensuring the participants that the results are anonymous. Also, we used convenient sampling method, so one can neither generalize nor reproduce this research finding. Due to the CoVID-19 pandemic, the online medium was used for data collection with self-reporting of data by the participants themselves questioning the uniformity in the understanding of study variables among the participants. Finally, in our study, students were in different academic years and exposed to different stressors. For instance, students in the first years were probably giving exams, while another year was having a break, this might have affected our results.

5 | CONCLUSION

On the whole, our study found the prevalence of alexithymia to be 22.89%. There were no significant differences between alexithymia and factors such as age, year of study, stay at a hostel, involvement in activities and sports, and smoking habits.

AUTHOR CONTRIBUTIONS

Sagun Karki: Conceptualization; formal analysis; writing—original draft; writing—review and editing. **Oshan Shrestha:** Conceptualization; formal analysis; writing—original draft; writing—review and editing. **Niranjan Thapa:** Data curation; writing—original draft; writing—review and

editing. **Satish Gupta:** Data curation; writing—original draft; writing—review and editing. **Amit Chaudhary:** Data curation; writing—original draft; writing—review and editing. **Abijeet Yadav:** Data curation; writing—original draft; writing—review and editing. **Pradeep Manandhar:** Conceptualization; supervision; writing—original draft; writing—review and editing.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

TRANSPARENCY STATEMENT

The lead author Sagun Karki affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ETHICS STATEMENT

Informed consent was taken from all the participants, and they were assured that there will not be in any disadvantages for not giving their consent. For those who gave the consent, they had the freewill to withdraw from the study at any time.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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