

Perceived psychological stress among undergraduate students: role of academic factors of a medical college of Kathmandu

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ABSTRACT

Introduction: Stress refers to a dynamic interaction between the individual and the environment, which described as external demands (physical or mental) on an individual's physical and psychological well-being. The objective of this study was to assess the perceived psychological stress and perception of academic stress among undergraduate students.

Methods: A cross-sectional, questionnaire-based survey was carried out among 853 undergraduate students (medical, dental and nursing) of Kathmandu Medical College, Kathmandu Nepal during August 2017 to July 2018. Perceived stress was assessed using Perceived Stress Scale-14 and perception of academic stress 18-item questionnaire was used to assess the academic factors of stress using self-administered technique. **Result:** The overall mean perceived stress score was 45.23 ± 4.96 , 99.6% of participants were in the group of more stressed and overall mean score of perception of academic stress was 54.68 ± 9.10 , and 56.3% of participants were in the group of academic stress. The correlation between perceived psychological stress and academic stress was 0.070 with P value of 0.040. **Conclusion:** Higher level of perceived stress and academic stress were reported by the students and there was weak significantly positive correlation between perceived psychological stress and academic stress.

Keywords: Academic factor, perceived stress, undergraduate students.

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INTRODUCTION

Stress is defined as “the relationship between the person and their surroundings, which is considered being physically or mentally demanding or as beyond his or her resources, putting their well-being at risk”.¹ Evidence has shown that the nursing students experience higher levels of stress than others because they have to deal with increased external stressors such as clinical responsibilities and course requirements. This can result in poor academic performance, and burnout.² It has also been reported that experience of specific academic hurdles makes them more sensitive to stress and anxiety than students in other fields.³ Likewise, the nursing students who engage in a wide range of clinical duties during their learning in clinical settings share similar stressors as professional nurses experience.⁴ Studies have shown that stress is prevalent among dental⁵ and medical students as well.⁶

Academic related problems are the greater perceived stressor whereas stress can also significantly raise problem, causing a negative impact on the academic performance, emotional and

physical difficulties as well as damage a student's feeling of self-worth.^{7,8} If the students are under more strain or stress, their learning and memory suffer, resulting in poor academic performance, low self-esteem and mental and physical problems.⁸

There are many studies done regarding perceived psychological stress in different countries, but similar literature is very less in Nepalese context. Hence, the study was aimed to assess the perceived psychological stress and perceived academic stress among undergraduate students.

METHODS

A cross-sectional, questionnaire-based survey was carried out among undergraduate students of Kathmandu Medical College, Nepal, from August 2017 to July 2018. Census method was used, so entire population was taken for the sample size after three constant follow-ups, which included 853 students, in which 548 students were from MBBS, 189 students from BDS and 116 students from Nursing, studying in first to fourth year.

Intern students were excluded as nursing students have no provision of internship. A Self-administered questionnaire was administered. The data collection tool comprised of three parts, part I consisted of socio-demographic related questions to collect personal details (age, sex, academic year, faculty, history of academic year failure, learning environment, etc.). Part II contained Perceived Stress Scale-14 (PSS-14) to measure the perceived psychological stress. The tool asked the respondents to indicate on Likert scale of 0 to 4, 0 indicating never, 1 indicating almost never, 2 indicating sometimes, 3 indicating fairly often and 4 indicating very often.⁹ The total score for PSS-14 ranged from 0 to 56. A higher score indicates greater stress¹⁰ so 28 was taken as the operational cutoff value. Part III consisted of Perceive Academic Stress (PAS-18) to measure the perceived academic stress. The tool asked the respondents to rate on a Likert scale of 1 to 5, with 1 indicating strongly disagree and 5 indicating strongly agree. The score for PAS-18 ranged from 18 to 90.¹¹⁻¹⁴ The academic stress was categorized as high stress (54 and above) and low stress (53 and below)¹⁵ so 53 was taken as the operational cutoff value.

The ethical approval was taken from Institutional Review Committee of Kathmandu Medical College (Ref:02082017) and informed consent was taken from each respondent before collecting data. Data were coded on a data sheet, analyzed, edited and categorized on the basis of research

objectives. Descriptive and inferential statistics were used to analyze the data by IBM SPSS version-20.

RESULTS

Table 1: Socio-demographic variables of the undergraduate students (n=853)

Variables	Frequency	Percentage
Age (in years)		
Less than 20	147	17.2
More than 20	706	82.8
Mean age± SD = 20.95±1.54 years		
Sex		
Male	383	44.9
Female	470	55.1
Marital Status		
Married	5	0.6
Unmarried	848	99.4
Faculty		
MBBS	548	64.2
BDS	189	22.2
Nursing	116	13.6
Academic Year		
MBBS First year	115	13.5
MBBS Second year	136	15.9
MBBS third year	149	17.5
MBBS fourth year	148	17.4
BDS First year	40	4.7
BDS Second Year	49	5.7
BDS Third year	50	5.9
BDS Fourth year	50	5.9
B.Sc.Nursing First year	30	3.5
B.Sc.Nursing Second year	30	3.5
B.Sc.Nursing Third year	26	3
B.Sc.Nursing Fourth year	30	3.5
Academic Failure		
Yes	227	26.6
No	626	73.4
Satisfaction with the learning environment		
Very Satisfying	42	4.9
Satisfying	470	55.1
Not very satisfying	297	34.8
Not at all satisfying	44	5.2
Satisfaction with home environment		
Yes	761	89.2
No	92	10.8

Among 853 students, 470 (55.1%) were females and 383 (44.9%) males. The mean age was 20.95±1.54 years and most of the students (99.4%) were unmarried. A total of 64.3% were from MBBS, 22.2% from BDS and 13.5% Nursing stream. Most of the students (73.4%) had no history of academic failure. More than half of the students (55.1%) had satisfying learning environment at college and most of the students (89.2%) had a satisfying environment at home. (Table 1) Table 2 reveals that the maximum (99.6%) students perceived more stress with the mean score of 45.23 ± 4.96. Table 3 reveals that more than half of the students (56.3%) had perceived academic stress with the mean score of 54.68± 9.10. Table 4 shows that there is weak significantly positive correlation between Perceived Psychological Stress and Perceived Academic Stress (P=0.04).

Table 2: Perceived stress among undergraduate students (n=853)

Perceived Psychological Stress	Frequency	Percentage
Mean Perceived Stress Score =45.23± 4.96		
High stressed (more than or equal to 28)	850	99.6
Low stressed (less than 28)	3	0.4

Table 3: Academic Stress among undergraduate students (n=853)

Perceived Academic Stress	Frequency	Percentage
Mean Perceived Academic Stress =54.68± 9.10		
High Academic Stress (54 and above)	480	56.3
Low Academic Stress (less than or equal to 53)	373	43.7

Table 4: Correlation between Perceived Psychological Stress and Academic Stress (n=853)

Variables	R	P value
Perceived Psychological Stress	0.070	0.04*
Perceived Academic Stress		

*P value significant at < 0.05

DISCUSSION

This study aimed to find out the perceived psychological stress and perceived academic stress among undergraduate students. More than half (55.1%) students were females, in contradiction to the study done in India, in which more than two third (68.04%) students were males.¹⁶ The mean age of the students was 20.95±1.54 years which is similar to the study done in India.¹⁶

Students from the medical, dental and nursing field expected to learn and master a huge amount of knowledge, attitude and skills for which they have to work hard which puts them under a lot of stress. The current study revealed that the undergraduate students experienced high stress with the overall mean perceived stress score of 45.23±4.96 which is contradictory form a study done in India, Saudi Arabia and Pakistan which reported the overall mean perceived stress score was 29.95 (±1.97), 23.46 (±7.77) and 30.84 (±7.01)^{6,16,17} respectively. The reason for this might be the use of different stress scoring scales like the PSS-10 scale. In the current study, the percentage experiencing high stress was 99.6% which was similar to the study done in Surat, which reported that 96.8% of students experienced stress.¹⁸

In this study, more than half of the students (56.3%) suffered from high academic stress with the overall mean perceived academic stress score of 54.68±9.10 which is more than the cutoff point. This indicates that the students experience stress in different academic stress

factors which is in contradiction to the study done in Malaysia which revealed that 80.88% of students were found to have a higher level of stress and another study done in Mainefhi, Eritrea also revealed 78.5% of students had academic stress^{15,19} which was higher than this study, it might be because of the satisfaction with learning environment and home environment.

In the current study, there was a weakly significant positive correlation between perceived psychological stress and perceived academic stress ($r = 0.070$; $P = 0.04$). This signifies that higher the academic stress of the students, the higher will be the perceived psychological stress. A study conducted in Pakistan revealed that there was a negative but insignificant correlation between perceived stress and academic performance ($r=-0.099$, $P>0.05$)¹⁷ which is contradictory to this study.

CONCLUSION

A higher level of perceived stress and academic stress were reported by the students and there was a weak significant positive correlation between perceived psychological stress and perceived academic stress. Interventions to lower academic stress and to cope with the perceived psychological stress should be carried out so that the learning process of the students will be efficient.

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