

## Factors Associated with Stress Among Nursing Students: A Cross Sectional Study

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**Received,** 16 April, 2018

**Accepted,** 5 May, 2018

Stress affects every individual and has a powerful impact on the mind and on an individual's health and well-being. It was intended to identify the factors related to stress among undergraduates nursing students of BMI (B&B Medical Institute), Nepal. A Cross-sectional descriptive design was adopted in this study among 180 nursing students; BNS (104) & BSc Nursing. Non-probability purposive sampling technique was adopted. A self-administered semi-structured questionnaire was used to gather the relevant data and rating scale was used. Collected data were analyzed by using descriptive statistic (frequency, mean and SD) and inferential statistics (Independent sample T test, chi-square).

The study revealed that majority (60% and 64% respectively) of the BN and BSc nursing student experienced moderate stress level. Among BN students 22 % had low stress level and only 18 % had high stress. While in the BSc nursing 28% had high stress and only eight percentages had low stress. There was significant difference in mean scores of stress between BN and in the BSc nursing at 95% confidence level ( $p=0.011$ ). The most common stress among BN students was personal-environmental stress (mean  $2.56 \pm 0.73$ ), Whereas, the most common stress among BSc nursing students was clinical stress (mean  $2.79 \pm 0.51$ ), followed by personal-environmental stress (mean  $2.77 \pm 0.59$ ) and academic stress ( $2.61 \pm 0.79$ ).

It was concluded that nursing students faced different types of stress that might inhibit positive learning experiences. Stress levels, its sources would serve as an important input in identifying and planning effective interventions and strategies to reduce or prevent stress in nursing education.

**Keywords:** academic, clinical, personal-environmental, nursing students, stress.

**S**tress refers to a dynamic interaction between the individual and the environment. In this interaction, demands, limitations and opportunities related to work may be perceived as threatening to go beyond the individual's resources and skills. In case of disarrangement, this interaction may lead to cognitive, emotional and behavioral alterations.<sup>1</sup> Stress affects every individual and has a powerful impact on the mind and on an individual's health and well-being.<sup>2</sup>

Stress or anxiety is not only a workplace problem but different stressors can also effect the students, which may be stress related to academic performance, or may be due to difficulty to adapt the environment of a new organization. The students may face stressors like social, environmental, academic, emotional, personal, and family. These stressors might disturb the learning ability and academic performance of the students.<sup>3</sup>

Academic stress is the anxiety and stress that comes from schooling and education. There is often a lot of pressure that comes along with pursuing a degree and one's education. There is homework, tests, group work, reading, and participate in extracurricular activity.<sup>4</sup>

Clinical practice is one of the crucial components in nursing education, and it can be stressful for students. They may face many challenges or threats in dynamic and complex clinical environments, such as how to use high-tech medical equipment, how to maintain good relationships with clinical

staff and instructors, how to manage sudden changes in a patient's condition, and how to deal with the demands of patients' relatives. These clinical experiences may lead students to perceive stress. Prolonged experience of stress may have negative impacts on students' clinical learning and on their health.<sup>5</sup>

Study conducted in Nepal to assess, stress, stressors and coping mechanisms in nursing students studying at Manipal College of Medical Sciences (Nursing Programme), results of study revealed that majority (60.4%) of the students experienced moderate stress level. Majority (77.5%) of the students experienced moderate stressor and only 1.2% of the students experienced high stressor.<sup>6</sup>

### Materials and Methods

Descriptive, cross-sectional design was adopted to assess factors associated with stress among nursing students. This study was conducted at B&B Medical Institute, Lalitpur. The study population was the students of post basic bachelor in nursing and bachelor of science in nursing studying in B&B medical institute. Non- probability purposive sampling technique was used in this study to select college. For study subjects, census sampling was done i.e. all the students studying in bachelor in nursing, total 180 students including 104 students in BN and 76 students in BSc. Data was collected in 2074/09/12. Permission was obtained from the concerned authority and written consent was obtained from each

Types of Stress	Level of Education	Mean	SD	P value
Academic Stress	BN	2.36	1.00	0.073
	BSc.nursing	2.61	0.79	
Clinical Stress	BN	2.45	0.79	0.01*
	BSc.nursing	2.79	0.51	
Environmental Stress	BN	2.56	0.73	0.042*
	BSc.nursing	2.77	0.59	
Overall	BN	2.46	0.63	0.003*
	BSc.nursing	2.72	0.51	

Table 1: Distribution of Stress Undergraduate Nursing Students, \* indicates Significant value ( $P < 0.05$ )

student prior to data collection. Self-administered questionnaire were used to collect data. Rating scale was used to collect stress related questionnaire, which was divided into three parts, part I consisted of question related to academic stress, part II questionnaire related to clinical stress and part III related to clinical stress. Respondents were requested to rate each variable placed against, Slight Stress, Moderate Stress and High Stress. The items were scored as 5, 4,3,2,1 respectively. Level of stress was categorized as low stress (1-2) Moderate stress (3) High stress (4-5). Reliability of the questionnaire was checked by cronbach's alpha test. Data were entered in SPSS version 20 and analyzed by using descriptive statistics including frequency, percentage, mean and standard deviation inferential statistics that included Chi square test and

independent t test.

### Results

All together 180 nursing students were asked to complete the questionnaire. The mean age of respondents for BN was  $24.06 \pm$  SD 2.79 (years) and for BSc was  $20.54 \pm$  SD 1.40 (years). Majority of the respondents (85%) were following Hindu religion.

The most common stress among BN students was personal-environmental stress (mean  $2.56 \pm 0.73$ ), followed by clinical stress (mean  $2.45 \pm 0.79$ ). Whereas, the most common stress among BSc nursing students was clinical stress (mean  $2.79 \pm 0.51$ ), followed by personal-environmental stress (mean  $2.77 \pm 0.59$ ) **Table 1.**

**Table 2** depicts the information regarding the top five stressors perceived by undergraduate nursing students. On the whole, the mean of stress perceived by the participants was  $2.57 (\pm 0.59)$ . The most common reasons of academic stress as stated by BN students

Factors	Stressors	BN		Bsc.nursing			
		Mean	Rank	SD	Mean	Rank	SD
<b>Academic Stress</b>	Continuous pressure to meet deadlines for assessment	2.80	3	2.13	3.00	2	1.07
	Fear of academic failure	2.92	2	1.19	2.89	3	1.22
	Resources to perform academic work	2.60	4	2.08	2.70	5	1.00
	Class workload	2.95	1	4.49	2.83	4	1.07
	Long class hour during study day	2.45	5	4.21	4.12	1	6.02
<b>Clinical Stress</b>	Unfamiliar situation in clinical area	2.54		2.13	3.04	4	1.03
	Maintaining balance between clinical work and study	3.30	1	4.17	3.03	5	0.90
	Work Load and practical assignment	3.21	2	3.10	3.50	1	0.93
	Inadequate information about patient from doctors & staffs	2.63	5	0.91	3.03	5	0.95
	Humiliating behavior of physician and being criticized in front of patients	2.90	4	1.21	3.25	3	1.15
	Fear of making mistake in clinical placement	2.54		1.13	3.39	2	1.05
	Time to prepare & submit of clinical assignment	2.96	3	3.14	2.92		1.12
<b>Personal- environmental Stress</b>	Inadequate provision of safety and security	2.87	2	3.14	2.72		1.10
	Inadequate facility of canteen/mess	2.58		1.08	2.82	5	1.01
	Limited recreational facilities	2.67	4	1.03	3.61	1	1.23
	Inadequate water supply	2.92	1	1.37	3.47	2	1.37
	Limited number of reference books/journals	2.65	5	1.09	3.24	4	1.01
	Financial problems	2.78	3	1.19	2.70		1.44
	Change in eating sleeping pattern	2.61		1.21	3.28	3	1.13
<b>Overall Perceived stress</b>				<b>2.57(±0.59)</b>			

Table 2: Stressors perceived by undergraduate Nursing students

Level of stress	BN	BSc nursing	Total
	Frequency (%)	Frequency (%)	
Low stress (1-2)	23(22)	6(8)	29(16.1)
Moderate stress (3)	62(60)	49(64)	111(61.7)
High stress (4-5)	19(18)	21(28)	40(22.2)
<b>Mean ± (SD)</b>	1.96± (.637)	2.20± (0.56)	
<b>t-value (p-value)</b>	(0.011*)		

Table 3: Level of Stress among Undergraduate Nursing Students

were class “workload” (2.95±4.49). Most common Source of clinical stress among BN students were “maintaining balance between clinical work and study” (3.30±4.17). The most common type of stressors of personal-environmental perceived by BN students was the “Inadequate water supply. Whereas most common reasons of academic stress as stated by BSc students were Long class hour during study day (4.12± 6.02). Most common Source of clinical stress among BSc students were work load and practical assignment (3.50± 0.92). The most common type of stressors of personal-environmental perceived by BSc students was limited recreational facilities.

**Table 3** unveils that nearly two-third (60%) had moderate stress among BN students. While in the B.Sc nursing, almost two-thirds students (64%) had moderate stress, Although, the mean stress of students was about 2 out of 5 in both groups; in BN and in B.Sc nursing students but variation of data is higher in BN (standard deviation of 0.637 and 0.56 respectively). Likewise, there was significant difference in mean scores of stress

between BN and in the BSc nursing at 95% confidence level (p=0.011).

### Discussion

Demographic distribution of student shows that majority of BN students (88.5%) fall under the age group of ≥22 years with the mean age of 24.06(±2.79).Whereas in BSc, majority of them (69.7%) fall under the age group of < 22 years with the mean of (20.54±1.40). Majority of BN and BSc. students (82.7% & 97.4% respectively) were unmarried.

The most common stress among BN students was personal-environmental stress (mean 2.56 ±0.73), followed by clinical stress (mean 2.45±0.79) and academic stress (2.36±1.00).Whereas, the most common stress among B.Sc nursing students was clinical stress (mean 2.79 ±0.51), followed by personal-environmental stress (mean 2.77±0.59) and academic stress (2.61±0.79). Total stress score varies throughout the years. B.sc students have more overall stress (mean 2.72 ±SD 0.51) with of BN (mean 2.46± 0.63) and p value of 0.003. These results are

in line with the study conducted in Nepal, that indicated that common stress was personal environmental (mean  $3.17 \pm 0.67$ ) followed by clinical stress (mean  $2.99 \pm SD 0.51$ ) and academic stress ( $2.97 \pm 0.97$ ).<sup>6</sup>

Regarding the top five stressors perceived by undergraduate nursing students. On the whole, the mean score of stress perceived by students was  $2.57 (\pm 0.59)$ . The most common reasons of academic stress as stated by BN students were class “workload” ( $2.95 \pm 4.49$ ), “fear of academic failure” ( $2.92 \pm 1.19$ ). Similarly common reasons for academic stress among B.Sc nursing were fo “long class hour during study day” ( $4.12 \pm 6.02$ ), “Continuous pressure to meet deadlines for assessment” ( $3 \pm 1.07$ ), and “fear of academic failure” ( $2.89 \pm 1.22$ ). This findings is consistent with study conducted by Labrague, revealed that, stress from assignments and workload ( mean  $2.68$  SD  $0.58$ ) was the most common stressor identified.<sup>7</sup>

Most common source of clinical stress among BN students in were “maintaining balance between clinical work and study” ( $3.30 \pm 4.17$ ) Likewise common reasons for clinical stress among B.Sc students were “work load and practical assignment” ( $3.50 \pm 0.93$ ), followed by Unfamiliar situation in clinical area ( $3,04 \pm 1.03$ ). These findings are to some extent consistent with the findings of similar study conducted by Abdullah, Nahid, stated common reason for clinical stress was unfamiliarity with ward facilities ( mean ( $2.09 \pm 0.79$ )).<sup>8</sup>

The result of present study revealed that the most common type of stressors of personal-environmental were “limited recreational facilities” (mean  $3.61 \pm 1.23$ ), “inadequate water supply” (mean  $3.47 \pm 1.37$ ). To some extent consistent findings were found in study conducted by Deka Meghali, to identify factors associated with stress among B.Sc. Nursing Students found that majority (53%) had stress related to inadequate facility of canteen, (45%) had stress related to lack of recreational facility.<sup>9</sup>

The current study’s findings revealed that nearly two-third (61.7%) had moderate stress, (22.2%) had high stress and only 16.1 % of the students experienced low stress. A similar study identified that majority (60.4 %) of the Students experienced moderate stress level 39.4% of the student experienced low stress level and least 0.6% of the students experiences High stress level.<sup>10</sup>

### Conclusion

The present study concludes that majority of the students experienced moderate stress level. There was significant difference in mean score of stress between BN students and BSc nursing students.

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