

Coping strategies and factors that contribute to stress among undergraduate students; a descriptive approach

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ABSTRACT

Background: Nursing students have to deal with assignments, presentations, continuous assessment tests, theoretical exams, and clinical skills in a limited time frame. When the burden increases beyond the limit of students, stress increases among them. **Objective:** To determine the coping strategies and factors that are associated with stress among undergraduate students.

Methodology: A cross-sectional descriptive study was conducted from April to June 2013, with a sample size of 253 using simple random sampling technique. Two valid and reliable questionnaires were used for data collection; *Perceived Stress Scale (PSS)* for the factors and level of stress, while *coping behavior inventory* was used for coping strategies among the respondents. The study was approved by ethical review committee while analysis was performed as descriptive and inferential statistics through SPSS 20.

Results: The total number of participants was 253, where the number of male students was higher (86.2%), while the mean age of the participants was (21.4 ± 2.2), and majority of the students' academic performance was good (69.6%). "Stress from assignment and workload (2.44 ± 0.64)", followed by "stress from the environment" (2.34 ± 0.68), and "stress from taking care of patients (2.16 ± 0.61) are the leading factors that contributes to the level of stress among undergraduate students. "Stay optimistic" (2.49 ± 0.69), followed by transference (2.45 ± 0.75), and problem solving (2.36 ± 0.59) are the coping strategies used by students to reduce level of stress.

Conclusion: The study concluded that majority of undergraduates was suffering from moderate stress, and assignment and workload are the main reason that contributes to their stress and stay optimistic is most common coping strategies used by students. Furthermore, Stress is strong positively correlated with coping strategies, while weakly positive correlated with age.

Keywords: Stress, clinical practice, academic performance, nursing education, coping style.

INTRODUCTION

Background

Nursing education is composed of broad theoretical knowledge and becoming skilled in clinical practice [1]. Nursing students improve their practical competencies, clinical decision-making, and the skills of communication during clinical practice as they are the future of nursing work force. During the clinical duties of students they face new environment which are totally different from the internal environment of an institute. Therefore initially students are exposing to multiple pressure and challenges in the complicated clinical setting, predominantly in the first months of their clinical duties [2]. Clinical education remains a vital part of nursing education because it not only improves the practical skills and knowledge of students but also provides an opportunity to put theoretical knowledge into practice [3].

Nursing students throughout the semesters put a lot of effort into their clinical work and their involvement in the

nursing organization in order to improve their grades and ranks. They consequently deal with psychological problems that affect their performance. Each student experiences these problems differently, varying in severity. Stress is a psychological, emotional state, or circumstance that an individual responds to when they feel under pressure or endangered [4]. Nursing students have to deal with assignments, presentations, continuous assessment tests, theoretical exams, and clinical skills in a limited time frame. When the burden increases beyond the limit of students, stress increases among them [5]. Stress not simply disturbs the academic and clinical performance of students but also leads to serious psychological issues such as depression [6]. Previous studies have revealed that nursing students suffer from stress [7], while other studies have reported that the stressors during clinical duties have been, lacking knowledge and abilities, work burden, being afraid of making mistakes, caring for patients, and handling emergencies [8, 9]. Furthermore, stress affects the students' academic performance, overall health; clinical routine, and quality of life [10].

Coping strategies are the capacity of a person to deal with stress, and it worth's more than the stress itself. Coping means the selection of mechanism that helps an individual to handle the level of stress that requires behaviors, cognitive and continuous efforts. Problem-focused and emotion-focused coping methods are at least two of their varieties. Depending on the threat type, prior beliefs, or transient circumstances like the sort of feedback, each person utilizes one of the techniques [11]. In previous studies, staying optimistic and problem solving were reported as the most commonly practiced coping strategies that help nursing students deal with stress [12].

To face challenges, inappropriate coping skills remain a barrier to achieving their goal among undergraduate students.

Research objective

- To determine the coping strategies practiced by nursing students and factors that increase stress.

MATERIALS AND METHODS

Study design and study sample

The study was conducted in the nursing institutes from April to June 2023 using a descriptive cross-sectional design. The students who were registered in any registered nursing college of Khyber pukhtankhwa was the study population of the study. The study sample was calculated through online sample size calculator through 95%

confidence level, 5% margin of error and 80% prevalence rate that give us a sample size of 253, using simple random sampling technique.

The inclusion and Exclusion criteria

Students who are currently enroll in any semester of 4 year program and willing participate in this study was the inclusion criteria for the students. Students performing clinical duties, on leaves, not-promoted and not willing to participate were excluded from the study.

Data collection Procedure

The data was collected in three parts, part (a) contains the demographic data of the participants, part (b) contains the level of stress through checklist and part (c) contains the coping strategies of the participants.

Research Instrument

Perceived Stress Scale (PSS) was used for the level of stress among the student's participants. The checklist contains 6 dimension 29 items having a 5 point Likert scale from 0 never to 4 often. The instrument chronbach alpha was 0.89 [13].

Coping behavior inventory was used for coping strategies among the participants. The questionnaire contain 4 dimensions, 19 items having a 5 point Likert scale from 0 never to 4 often. The chronbach alpha of the instrument was 0.76 [14].

Data analysis procedure

The entire set of data used in this study was analyzed using SPSS 22.0 statistical software. Standard deviations mean, frequencies, and percentages were all included in the data analysis to describe the study sample as descriptive statistics. A Pearson correlation test was applied to identify the association be between stress and coping behaviors as inferential statistics.

Ethical Consideration

The individuals were voluntarily involved in this project and confidentiality was maintained in all the responses. The introduction to the questionnaire includes a statement outlining the goals, plans, and uses for the data.

The study was approved by the ethical review committee, while permission was taken from each institute for data collection.

RESULTS

Demographic data of the participants

The total number of students in the study was 253, where males were higher (86.2%) than females (13.8%). The mean age of the students was (21.4 ± 2.2), while students who live in villages were in the majority (53.8%), and the

majority of students belong to private institutes (93.7%). (See table 1).

Characteristics		Frequency (253)	Percentage
Gender	Male	218	86.2 %
	Female	35	13.8 %
Age	Mean age	21.4 ± 2.2	
Living in	Village	136	53.8 %
	City	117	46.2 %
College	Private	237	93.7 %
	Public	16	6.3 %

Academic performance of the students

Figure 1 illustrates that majority of the students' academic performance was good (69.6%), followed by average performance students (23.7%), and poor performers was (6.7%).

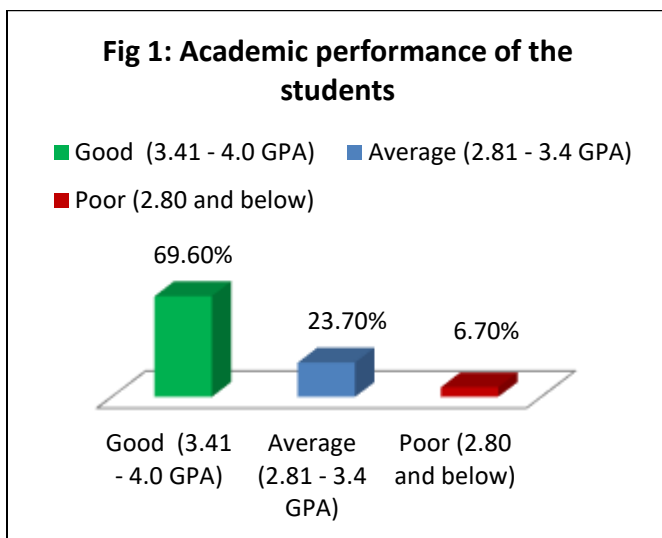


Table 2 demonstrates that the level of overall stress was moderate, while the factor that increased the level of stress was "stress from assignment and workload," with a mean score of (2.44 ± 0.64), followed by "stress from the environment," with a mean score of (2.34 ± 0.68), and "stress from taking care of patients," with a mean score of (2.16 ± 0.61) are the three domains that were responsible for increasing the level of stress. The remaining factor also contributes to the level of stress among the participants. (See Table 2).

Table 3 reveals that "stay optimistic" was the coping strategies used by most of the students and mean score of (2.49 ± 0.69), followed by transference (2.45 ± 0.75),

	Stress	Mean score
1	Stress due to taking care of patients	2.16 ± 0.61
2	Stress from lecturer and clinical staff	2.08 ± 0.69
3	Stress due to workload of study	2.44 ± 0.64
4	Stress due to daily life	2.03 ± 0.69
5	Stress from lack of knowledge and skills	2.10 ± 0.83
6	Stress due to environment	2.34 ± 0.68

then problem solving (2.36 ± 0.59), and avoidance was the least practice strategies practice by students having mean score of (2.23 ± 0.59).

	Coping strategies	Mean score
1	Avoidance	2.23 ± 0.59
2	Problem solving	2.36 ± 0.59
3	Stay optimistic	2.49 ± 0.69
4	Transference (Change)	2.45 ± 0.75

Table 4 reveals that stress is positive strong association with coping strategies, while Gender, college and living is weakly positive correlated with coping strategies with stress, and age. Academic performance is weakly negative correlated with stress and coping strategies.

DISCUSSION

In the current study, the total number of participants was 253, where males were higher (86.2%) than females (13.8%). The mean age of the students was (21.4 ± 2.2), while students who live in villages were in the majority (53.8%), and the majority of students belong to private institutes (93.7%). Supporting the demographic data of our study, a study conducted in Pakistan reveals that the majority of the participants were male (69.9%), and students from the private institute were also higher (96%) than public institute students [4]. Contradicting our findings another study report that female was higher (92.4%) than male (7.6%) [2].

In the current study, the overall level of stress among the participants was moderate. "Workload and assignment" remain the most reported factor followed by "stress due to

Table 4: Correlation of stress with coping strategies and other variables

	1	2	3	4	5	6	7
1: Gender	-	.106	-.076	-.104	.432**	.085	.002
2: Age		-	.307**	.000	.168**	-.050	-.019
3: GPA			-	-.106	-.032	-.055	.103
4: College				-	-.111	.031	.036
5: Living					-	.253**	.117
6: Coping strategies						-	.741**
7: Stress							-

environment", and "stress from taking care of patients are the leading factors associated with stress enhancement among the study participants. A study conducted in India reveals that the overall stress among the study participants was moderate which supports our findings. Furthermore, the study also concluded that interface worries and academic workload, an approach of other professionals toward nursing or shortage of time, and fear of examination are the leading factors that are associated with stress [15]. A study conducted in Pakistan also supports our findings that the majority of undergraduate nursing students' level of stress was moderate [4]. The study of Shukla et al. (2012) and Eldeeb et al. (2014) illustrates that the major factor that was responsible for stress was academic workload [16, 17]. Financial issues and concern about the future were the leading stressors that elevate the level of stress among the students were reported by the study by Al Dubai et al. (2011) [18]. Another study also reveals that lecturer in academics and clinical teachers and nursing staff in clinical are the prominent stressors among nursing students [19]. Another study also reveals that lecturer in In academics and clinical teachers and nursing staff in clinical are the prominent stressors among nursing students [19]. The findings of a study conducted in China were in line with our study that established that the majority of the student's level of stress was moderate.

In the present study, it was reported that "stay optimistic" was the coping strategy practiced by most of the students with a mean score of (2.49 ± 0.69) , followed by transference (2.45 ± 0.75) , then problem solving (2.36 ± 0.59) , and avoidance was the least practice coping strategies practice by students having a mean score of (2.23 ± 0.59) to deal with stress. The studies of Shiferaw et al. (2015), Wejdan et al. (2016), and Ab Latif R (2016) show congruence finding with our study that students used optimism, problem-solving, blaming, and use of problem-

solving as a coping strategy to counter stress [20, 21, 22]. A study conducted in India contradicts our findings that disclosing that Students prominently focused on positive approaches such as active coping, positive reframing, and planning to cope with stress in their daily life [15]. Another study demonstrates that students used coping strategies the Self-confident, Helpless approach, Positive approach, Soft approach, and Social support-seeking approach [23]. The study by Chan et al. (2014) reports that most students used the coping strategies of developing social support, solving problems, engage in activities, avoiding, and look for distractions [24].

In the current study, a Pearson correlation test was used that reveals that stress is strong positively correlated with coping strategies, while stress and coping strategies are weakly positively correlated with gender, and stress is weak negatively correlated with age and academic performance. Supporting our findings a study that there is a significant correlation between academic and clinical stress with coping strategies through ANNOVA [23].

Another study also established that as a result of post-hoc tests coping strategies have a significant association with stress [25]. Liu. et.al. (2021) contradicts our findings that show that as a result of the Pearson correlation, there is no significant correlation between stress with its domains and positive coping style [2]. The study of Bodys-Cupak et al. (2016) reveals that students who perform clinical duties and suffer from high level of stress use negative coping strategies such as accusing themselves, contradicting, and stopping actions [26].

CONCLUSION

From the findings of this study, it was concluded that undergraduate nursing students suffer from moderate stress. "Workload and assignment" remain the most reported factor followed by "stress due to environment",

and "stress from taking care of patients" are the leading factors associated with stress.

To counter stress undergraduate nursing students practice coping strategies to deal with challenges in college as well as in the clinical setting. "Stay optimistic" followed by transference, and problem-solving was the common coping strategies used to reduce the level of stress. Furthermore, stress is strongly positively correlated with coping strategies.

LIMITATION

- The study was conducted in one country so its result has limited generalizability.
- The design was cross-sectional that could not draw causality of association.
- The coping strategies used in the checklist were limited so elaborate strategies would be better as positive and negative coping strategies.

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