

Original Research Article

Sources and level of stress among college students: a study conducted in the Kingdom of Saudi Arabia

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ABSTRACT

Background: Stress is inevitable. Mild level of stress is needed for better performance among individuals. Nursing and medical undergraduates experience high levels of pressure during their college when compared to students in other arts and science specialties. Numerous factors of stress among applied medical students may be theoretical, intrapersonal, interpersonal, and environmental. The objective of this study was to assess sources and level of stress by college of applied medical undergraduates.

Methods: A descriptive study was conducted among the female college of applied medical sciences, Prince Sattam Bin Abdul-Aziz university, Wadi Al Dawasir, Saudi Arabia. A study sample of 72 female students of nursing and medical lab sciences were selected using random convenient sampling technique. Primary data was collected using a questionnaire related to sources of stress distributed among the students.

Results: The results revealed that 11 (15%) of students had mild level of stress, 51 (56%) of them had moderate and 21 (29%) of them had severe level of stress. Intrapersonal stressors with the mean value of 2.09 (sometimes), interpersonal stressors mean value is 2.0 (sometimes), environmental stressors mean value is 1.4 (never), and academic stressors mean value is 2.5 (often) disturbing stressors for the students.

Conclusions: The university should maintain conducive academic environment for better learning, with the focus on the students' personal and social needs. The administrators should provide adequate resources such as books, computers to do assignments. Nursing college administrators need to take effort to narrow the gap between student's opportunities, goals, and values to be integrated with that of the university.

Keywords: Stress, Stressors, Applied medical students

INTRODUCTION

Stressors for applied medical students includes adjusting to long study hours and clinical training that requires sensitive, emotional, personal maturity and understanding. The clinical training for applied medical students was identified as more stressful than other courses.¹ There are many causes for stress among undergraduate students that may arise due to a number of

factors including conflicts with other departments, personal, and environmental sources. Theoretical stressors refer to stress associated with reading, study workload, clinical practice, and misunderstanding with lecturers and instructors. Midterms, final examinations, research projects, presentations, group discussions and assignments, clinical training are also very stressful for college students.^{2,3}

Undergraduate students experience difficulty in adjusting to the academic environment of higher education, interpersonal, intrapersonal and environmental stressors. If the stress is not resolved, it may lead to emotional burn out and students will face high levels of apprehension, hopelessness, alcohol and drug abuse, over eating and under eating, mood swings, harming themselves, pains, aches, and sleep disturbances. Nwadiani and Ofogebu concluded that under graduate students need to undergo extensive preparation and sensitization before going to clinical training in the hospital.⁴ They frequently travel long distance to clinical area and use extremely advanced instruments. They should take care of the patients, if the student is under tension that can cause severe injury to their patients. Access to healthcare services and preventive care at an early stage for students is essential to reduce and mitigate stress. Access to healthcare is vital. Provision of health insurance system to the people will increase the access to health services.⁵ Short waiting time in the hospitals will also increase the uptake of ambulatory care for preventive and outpatient care in the hospitals.⁶

The aim of the study is to assess the sources and level of stress among college students at college of applied medical sciences, Prince Sattam Bin Abdulaziz university, Wadi Al Dawasir, Saudi Arabia.

METHODS

A descriptive study was conducted among the female college of applied medical sciences, Prince Sattam Bin Abdul-Aziz university, Wadi Al Dawasir, Saudi Arabia. A study sample of 72 female students of nursing and medical lab sciences were selected using random convenient sampling technique.

Study period

The study conducted from June 2018 to June 2019.

Selection criteria

Ransom convenient sampling technique was used.

Ethical approval

Appropriate permission was obtained to carry out the research work from the college authorities and approved by the institutional review board. The purpose of the research was explained to the students and informed consent was obtained. Secrecy of the information was strictly observed by declaring the students that no particulars about their information being released and data will be used for research purposes only.

Data was collected using the following tools: The questionnaire consisted of the following sections: a) socio-demographic variables: age, level of students, birth order, menstrual irregularity, marital status, no of

children, chronic disability. The second part (b) consisted of questions related to sources of stress. The purpose was explained to them, the data was collected. Tool has total 3 components namely intrapersonal stressors 11 items, Interpersonal stressors 7 items, academic stressors 5 items total 31 items. It is a four-point Likert scale the score as follows: never/rare: 1, sometimes: 2, often: 3, very often: 4, total score: 124, mild stress: 1-41, moderate stress: 42-83, severe stress: 84-125. The mean score represents as 1-1.74 (never), 1.75- 2.49 (sometimes), 2.5-3.24 (often), 3.24- 4 (very often). The collected data were checked for accuracy and were coded and entered into the statistical package for social sciences (SPSS) software version 16. The descriptive statistical data was analyzed and presented using frequency distribution and results were expressed in percentage.

RESULTS

Table 1 represents the socio demographic variables of students, 19 (25.7%) of them belongs to 22 years. of age, 8 (10.8%) in age group of 20 years. 56 (75.7%) are single, 11 (14.9%) are married and 5 (6.8%) got divorced.

Table 1: Socio-demographic variables.

Variables	N	Percentage (%)
Age of the students (Years)		
20	8	10.8
21	7	9.5
22	19	25.7
23	11	14.9
24	11	14.9
25	16	21.6
Marital status of the students		
Single	56	75.7
Married	11	14.9
Divorced	5	6.8

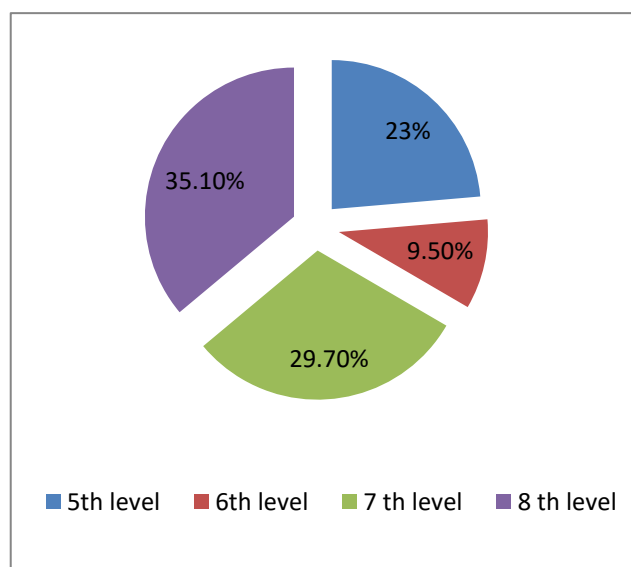


Figure 1: Percentage of levels of students.

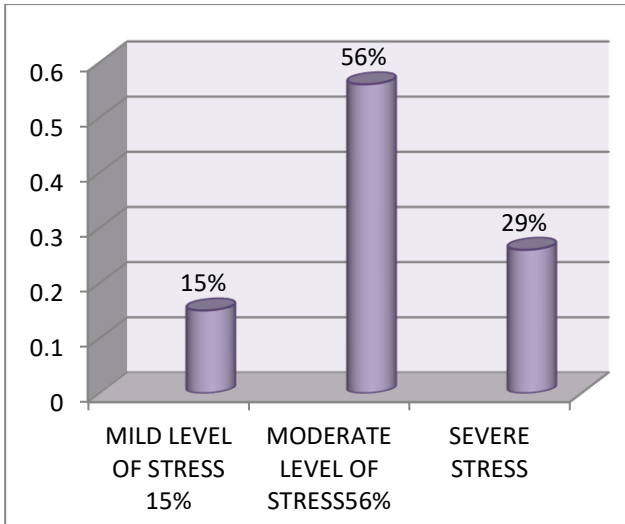


Figure 2: Percentage of level of stress among students.

The level of stress among students in which 15% of them had mild level of stress, 56% of them had moderate level of stress and 29% had severe level of stress.

Table 2: Mean and standard deviation of demographic variables.

Variables	Max	Mean	SD
Age of students (years)	25	22.8056	1.64136
Marital status of students	3	1.2917	0.59191
Birth order of students	3	1.8056	0.68462
Any chronic disease	2	1.8889	0.31648
Type of chronic illness	9	7.6250	2.37022
Number of children	2	1.1111	0.31648
Physical disability	2	1.9861	0.11785
Menstrual irregularity	2	1.7222	0.45105
Level of the students	5	3.7917	1.17410

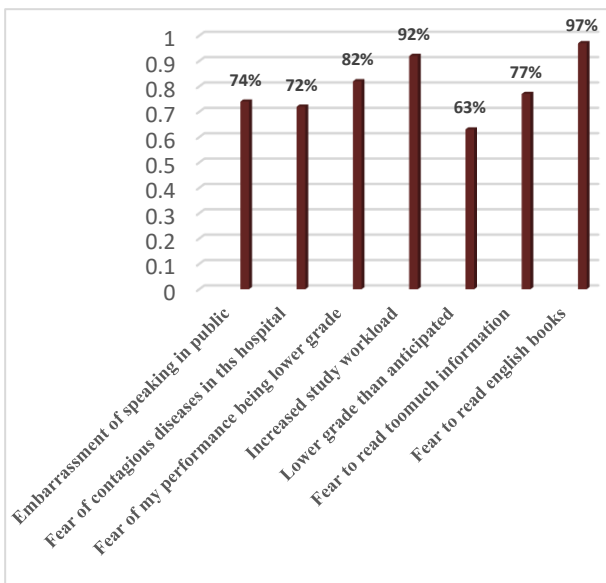


Figure 3: Percentage of stress sources among students.

Table 3: Mean and standard deviation of intrapersonal stressors.

Intrapersonal stressors	Max	Mean	SD
Change in sleeping habits	4	2.0972	0.41655
Change in eating habits	4	2.1250	0.44207
New responsibilities	4	2.0972	0.34231
Responsibility violation (abuse)	3	2.0833	0.27832
Financial difficulties	4	2.1111	0.46134
Decline in personal health	4	2.9861	0.39336
Embarrassment of speaking in public	4	3.6528	0.67469
Fear of contagious diseases at the hospital	4	2.9.0000	0.42100
Conflict with customs/beliefs	1	1.0000	0.00000
Major family event (death/ illness)	3	1.9583	0.42584
Major personal event (engagement/ marriage/ divorce/ delivery)	4	1.1944	0.61983

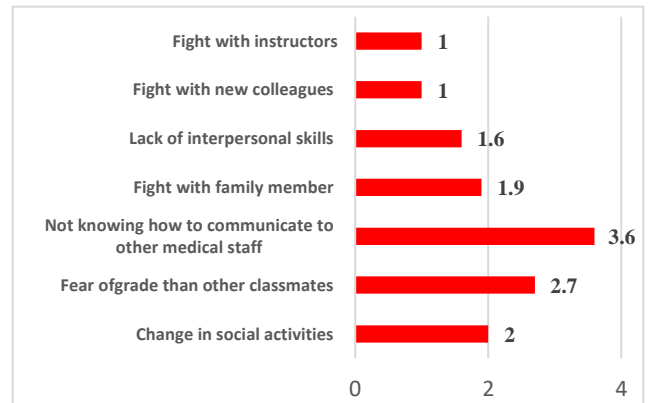


Figure 4: Mean value of interpersonal stressors.

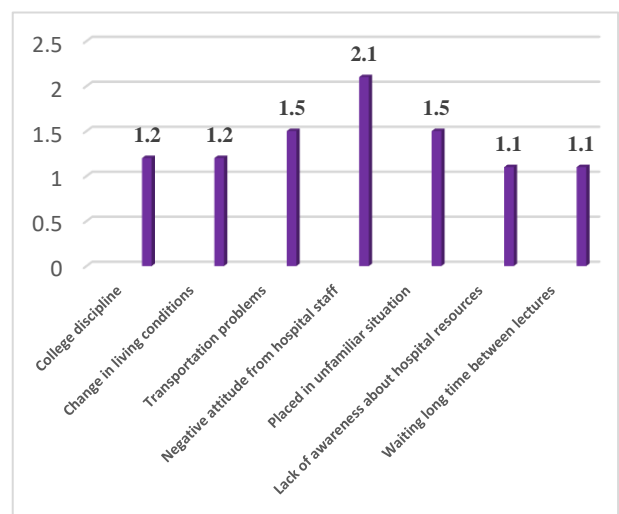


Figure 5: Mean value of environmental stressors.

The above Table 3 depicts the intrapersonal stressors among students in all items were disturbing the students with the mean value of 4.00 except customs and beliefs and responsibility violation.

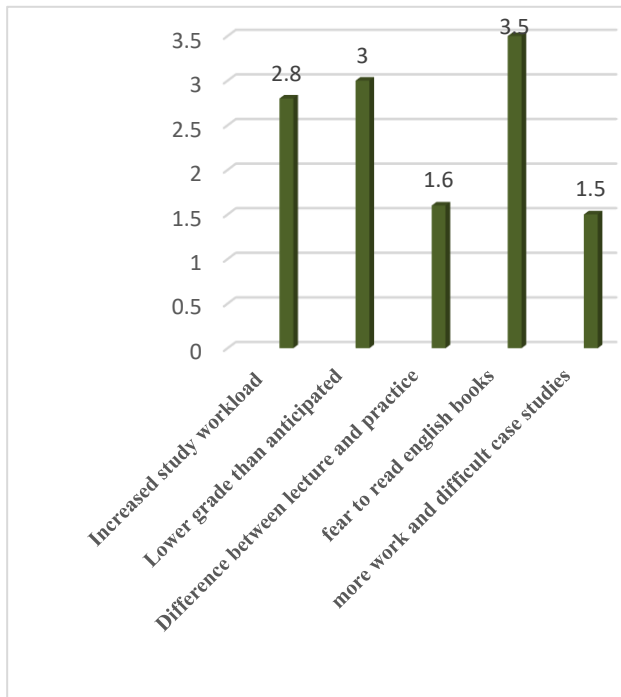


Figure 6: Mean value of academic stressors.

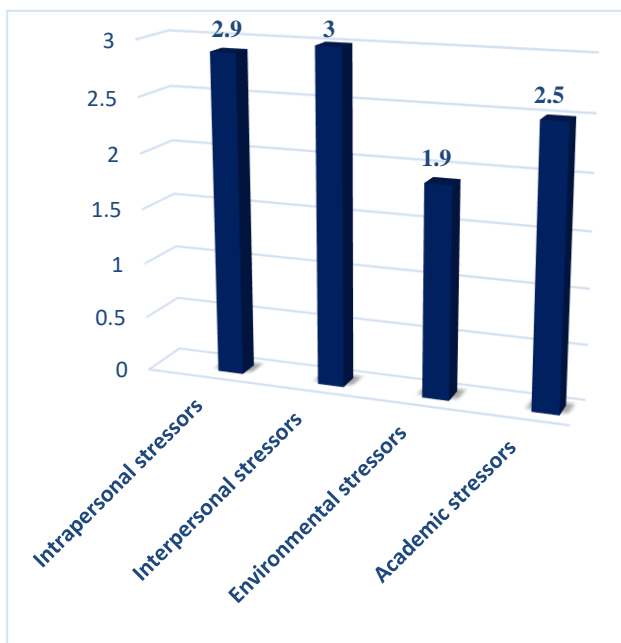


Figure 7: Mean value of sources of stressors.

DISCUSSION

In this study most of the students were in the age group of 25 years, 11 (14.9 %) 17 (23%) of the students are in 5th level, 7 (9.5%) of them are in 6th level, 22(29.7%) of them

are in 7th level, 26 (36%) of students are studying in 8th level. Regarding marital status 56 (75%) are single, 11 (14.9%) were married and 5 (6.8%) of them got divorced. 36 (48.6%) of them were in birth order of 2-4, 8 (10.8%) of them have some chronic disease, 8 (10.8%) of them had anemia, 6 (8.3%) have asthma 5 (6.8%) had diabetes, 4 (5.4%) of them had hypertension, 1(1.4%) have cancer. The 8 (10.8%) of them have one child 3 (4.1%) of them have two children, 20 (27%) have menstrual irregularity. In demographic variables the birth order of the students was 36 (48.6) of them among 2-4 children, 8 (10.8%) of the students had chronic diseases, 10.8% had one child, 27% of the students had menstrual irregularity.

High levels of stress are considered to distress students’ physical health and academic tasks. If the stress is not dealt with meritoriously, the feelings of insecurity, anxiety, sleep disturbances and irritation, lack of interest in studies may happen to the college students. It is important to look at the different factors of stress to help them cope effectively.

In this present study in intrapersonal stressors the students had change in sleeping habits with the mean value of 2.0 (sometimes), change in eating habits with the mean value of 2.1 (sometimes), new responsibilities with the mean 2.0 (sometimes), embarrassment of speaking in public with mean 3.6 (very often), fear of contagious diseases at the hospital 3.0 (often), decline in personal health with the mean 2.9 (often). These are all the factors which are disturbing sources of stress among students. The present study results were supported by findings from another study that concluded that students had changes in sleeping habits 56.5%, eating habits 49.7%, in addition to new responsibilities 46.9%.⁷

In interpersonal stressors students change in social habits with the mean 2.0 (sometimes), standard deviation of 0.289, fear of my performance being of lower grade than classmates with the mean 2.7 (often) and standard deviation of 0.750, not knowing how to communicate to other medical staff 3.66 (very often) with the standard deviation of 0.769, fight with family member is 1.9 (sometimes) and standard deviation 0.278, lack of interpersonal skills with the mean value of 1.62 (sometimes), standard deviation is 0.487, fight with new colleagues with the mean 1.00 (never), standard deviation 0.000. Trouble with instructors mean value 1.1 (never), standard deviation 0.387. In this present study change in social activities, not to communicate to other medical staff as the important stressors for the students. The instructors need to concentrate on these aspects and counsel them.

Regarding environmental stressors among college students’ college discipline with the mean value 1.9 (sometimes), change in living conditions the mean value is 1.2 (sometimes), computer problems 1.5 (sometimes), transportation problems 2.5 (often), Negative attitude from hospital staff 1.1 (never), placed in unfamiliar

situation 1.3 (never) lack of awareness about hospital resources 1.3 (never), waiting long time between lectures 1.3 (never). In this college discipline, change in living conditions sometimes and transportation problems stressors is often disturbing sources of stress among students.

Increased study workload the mean value is 2.8 (often), lower grade than anticipated the mean is 3.0 (often), vast difference between lectures and actual practice 1.6 (never), fear of reading too much information and English books 3.5 (very often), unfairly given more work and difficult case studies 2.5 (often).

Intrapersonal stressors with the mean value of 2.09 (sometimes), interpersonal stressors mean value is 2.0 (sometimes), environmental stressors mean value is 1.4 (never), and academic stressors mean value is 2.5 (often) disturbing stressors for the students. The present study results are supported by Schaufeli et al.⁸ Emphasized that environmental role as sources of stress, focused on different conditions in the job environment and have found that role stressors, such as long hours, are associated with burnout and high levels of failures and discontinuing studies.

Modern technologies help students to handle simulators as if it is a real patient, this may decrease the shock of the direct exposure to actual clinical practice on patient and may decrease the level of stress on advanced academic year that the student need to be in actual clinical setup.⁹⁻¹¹

This present study results revealed that there are a variety of sources of stressors that are hindering the day today activities of the college students at college of applied medical sciences. The important sources are academic stressors which is very often disturbing the students. The instructors, college administrators and parents can help the students to cope up with these stressors and we can build a healthy nation.

College students should develop new social and public contacts and they need to take up accountability for their own responsibilities and needs. They may have difficulty in adjusting to more academic expectations and the need to learn to deal with personalities of different values, customs and individual beliefs. There are no research studies conducted in this respect, so in-depth research is needed to clarify the magnitude of the problem and to emphasize whether these stressors are mostly related to daily disturbances, major life events or academic and teaching and learning problems.

Limitations

Small sample size of the study is one of the limitations. Larger studies could be done in the future. Also, cross-sectional nature of the study may also pose a limitation and future longitudinal studies could be done in the area to establish causality.

CONCLUSIONS

The university should maintain conducive academic environment for better learning, with the focus on the students' personal and social needs. The administrators should provide adequate resources such as books, computers to do assignments. Nursing college administrators need to take effort to narrow the gap between students' opportunities, goals, and values to be integrated with that of the university. Stress management workshops are the need of the hour to train student's different ways to deal with unexpected stressors. Faculty members should train and help the students to cope with stress by using stress management techniques which is either physical or mental.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Misra R, Mckean M. College students' academic stress and its relation to their anxiety, time management, and leisure satisfaction. *Am J Health Studies*. 2000;1(16):41-51.
2. Baghurst T, Kelley B. An Examination of Stress in College Students over the Course of a Semester. *Health Promotion Practice*. 2013;15(3).
3. Al-Barrak MY, El-Nady MT, Fayad EA. Sources of stress as perceived by nursing students at King Saud University. *Med J Cairo Univ*. 2011;79(1):541-53.
4. Nwadiani M, Ofoegbu F. Perceived level of stress among first-times in Nigerian Universities. *College Student J*. 2001;1(35):1.
5. Sriram S, Khan MM. Effect of health insurance program for the poor on out-of-pocket inpatient care cost in India: Evidence from a nationally representative cross-sectional survey. *BMC Health Serv Res*. 2020;20:839.
6. Sriram S, Noochpoung R. Determinants of hospital waiting time for outpatient care in India: how demographic characteristics, hospital ownership, and ambulance arrival affect waiting time. *Int J Community Med Public Health*. 2018;5:2692-8.
7. Ross S, Niebling B, Heckert T. Sources of stress among college students. *College Student J*. 1999;(33):312-7.
8. Smith T, Renk K. Predictors of academic-related stress in college students: An examination of coping, social support, parenting, and anxiety. *Naspa J*. 2007;3(44):78-90.
9. Schaufeli W, Bakker B, Hoogduin K, Schaap C, Kladler A. On the clinical validity of the Maslach burnout inventory and the burnout measure. *Psychol Health*. 2001;5(16):565-82.
10. Upadhyay P. The Effect of Inner Engineering Online (IEO) Program on Reducing Stress for Information Technology Professionals: A Randomized Control

Study. *Evid Based Complement Alternat Med*. 2022;2022:9001828.

11. Edwards D. Clinical supervision and burnout: the influence of clinical supervision for community mental health nurses. *J Clin Nurs*. 2006;15(8):1007-15.

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