

Prevalence of Stress among Medical Students of Various Medical Colleges in Bangladesh

Shamima Nasrin Shadia^{1*}, Mosaref Hossain², Habiba Binte Jahan³
and Nusrat Jahan⁴

ABSTRACT

Stress is an inevitable part of medical education and lack of adequate time for practicing stress-coping skills which affect the students harmfully. In Bangladesh, studies to document stress among medical students is very few. Medical students of Gonoshasthaya samaj vittik Medical College, Gonoshasthaya samaj vittik Medical College (Dental Unit), Anwer Khan Modern Medical College and Shaheed Monsur Ali Medical College participated in the study (n=312, both male and female). The objective of this study is to have information on the prevalence of stress seeming by medical students in Bangladesh and identify the stressor leading to increased stress among medical students. Descriptive statistics were used. Results were expressed as percentages /proportions, means and average. In this study the total prevalence of stress was 62.82% and Female (65.50%) perceived greater stress when compared with male (59.57%). Poor performance at the examination, large content to be learnt, and lack of time to revise course content of exam. are the major stressor among the students. Students should receive consultation on how to manage and cope up with stress. Preventive mental health services, supportive learning environment and student counseling services need to be made available and accessible to reduce this morbidity.

Key Words: Stress, stressor, medical students, Mental Health, Counseling

Introduction

Stress is deviation from homeostasis where a someone feels that the existing situation are threatening to him/her and that condition leads to lack of well-being of the person.¹⁻² Illness associated with stress is very familiar to worldwide. Stress related disorders are liable for about one-third of the years lost due to disability caused by stress associated illnesses³ Awareness regarding mental health and stress related disorders have increased worldwide. The medical students have to work hard and read regularly their vast courses so that they obtain proper clinical skills and also achieve enormous amount of knowledge, which certainly causes stress. The medical colleges also realize this fact are worried to take steps to stay away from the bad effect of stress related illnesses can have to their students and want to take protective actions.⁴

¹Lecturer, Department of Anatomy, Gonoshasthaya Samaj Vittik Medical College, Mirzanagar, Savar, Dhaka, Bangladesh. E-mail: nas_cbmc@yahoo.com

²Director, Linear Maternity Care and Diagnostic Lab. Basundara, Ashulia, Savar, Dhaka. E-mail: mos_pstu@yahoo.com

³Sonologist, Catharsis Medical Center, 188 shilmun, Tongi, Dhaka, Bangladesh. E-mail: dr.habibajahan@gmail.com

⁴Medical Officer, BSMMU, Shahbag, Dhaka, Bangladesh. E-mail : dr.habibajahan@gmail.com

*Corresponding Author: **Dr. Shamima Nasrin Shadia**, Lecturer, Department of Anatomy, Gonoshasthaya Samaj Vittik Medical College, Mirzanagar, Savar, Dhaka, Bangladesh.

Mobile No. 01740549964

E-mail: nas_cbmc@yahoo.com

Previous studies have shown high prevalence of stress is most important cause of stress associated disorders like depression in medical students.⁵⁻⁶ Various studies confirm that cognitive functioning and education of students is harmfully affected by stress, in the medical college.⁵ Mental health of medical students is improperly affected by learning process which has unavoidably lead to high incidence of depression, anxiety and stress between them.⁷⁻¹⁰ In an extremely competitive situation in order to keep a good educational result, medical students have to create personal and social sacrifice which causes stress.¹¹ Sleepless nights, depression,¹² suicidal tendency .^{10,13} addictions to dependence-producing drugs for coping up with stress, and poor performance at examinations in spite of doing hard work are some of the bad effects of stress. In medical college of Bangladesh very few studies have been done to assess the presence of stress in medical students. The aim of our study is to determine the prevalence of stress in various medical colleges in Bangladesh.

Materials and Methods

This descriptive type of study was conducted in the department of Anatomy of Gonoshasthaya Samaj Vittik Medical College among 312 medical students of different medical college of Bangladesh. The study was conducted from Feb,2018 to Feb, 2019. Medical students of Gonoshasthaya Samaj Vittik Medical College, Gonoshasthaya Samaj Vittik Medical College (Dental Unit), Anwer Khan Modern Medical College and Shaheed Monsur Ali Medical College participated. Students of both sex participated in this study. Descriptive statistics were used to computer percentages and averages. Results were presented in tables and charts and expressed as percentages/proportions, means and average.

Study Procedure

A predesigned, semi structured questionnaire was prepared. The questionnaire consisted of three parts. The first part comprised demographic information of students such as age, sex, and residence. The second part of the questionnaire included questions of GHQ-12 to measure stress. GHQ (The General Health Questionnaire) is a self administered questionnaire is developed by British scholar Goldberg in 1972.¹⁴ Here information about students concentration, sleep, playing, decision making, normal activities, problems and other emotional status like feeling, thinking, confidence etc. The third part consisted of stressor and questions related to activities done to relieve stress. Before the delivery of questionnaire, students were given full reassurance about confidentiality of their details and clarification was given regarding suspicions about questions.

Results

In our study Among the 312 medical students, 141 (45.19%) were male and 171 (54.81%) female students. Fig.1 shows that Out of 312 medical students, 196 (62.82%) medical students revealed some ill effects of stress. Fig.2 shows that among 196 students who presented stress, 84 (59.57%) were male and 112 (65.50%) female students. Stress was more among female

(65.50%) than male students (59.57%); however, the difference did not reach statistical significance. Table 1 shows that among 196 students who revealed stress, poor performance in examinations was the cause in 61.22% of them, Difficulty in understanding the lecture in 27.04%, Difficulties of Memories in 58.67%, large content to be learnt 60.71%, lack of time to revise the course content in 60.71%, Economic Problem 9.18% and Family Problem 19.90% .In this study poor performance at the examination, large content to be learnt, and lack of time to revise the content were the major causes of stress among the students. Table 2 shows that 196 students were practicing some of stress-relieving activities such as listening to music 55.10%, playing games 23.98%, spending time with friends 46.43%, sleeping 59.69%, Internet browsing 55.61%, watching movies 43.88%, and None 13.27%.

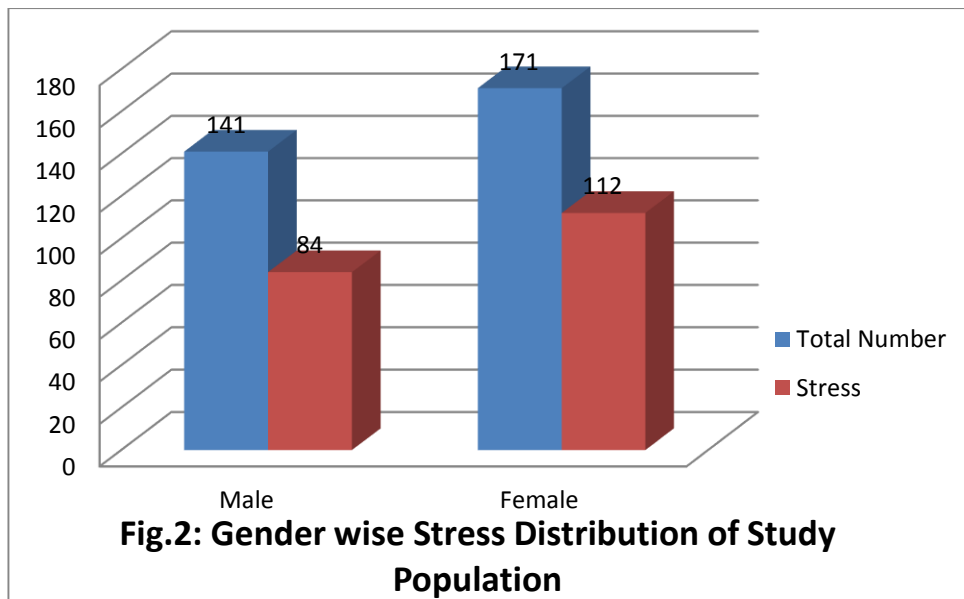
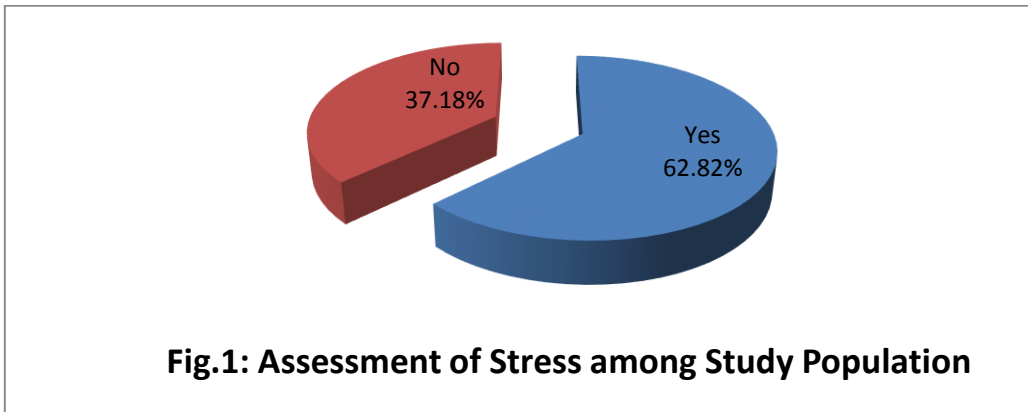


Table 1: Showing of factors contributing stress

Causes	Number (No.)	Percentage (%)
Poor performance in examinations	120	61.22
Difficulty in understanding the lecture	53	27.04
Difficulties of Memories	115	58.67
Lack of time to revise the course content	119	60.71
Large content to be learnt	119	60.71
Economic Problem	18	9.18
Family Problem	39	19.90

Table 2: Activities Practices by students to relieve stress

Activities/ practices to relieve stress	Number(No.)	Percentage (%)
Listening to music	108	55.10
Playing games	47	23.98
Sleeping	117	59.69
Internet browsing	109	55.61
Watching movies	86	43.88
Spending time with friends	91	46.43
None	26	13.27

Discussion

In the present study, prevalence of stress 62.82% among medical students .This results are in contrast to Abdulghani et al. reported 63.7% in Saudi Arabia ¹⁵ and Saipanish et al. reported 61.4% in Thailand.⁷ Our result reveled high rates of stress then other study conducted in Bangladesh. In a study conducted by Eva et al. reported that 54% of medical student suffering from stress.¹⁶ Another study Firth J reported prevalence of stress was 31.2% in British medical school.(17) Now-a-days stress is increasing in worldwide. Stress level is varies in different institute and country.

A study conducted by Eva et al. state that stress level is different between public and private Medical College.¹⁶ The gender-wise distribution of stress is insignificant in our study. The major cause of stress in the study is found out to be academic relate^{17,18-19} which included large content to be learnt, lack of time to revise course content,²⁰ Poor performance in the examinations was

accreted mainly owing to lack of time for revision and large content to be learnt. In our present study also included the type and evaluate of stress-coping skills adopted by the students²¹; Sleeping 59.69%, listening to music 55.10% Internet browsing 55.61%, was the common strategy employed by the students to relive stress. In present study about 13.27% of students were not involved in any activity to cope up with stress. Similarly Eva et al. reported that 18% .¹⁶

A study conducted by Heidari et al. showed that improved life style & mental health play vital role to ensure the efficiency & dynamism of the student in education and prevention of academic failure.²² Another study reported that in medical education workshop and training can increase knowledge of medical student by this influence educational performance of their.²³

Conclusion

The result showed high levels of presence of stress among medical students in different medical college of Bangladesh. Medical students stress may manipulate professional development and harmfully impact educational performance contributing to educational dishonesty and substance abuse. Addressing these issues by the institute use professional help would go a long way in ameliorating students stress and in making their learning a pleasant thing .It will be helpful to creating a encouraging teaching environment in medical colleges to diminish students stress. Students were trained about the importance of self-motivation to stay up. They were advised to grow hobbies, spend time with friends and family and were encouraged to discuss their problems with elders or friends .Counseling about importance of sleep hygiene. Benefits of daily 30-min physical activity and regular meditation were explained to the students. A counseling program continued in Gonoshasthaya Samaj Vittik Medical College. It needs to be made available and accessible to reduce this morbidity.

Authours' contributions

Shamima Nasrin Shadia contributions to Conception and study design, data gathering, acquisition of data, in Drafting and submitting manuscript. Mosaref Hossain has been involved in study design, analysis and interpretation of data, in drafting the manuscript. Habiba Binte Jahan and Nusrat Jahan have been involved in data gathering. All authors read and approved the final manuscript.

Acknowledgement

We thank the medical students of Gonoshasthaya Samaj Vittik Medical College, Gonoshasthaya Samaj Vittik Medical College (Dental Unit), Anwer Khan Modern Medical College and Shaheed Monsur Ali Medical College for their participation in the study in spite of their busy schedule . We thank Principal of Gonoshasthaya Samaj Vittik Medical College ,Gonoshasthaya Samaj Vittik Medical College (Dental Unit), Anwer Khan Modern Medical College and Shaheed Monsur Ali Medical College . We also thank Professor of Anatomy Dr.Laila Parveen Banu and Heads of Departments of Anatomy of Gonoshasthaya Samaj Vittik Medical College . This study is not funded by any institutions.

References

1. Md Aris, SMY., Mariam, AD. (2011). Differences in depression, anxiety and stress between low-and high-achieving students. *J Sustain Sci Manage* , 6,169-178.
2. Khodarahimi, S., Hashim, IHM., Mohd Zaharim, N. (2012). Perceived stress, positive negative emotions, personal values and perceived social support in Malaysian undergraduate students. *Int J Psychol Behav Sci*, 2, 1-8.
3. Begg, S., Vos, T., Barker, B., Stevenson, C., Stanley, L., & Lopez. (2007). The burden of disease and injury in Australia 2003.PHE 82.Canberra: AIHW.
4. Shuchman, M.(2007). Falling through the cracks–Virginia Tech and the restructuring of college mental health services. *N Engl J Med* , 357(2), 105–110.
5. Dahlin, M., Joneborg, N., Runeson, B. (2005). Stress and depression among medical students: a cross- sectional study. *Med Educ*, 39, 594-604.
6. Sherina MS, Rampal L, KenesonN.(2004). Psychological stress among under graduate medical students. *Med J of Malaysia*, 59(2), 207- 211.
7. Saipanish, R., Smriti, S.(2003). Stress among medical students in a Thai medical school. *Med Teach*,25, 502-506.
8. Stewart,SM., Betson,C., Marshall, I.(1995). Stress and vulnerability in medical students. *Med Educ*,29,119-127.
9. Singh ,G., Hankins,M., Weinman,JA.(2004). Does medical school cause health anxiety and worry in medical students? .*Med Educ* ,38,479-481.
10. Dyrbye,LN., Thomas,MR., Shanafelt, TD.(2006). Systematic review of depression anxiety and other indicators of psychological distress among U.S. and Canadian medical students. *Acad Med*, 81, 354-373.
11. Wolf,TM., Kissling, GE.(1984). Changes in lifestyle characteristics, health and mood of freshmen medical students. *J Med Edu* ,59,806-814.
12. Sidik,SM., Rampal, L., Kaneson, N.(2003). Prevalence of emotional disorders among medical students in a Malaysian university. *Asia Pac Family Med*, 2(4),213–217.
13. Tyssen, R., Hem, E., Vaglum, P.(2004). The process of suicidal planning among medical doctors: predictors in a longitudinal Norwegian sample. *J Affect Disord* ,80(2-3),191-198.
14. Goldberg DP.(1972). The General Health Questionnaire(GHQ).Companion to *Psychiatric studies*,172-173.
15. Abdulghani,HM., Alkanhal, AA., Mahmoud, ES.(2011). Stress and its effects on medical students: a cross-sectional study at a college of medicine in Saudi Arabia. *J Health Popul Nutr* ,29(5),516-522.
16. Eva,OE., Md Zakiril,I., Abu Sayed, MM.(2015). Prevelence of stress among medical students: a comparative study between public and private medical schools in Bangladesh. *BMC Research Notes* , 8,327.
17. Firth, J.(1986). Levels and sources of stress in medical students. *BMJ* ,292,1177-1180.
18. Garbee,W., Zucker,S., Selby, G.(1980) Perceived sources of stress among dental students. *J Am Dent Assoc*, 100,853–857.
19. Supe, AN.(1998). A study of stress in medical students at Seth G.S. Medical College. *J Postgrad Med* , 44(1),1–6.
20. Morrison ,J., Moffat, K.(2001). More on medical student stress. *Med Educ* ,35(7),617–618.
21. Lazarus ,RS., Folkman, S.(1984). *Stress, Appraisal, and Coping*. New York: Springer.

- 22 Heidari, M., Borujeni, M., Borujeni, M., & Rezaei, P. (2019). Assessment the relation between Lifestyle with mental health and educational achievement in nursing students. *Bangladesh Journal of Medical Science*, 18(04), 722-728. <https://doi.org/10.3329/bjms.v18i4.42875>
- 23 Mosalanejad, L., Sani, M. S., Hosseini, Y., & Abdollahifrad, S. (2018). Implementation of Serial Workshop by Students Educational Need: Trend to Accountability in Medical Education. *Bangladesh Journal of Medical Science*, 17(1), 78-83. <https://doi.org/10.3329/bjms.v17i1.35285>