

Stress in First Year Medical Cadets of Armed Forces Medical College, Bangladesh

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Abstract

Introduction: The journey of medical life specially in the military environment is a very stressful for medical cadets.

Objective: To determine stress in 1st year medical cadets of Armed Forces Medical College.

Methods: Out of 124 medical cadets, 117 were conducted based on a well-established questionnaire that included different established factors of stress. All cadets were given a thorough explanation of the study's methodology and goal before their agreement was gained. In this study, the Medical student Stressor Questionnaire with small cadetship related factor 24(MSSQ) was used to identify sources of stress. Each of the questions in this questionnaire can be a potential source of stress in cadet in his academic life. Data were analyzed with SPSS v.12. Relation between variables was assessed with chi-square test with a significance level of 0.05%.

Results: Of the 124 total cadets, present 117 received questionnaires and completed them returned them. Out of 117 cadets, 82(70%) were female and 117(100%) were unmarried. Moderate stress (1.87) experienced in academic factors as well social factors. Bangla medium students facing relatively more stress than English version background students.

Conclusion: This finding suggests, the very medical education is full of multi varieties stressors. More so cadetship accentuates the stress further in medical life. Now the time has come to think the policy maker involved in medical education. Their realistic thinking to reorganize the curriculum according to time limit to ensure a stress free environment as much as possible in the 1st year of MBBS.

Key words: Stress factors, Medical cadets, Stress in 1st year medical cadets.

Introduction

Stress is a condition of mental or emotional strain or tension brought on by challenging or unfavorable situations. Medical education is highly stressful as compared to other professional curricula. The students of 1st year of medical

colleges stand on the brink of transition as they journey from a phase of rote learning to self-directed learning. This sudden transition for a student along with the vast syllabus, sudden change of version, different pattern of assessment system specially too much oral examination, performance intimation to the parents, more disciplined environment, peer struggle for academic result and extensive period of course are precipitating issues for pressure in medical cadets.

Mild stress may be beneficial in cognitive tasks and performance while persistently high stress may lead to anxiety and/or depression.¹ Medical cadets are the ones who will become future physicians of Bangladesh Armed Forces and more than this they are responsible leaders in the society and health system. Thus, it is important for medical cadets to be placed in desirable limit of stress. Over the years, numerous research on medical students have been conducted to examine stress and its effects.^{2,3} Among these, there were numerous research that sought to determine the amount of stress among first-year MBBS students.^{4,5} There is a need to determine and compare the stress levels experienced by students in different years of the MBBS program as well as many causal elements, which have rarely been examined by researchers. So that appropriate actions can be done to reduce stress to the minimum possible level.

So the goal of this study was to ascertain how stressed out MBBS cadets were throughout their first year. Additionally, we looked at factors contributing to stress among MBBS first-year cadets. Although it is practically difficult to completely eliminate stress or stress factors, we can add timely stress management strategies, counseling, small group discussions, and regular psychological assessment of the students if we are aware of the stress level in first years and the causal elements. The time has arrived to determine the stress levels and contributing factors among medical students.

Materials and Methods

At the Armed Forces Medical College, Dhaka MBBS first-year undergraduate medical cadets participated in the current cross-sectional, questionnaire-based survey.

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The semi-structured questions were distributed among the cadets in lecture hall. Out of 124 cadets, 117 available Cadets of 1st year MBBS course were asked to complete a pre-designed questionnaire within half an hour that included different established factors of stress. The question was never revealed to the cadets before to prevent any bias. All cadets were given a thorough explanation of the study's methodology and goal before their agreement was gained. The AFMC Ethics Committee gave its approval to the study's protocol. In this study, the Medical student Stressor Questionnaire with small cadetship related factor 24 (MSSQ) was used to identify sources of stress.⁶ Each of the questions in this questionnaire can be a potential source of stress in cadet in his academic life.

The factors causing stress are grouped into six domains namely, ARS, intra- and inter-personal related stress (IRS), teaching and learning related stress (TLRS), social related stress (SRS), desire and drive related stress (DRS) and finally group activity related stress (GARS).

The participant's total stress level is indicated by the mean score. Individual domain means were also calculated. Further based on the scoring pattern, the stress levels were graded as mild (<1), moderate (1.01–2), high (2.01–3) and severe (>3). While moderate stress demonstrates the cadet's capacity to effectively manage it, mild stress suggests a near lack of stress. High score suggests that emotions may be brittle, whilst extreme stress suggests that coping with day-to-day activities may be challenging.^{4,6} For Statistical analysis, ANOVA and multivariate analysis was the statistical tool employed and the Statistical Package for Social Sciences version 22 was the software used.

Results

After Statistical Analysis, the mean score from the Table-I, it can be mentioned that, the Academic Related Stress (1.87), Social related stress (1.57), motivation related (1.12) and so on. So Academic Related stress (1.87) can be clearly stated that they were the major sources of stress among the cadets, Social related stress (1.57), was the next high source due to some discipline related extracurricular and physical fitness activities factors followed by motivation related (1.12) and Teaching and learning related stress (1.09) in that order, however all of whom the stress levels was mild.

When we made comparison study among the different factors related stress levels in cadets from Bangla Medium background and English version background by analyzing the mean score of the two groups in Table-II, the stress levels of only Academic Related Stress, was high among the first year undergraduate cadets of Bangla medium background. While all other stresses were found to be similar or slightly higher in English version back

ground students. The difference in mean values between the two groups cannot be compared since the P value, which was discovered to be 0.333, is not less than 0.05.

Table-I: Source of stressors in medical cadets and their mean scores

Sources of Stressors	Mean Score \pm SD
Academic related stress	1.87 \pm 0.71
Interpersonal related stress levels	1.00 \pm 0.08
Teaching and learning	1.09 \pm 0.34
Social related stress	1.57 \pm 0.93
Motivation related	1.12 \pm 0.38
Group activities related stress	1.00 \pm 0.17

Table-II: Comparison of stress between students of Non-english medium and English Medium Background

Sources of Stressors	Bangla medium	English Version
	Mean Score \pm SD	Mean Score \pm SD
Academic related stress	2.06 \pm 0.75	1.67 \pm 0.78
Interpersonal related stress levels	0.92 \pm 0.16	1.16 \pm 0.32
Teaching and learning	1.00 \pm 0.25	1.19 \pm 0.55
Social related stress	1.57 \pm 0.92	1.64 \pm 0.93
Motivation related	1.12 \pm 0.39	1.13 \pm 0.33
13 group activities related stress	1.03 \pm 0.14	1.01 \pm 0.25

Mean score of 0.00 to 1.00 – indicate mild stress 1.01 to 2.00 – moderate stress, 2.10 to 3.00 – high stress and 3.01 to 4.00 – severe stress.

Discussion

As per Ontogeny is concerned, study group of cadets were belongs to youth group, the group who has the extreme potentiality and capability both mental and physical to take challenge or pressure in other word stress, and without any stress, life will be monotonous and boring on the other hand when the pressure exceeds individuals ability to cope and more so if it is prolong persisting then it can be disastrous.⁷

According to a meta-analysis by the American JAMA magazine, 21% to 43% of all medical students may have depression symptoms.⁸ Stress among medical students is rising daily. For medical students who are unable to handle the stress, it can lead to anxiety disorders, suicidal thoughts, and a host of other psychological effects.⁹

This study shows a relatively moderate Academic Related Stress prevalence (1.87) of stress experienced by both male and female medical cadets while the prevalence is severe (3.10) in similar study among the Chhattisgarh Medical College students. Interpersonal related (1.00) stress levels, Teaching and learning (1.09) was also much lower than Chhattisgarh Medical College students Interpersonal related (2.96) stress levels, Teaching and learning (2.45) respectively.⁷ More so all other level is also higher than our study, several factors might contribute of this variation including regional language, socioeconomic status and environmental factors and so on.

After reducing the time duration of 1st professional examination having the same syllabus or some extent more contents causes the increased stress among the all medical students. According to a different study, the prevalence of emotional disturbance was 31/2%, which is comparable to the figures given by American medical students.⁵

High levels of discomfort have been seen among undergraduate medical students, according to various published literatures. The ability of a student to learn and perform well academically may be hampered by stress, coupled with social, emotional, physical, and family issues. Excessive stress can have a severe impact on a student's academic performance as well as their physical and mental health. Even while exams, especially oral exams, are essential to achieving the intended purpose of medical education, medical students experience stress due to the extensive syllabus, thick textbooks, pattern and frequency of exams.

Exams are a significant cause of stress for medical students, according to studies by other academics.^{2,7} Psychosocial variables could potentially be a source of stress.^{9,10} High parental expectations and the standard of care provided by parents both contribute to stress. Although the difference was not statistically significant, the current study also showed that pupils with a Bangla medium background experience more stressful situations than their English version counterparts.

Conclusion

Most of the cadets have a strong and supportive social and family background. More so they are enjoying better accommodation, environment and food qualities in comparison to civil government medical students. 1st year medical curriculum acts as a root cause of stress. At present, the burning issue is to create awareness in the minds of all policy maker involved in medical education regarding the kinds of stress the student faces and to help them reorganized the curriculum to fit with the time frame so that they can have a stress free environment as much as possible in the 1st year of MBBS.

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