

Activities Reducing the Stress among Undergraduate Medical Students: The Students' Perception

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Abstract

Most attention has been focused in recent years with respect to the issues of the medical students suffering from excess of stress during their studies, which may constrain their extent of learning, acquisition of knowledge, and consequently their academic performance. A cross-sectional descriptive study was conducted between July 2016 and June 2017 to explore the activities which helped to reduce the burden of stress among the undergraduate medical students of four government and two private medical colleges in Bangladesh. A self-administered semi-structured questionnaire was used to collect the data on the students' perception. A total of 1145 students included in this study of which 63 % were female. The study revealed that the students' perceptions of stress were highest with respect to the existing policy concerning vacation/holiday (87%), common room facilities (78%), counselling service (64%) and accommodation facilities (60%). The most common coping strategies adopted by the students were discussing problems with family members and friends, gossiping with friends and using social media. Neither alcohol nor drug consumption was mentioned by the students as an effective stress reduction strategy. To generalize the findings, a further longitudinal study including prospective and multi-center focus group discussions along with quantitative research is recommended.

Keywords: Activities, stress, institutional initiatives, medical students, Bangladesh

Introduction

Stress is one of the most common and process-oriented obstacles to success of medical education globally (Gade et al., 2014). It often exerts a negative effect on academic performance, physical, and mental health of the students. And this may hinder later to their professional development and even in clinical practice (Rahman et al., 2015). Tired and

tense doctors may not provide good-quality of care (Soliman, 2014). A more manageable, less stressed and more humane image of the profession should decrease the stress and its consequences (Mahajan, 2010).

Several studies have assessed both the perception of stress and coping up strategies among medical students (Al-Dubai et al., 2013, Nazeer and Sultana, 2014a). On the other hand, few studies done so far have managed to develop robust strategies to reduce the stress among undergraduate medical students (Eva et al., 2015, Sultana, 2014). In this study, we hypothesized that changes in the existing institutional facilities and students' activities could help to alleviate the stress among medical students. Therefore we first made a baseline survey of students' perception regarding existing institutional facilities and coping strategies of students. We did this for a single country Bangladesh. This survey suggests handles by which stress could be reduced. The effectiveness of these handles should be examined in follow-up studies where they are put in place.

Materials and Methods

A cross-sectional descriptive study was conducted between July 2016 and June 2017 among the undergraduate students of six (four from government and two from private) selected medical colleges of Bangladesh. A total of 1169 students from 2nd to 5th academic year were subjected to interview in this study. Students who were present at the time of data collection and willingly to participate into the study were enrolled.

A self-administered semi-structured questionnaire was used to collect data from the students adopting convenience sampling technique. Participants in this study were enrolled

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voluntarily. Questionnaires were given to the available students of each academic year just after the end of the lecture class. All the respondents were informed about the study objectives, their participation anonymity and research ethics. As the study was based on questionnaires, the medical colleges' authorities gave verbal consent to collect the data.

Results

There were 1169 enrolled initially to the survey, but only 1145 respondents returned the questionnaires; a response rate of 98%. Of them, 63% (a total of 720) were female (Fig. 1).

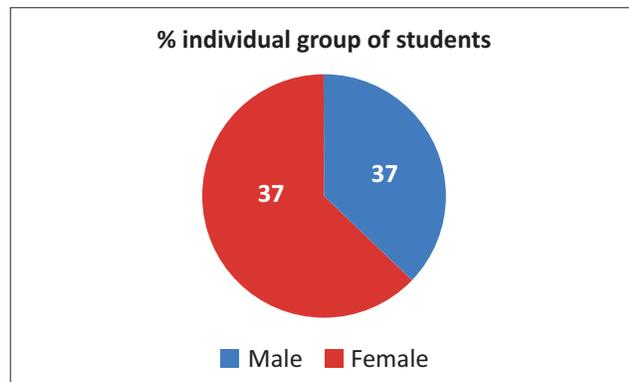


Fig. 1 Comparison (%) of male and female respondents were from six selected medical colleges in Bangladesh.

The respondents were from 2nd year to 5th year (Fig. 2). Students enrolled from 3rd year and 5th year were almost similar (27%), followed by 25% and 21% from 4th year and 2nd year respectively. Fig. 2 showed the academic year-wise distribution of male and female students in six different medical colleges of Bangladesh. Among the distribution, female respondents were nearly two-thirds of the total students.

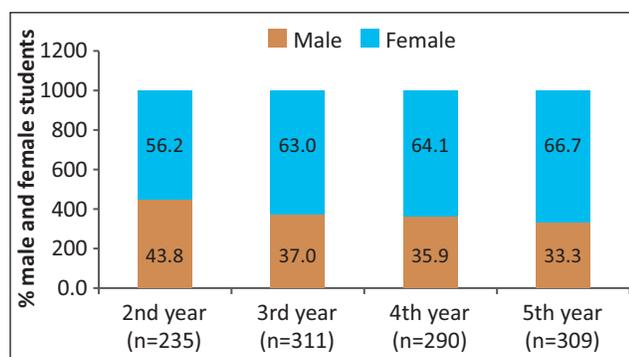


Fig.2 Distribution of the students by their gender and academic year in six different medical colleges.

The respondents' opinion about the existing facilities at the institutes is shown in Table 1. Among the respondents (n = 1145), nearly 57% opined that the institutes provide adequate library facilities, whereas 61% stated that indoor/outdoor game facilities were insufficient. Approximately 60% disputed about the current accommodation management. Almost four-fifths (78%) of

them reported the poor common room facilities to contribute to stress. When we looked for other factors, for example the duration of vacation/leave, 87% respondents expressed their view that vacation/holiday was insufficient for relaxing the stress. Almost two-thirds (64%) pointed out that there were no effective counselling services for students. In fact, only 1124 students answered the question about the existing stipend facilities. Of them, 46% mentioned insufficiency of the institutional stipend as stress factor (Table 1).

Table 1. Delineation of the students' (n= 1145) opinion with the existing facilities at six selected medical colleges in Bangladesh.

Types of statement	Agree	NAND	Disagree
	f (%)	f (%)	f (%)
Adequate library facilities	647 (56.51)	91 (7.95)	407 (35.55)
Sufficient indoor/outdoor games facilities	351 (30.66)	93 (8.12)	701 (61.22)
Sufficient vacation/leave	119 (10.39)	32 (2.79)	994 (86.81)
Stipend for insolvent students (n= 1124)	344 (30.60)	259 (23.04)	521 (46.35)
Sufficient accommodation	370 (32.31)	93 (8.12)	682 (59.56)
Common room facilities	195 (17.03)	62 (5.42)	888 (77.55)
Effective student's counseling service	226 (19.74)	187 (16.33)	732 (63.94)

*Values from SA (strongly agree) and A (agree) were calculated together for describing the sum of values (%) all over the text reported as 'agree'. Similar approaches were applied for sum of values (%) calculated from DA (disagree) and SDA (strongly disagree) reported as 'disagree' parameter (please see SI for questionnaire score values).

The students' perception on which of their own activities helped to reduce their stress is shown in Table 2. Among the respondents (n =1145), more than 78% shared their problems with their family members and friends. Ninety percent relaxed while gossiping with friends and 80% of the students used social media to get rid of stress. We found that nearly 73% (out of 1137) engagement in social activities, for instance helping patients. At least, 86% respondents agreed that facilitating prayer/yoga/meditation might reduce the stress. Fewer than 10% of the respondents thought that smoking or taking alcohol/drugs alleviates their stress. Moreover, 62% respondents opposed to the idea that taking medicine could provide a way to relieve stress.

Table 2. Distribution of students' (n = 1145) response from six selected medical colleges which relates to their individual activities pursuing as a way for stress management/ stress reduction during their academic periods.

Types of statement	Agree	NAND	Disagree
	f (%)	f (%)	f (%)
Sharing problems with the family members	894 (78.08)	98 (8.56)	153 (13.36)
Sharing personal problem with friends	927 (80.96)	107 (9.35)	111 (9.69)
Getting relaxed by gossiping with friends	1023 (89.34)	62 (5.41)	60 (5.24)
Using social media to get relax	921 (80.44)	101 (8.82)	123 (10.74)
Involvement in social activities (n= 1137)	825 (72.56)	177 (15.57)	135 (11.87)
Offering prayer/meditation to get rid of stress	980 (85.59)	87 (7.60)	78 (6.81)
Medication	250 (21.83)	186 (16.25)	709 (61.92)
Smoking	76 (6.64)	43 (3.75)	1026 (89.61)
Addiction to alcohol/drug	42 (3.67)	47 (4.10)	1056 (92.23)

*Values from SA (strongly agree) and A (agree) were calculated together for describing the sum of values (%) all over the text reported as 'agree'. Similar approaches were applied for sum of values (%) calculated from DA (disagree) and SDA (strongly disagree) reported as 'disagree' parameter (please see SI for questionnaire score values).

Discussion

In this study, two types of factors were pointed out that affect the stress experienced by students, i.e. the environment provided to them and the activities they undertake. We did this for a specific country (Bangladesh) and a specific type of study (medical students). Some of the results (e.g. on alcohol and tobacco use) may be much different for other countries and studies, but others may be more general. The statistics of this study appears to be good, more than 1000 students presented with a questionnaire responded at a close to 100 % rate. This by itself suggest that stress management during academic studies is and of concern to the students.

How the students' environment affects stress levels

Starting with what appears to be good, library facilities appear to help. In our study more than half of the students opined that their institute provided adequate library facilities (Table 1). Other studies students of all academic years showed that their students were quite stressed due to

inadequate facilities in the library (Dhillon et al., 2006, Mahajan, 2010, Nazeer and Sultana, 2014a). We may conclude that library facilities may help in managing the stress of the students and that the particular institutions that we examined were doing OK here.

Perhaps not unexpectedly, the rebound is in the hostel facilities. Duly allotted and comfortable hostel accommodation may be one of the important factors to make the students less stressed (Table 1). Similar studies also reported that the most common source of stress among the students was their living condition in the hostel (Nazeer and Sultana, 2014a, Nazeer and Sultana, 2014b, Sreeramareddy et al., 2007). We suppose that hostel facilities were so incompatible with studying that students fled into the libraries for being able to study. In keeping with this, three quarters of the students felt that common room facilities were inadequate (Table 1). Also in previous studies students of all academic years were quite stressed due to inadequate recreational facilities (Mahajan, 2010, Nazeer and Sultana, 2014a, Shaikh et al., 2004). On the basis of our findings, we propose that medical students should be offered more opportunities for recreational facilities and better accommodations for studying, in order to minimize the stress. Not unexpectedly was that almost half the students stated that financial benefits were not provided by the institutions to the insolvent students. Other studies also reflected our findings that financial constraints in general were one of the common sources of stress among the students (Al-Dubai et al., 2013, Nazeer and Sultana, 2014a, Shaikh et al., 2004).

The study had hypothesized that the duration of vacation/holidays were another potential factor responsible for managing stress. The present study revealed that almost all students argued that the duration of vacation during the course is insufficient (Table 1). Other studies also supported our hypothesis that vacation and holidays were key factors responsible for managing stress (Gade et al., 2014, Nazeer and Sultana, 2014a). It seems that the institutions could substantially help to relieve the stress by ensuring adequate leave to the students. Although this reduces teaching time, it may well be that the optimum for knowledge acquisition actually reside at a lower rather than higher offering of such knowledge.

Surprisingly and importantly because it appears to be something that is quite manageable, in this study more than half of the students felt that effective student counselling services were not prevailing in the institutions (Table 1). Counselling services could help make the students aware of stress and its management (Al-Dubai et al., 2013, Mahajan, 2010, Nazeer and Sultana).

How the students' activities affect stress levels

A great majority of the students reduce stress by talking with family and friends (Table 2), as had also been found by (Bukhsh et al., 2011, Eva et al., 2015, Nazeer and Sultana, 2014a, Shaikh et al., 2004). Nine out of ten students noted

that students became relaxed by gossiping with friends (Table 2), confirming results obtained in Pakistan (Shaikh et al., 2004). Four out of five students expressed their opinion that students used social media to get relaxed (Table 2), in agreement with the previous finding that social media could help to reduce the stress (Eva et al., 2015, Nazeer and Sultana, 2014a). Three quarters of the students stated that students alleviated stress by helping patients socially (Table 2), was consistent with the report by (Eva et al., 2015). It may not be unrelated to this that the great majority of the students noted that offering prayer/practice yoga/meditation could reduce the stress (Table 2). This finding agreed with the outcome of other studies (Eva et al., 2015, Gade et al., 2014, Shaikh et al., 2004, Nazeer and Sultana, 2014a).

Usage of alcohol, tobacco, and drugs were the common strategies to cope stresses in medical students in the United Kingdom (Ashton and Kamali, 1995), but not at all in this study. This indicates that for some issues there are vast differences between countries. It remains to be established whether this is actual and stable, or socially and culturally enforced.

Recommendations

Based on the overall findings of student perception, the following handles are suggested for reducing student stress better:

- I. institutes should perhaps set up a monitoring system to identify the stressful condition of the students,
- ii. the institute should provide adequate psychological, societal and academic counseling service for the students,
- iii. preparatory leave mentioned in curriculum for each phase should be followed strictly and
- iv. hostel accommodation and recreational facilities should be enhanced perhaps also with an eye of enabling studying at the hostel location.

In addition, then medical colleges should have a keen eye on how talking/ gossiping/ social-mediating with friends constitute a major way of stress reduction, and may create major facilities for such activities. These may not be libraries or hostels, but tea/coffee bars, students meeting points or movie theatres on campus. Proper facilities for private prayer and meditation should also help. Providing tobacco, drugs or medicines does not appear to be a priority. We note however that these are suggestions only.

Conclusion

The present cross-sectional descriptive study has been attempted to identify the potential factors contributing to reduce the stress among the students of six selected medical colleges of Bangladesh. This finding will help to improve our understanding of the causes and consequences of medical student stress, potential solutions. A double-blind study is needed to prove that any of these factors works independently of the others. Indeed, many of the factors mentioned may be confounded; students may gossip in libraries or vacation/leave does help against stress but is not properly managed. To generalize our findings in depth interviews, focused group discussion, large scale of quantitative study across national borders are recommended. Longitudinal follow ups of such studies to obtain the magnitude of the problem and to assess how it perpetrates into medical practicing should be useful.

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Conflict of interest

The authors declare no conflict of interest.

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