

Impact of Counselling Services in Stress Reduction among First Year MBBS Students

ABRAHAM JOBBY¹, ANGELA VISWASOM²

ABSTRACT

Introduction: Medical education being a highly competitive field is known to be quite stressful. Stress hinders the efficiency of many medical students. It has a negative influence on their academic performance as well as their physical health.

Aim: To observe the baseline stress level of first year medical students and to assess the effect of counselling and mentoring programme on these stress levels.

Materials and Methods: An experimental study (pre and post-test without control) was conducted during November to December 2015 amongst the first year medical students of the Travancore Medical College, Kollam, Kerala, India. Ninety-eight first year medical students were divided into 10 batches and were assigned to a teaching faculty of the basic specialities (mentor). Personal interaction and counselling was conducted by the teaching faculty with technical assistance from the psychiatry department. General

stress relieving techniques were taught to students through two counselling programmes in four batches, each within a gap of one month. Standardised peer reviewed, pre validated stress assessing questionnaires (pre-test and post-test) were administered to the students who consented and attended all sessions.

Results: It was identified that around 74 out of 98 (75.5%) of the students were experiencing stress at the beginning of the study and this reduced to 69 out of 98 (70.4%) after implementation of the programme in a time period of one month. This shows that counselling programmes were effective in reducing both baseline stress and academic stress amongst first year medical students.

Conclusion: Assessment of stress and conduct of stress management programmes are necessary for improving the academic performance and Quality Of Life (QOL) of medical students. Stress relieving techniques should also be practiced to reduce stress in medical education.

Keywords: Coping strategies, Counselling, Medical students, Stress

INTRODUCTION

Medical education, being a highly competitive field is known to be quite stressful for the students [1]. A high level of stress affects their physical and mental health as well as decreases their academic performance [2-4]. Stress in students may also be due to lack of proper guidance [5]. Coping is defined as the process of managing the stressful demands and challenges exceeding the resources of the person. Adapting coping strategies that are beneficial during stressful experiences have to be encouraged [6].

Untreated stress can lead to depression and adversely affect QOL [7]. Mild form of stress may be beneficial in many students, however, persistently high stress levels may be detrimental to mental health [8]. Moderate level of stress has been reported in both male and female students during regular classes [9]. Garlow SJ et al., and Kumar SS et al., have reported that suicidal feelings and actions are relatively high in college students [10,11].

Counselling programmes have shown to decrease stress levels effectively, promoting positive coping skills which in turn improves their academic performance [12]. A structured orientation programme emphasising the requirements of each phase of the MBBS curriculum, along with counselling and teaching self care skills are approaches which are highly successful in reducing stress [13]. Structured time outs during the course along with genial faculty, student discussion groups, mentoring sessions, psychological and pedagogical support are some recommendations to ward off stressors [14]. Finkelstein C et al., in an earlier study reported that an elective in 'Mind-Body Medicine' may decrease anxiety scores among preclinical medical students [15]. The present study was undertaken to observe the baseline stress scores and to assess the effect of mentorship programme and counselling sessions on the stress levels.

MATERIALS AND METHODS

An experimental study (pre and post-test without control) was conducted during November to December 2015 amongst the first year medical students of the Travancore Medical College, Kollam, Kerala, India, in accordance with the Institutional Ethics Committee. A written, informed consent was obtained from each participant. The study was carried out with assistance of the Department of Psychiatry and the Medical Education Unit. Standardised peer reviewed, prevalidated questionnaires were administered to the students who consented and were present in all sessions both before and after the stress reduction programme.

The study was performed in accordance with the "Ethical Guidelines for Biomedical Research on Human Participants, 2006" by the Indian Council of Medical Research and the Declaration of Helsinki, 2008.

All willing first year MBBS students admitted in the year 2015 were included in the study. Out of the 100 students, 98 students were included in this research after obtaining written, voluntary informed consent. Two students who were absent during the initial session were excluded from the study.

Counseling Programme

The pre-session assessment started with the assessment of baseline stress levels of the 98 students present at the initial session using the prevalidated Cohen's Perceived Stress Scale Questionnaire (PSSQ) and Medical Stress Scale Questionnaire (MSSQ) [16,17]. Coping strategies and institutional factor analysis was also done [18].

The students were divided into 10 batches by lottery method and were assigned to a teaching faculty (mentor) from the first year MBBS cadre. The faculty spent one hour in a week with the students. During this time there was one to one personal interaction and the students who needed more care were identified. These students were addressed in a separate session. Depending on

the analysis of the stress level, the students were counselled by their mentors with guidance from the psychiatry department. The mentors received training from the psychiatrist and psychologist of Travancore Medical College, Kollam, Kerala, India, for identifying a student in need of counselling and sending them to the specialist for the additional counselling if required. Two episodes of en-masse stress reduction counselling programmes aimed at providing theory and practical skills of stress reduction were also conducted for all students in each of the four batches. Each episode comprised of two interactive sessions organised by the psychiatry department. The first session of each programme dealt with the theoretical aspects of evolution of stress and its management. The psychologist provided the students with stress management tips and measures to improve their positive coping strategies in the second part of the session. Two such programmes were held a month apart. The same questionnaires used in the pre-session were administered a month after the second stress management programme was conducted.

Assessment of Stress

Cohen's PSSQ comprising of 10 questions analyses the way how often a student felt or thought a certain way using a five point Likert's scale [16]. This questionnaire gives a measure of the degree to which situations in one's life are appraised as stressful. The questions in the PSSQ ask about feelings and thoughts of incidents which occurred during the last month. In each case, respondents are asked how often they felt a certain way. Higher scores implied higher stress.

The MSSQ is a prevalidated 27-item screening instrument developed for assessing the stressor experience of first year MBBS students [17]. Their responses were marked using five point Likert's scale. Again, higher scores meant higher stress levels.

Coping strategies and stress reducing factors were identified using a peer reviewed and prevalidated questionnaire prepared by the Department of Psychiatry.

STATISTICAL ANALYSIS

Data is represented as Mean±Standrad deviation and was analysed using SPSS version 16.0. Descriptive statistics and paired t-test was used to compare pre and post stress scores. Chi-square test was used to test significant associations between proportions. A p-value<0.05 was considered as significant.

RESULTS

The [Table/Fig-1] presents the sociodemographic details of the participants. Most of the students were 19 years of age and belonged to middle class, nuclear families. The stress scores were reduced significantly (p<0.05) after conducting the counselling programmes [Table/Fig-2]. Baseline stress scores were found to be higher irrespective of gender [Table/Fig-3,4]. A 74 (75.5%) of the students were found to be highly stressed as their PSSQ scores was high [Table/Fig-5].

The MSSQ focussed on the academic stressors. The students readily agreed that the increased work load towards exams (n=93, 94.9%) and the difficulty in covering portions daily (n=84, 85.7%) were the most common stressors. Two of the entities that were considered as least stressful by the students were - not being given appropriate marks in sessional examination (n=12, 12.2%) and fear of ragging or harassment (n=15, 15.3%).

When considering the non academic stressors, the most relevant stressor identified was difficulty in finding time for recreation were 60 (61.2%). Another major factor which stressed the students was the difficulty of being away from home were 36 (36.7%). This could be attributed to the fact that 83 (84.7%) of them were raised in nuclear families. The students had difficulty in dealing with ill health issues during the course of study were 32 (32.6%). In this study, the effect of counselling was found to be only minimal in relation

Age (years)	Frequency	Percentage
17	1	1%
18	25	25.5%
19	53	54.1%
20	18	18.4%
21	1	1%
Gender		
Boys	31	31.6%
Girls	67	68.4%
Socioeconomic class (as per the urban institute report)		
Upper class	6	6.1%
Middle class	92	93.9%
Earning members in the family		
Both parents	30	30.6%
Single parent	68	69.4%
Family type		
Nuclear	83	84.7%
Joint	14	14.3%
Divided	1	1%
Boarding Type		
Hostel	77	78.6%
Day-scholar	21	21.24%

[Table/Fig-1]: Sociodemographic profile of the participants.

Parameter	Pre-test score (n=98)	Post-test score (n=98)	p-value
MSSQ	96.44±10.0	94±12.1	0.031*
PSS	22.73±3.910	21.36±3.938	0.003*

[Table/Fig-2]: MSSQ and PSS scores of the participants. Data is presented as Mean±SD. (* p-value<0.05 was significant)

Gender	Pre-test Perceived stress scale		Post-test Perceived stress scale	
	Stressful	Not stressful	Stressful	Not stressful
Boys (n=31)	21 (28.4%)	10 (41.7%)	23 (33.3%)	8 (27.6%)
Girls (n=67)	53 (71.6%)	14 (58.3%)	46 (66.7%)	21 (72.4%)

[Table/Fig-3]: Frequency and percentage of stress levels of boys and girls by Perceived stress scale before and after counselling. Data is expressed as frequency and percentage, the chi-square and p-value were not found to be significant in the dichotomous data

Gender	Pre-test Medical students stress		Post-test Medical students stress		
	Severe stress experience	Mild-moderate stress	Severe stress experience	Mild-moderate stress	No stress experience
Boys (n=31)	29 (31.5%)	2 (33.3%)	28 (32.2%)	3 (30.0%)	0 (0.0%)
Girls (n=67)	63 (68.5%)	4 (66.7%)	59 (67.8%)	7 (70.0%)	1 (100.0%)

[Table/Fig-4]: Frequency and percentage of stress levels of boys and girls by Medical students stress questionnaire before and after counselling. Data is expressed as frequency and percentage

Perceived stress scale	Pre-test	Post-test
Stressful	74 (75.5%)	69 (70.4%)
Not stressful	24 (24.5%)	29 (29.6%)
Medical students stress		
Severe stress experience	92 (93.9%)	87 (88.8%)
Mild to moderate stress	6 (6.1%)	10 (10.2%)
No stress experience	0 (0.0%)	1 (1.0%)

[Table/Fig-5]: Pre and post counselling levels of academic stress as assessed by PSSQ and MSSQ (n=98).

to the non academic stressors, as there was no change in the situations in the institution.

Of the institutional factors which helped in relieving stress, 85 of the students (86.7%) perceived that interactions with friends and group members and vacations and holidays to be most effective in reducing stress. On the other hand, departmental ambience and the campus itself were considered to be the least conducive for stress relief.

The coping strategies adopted by the students were mostly positive with most of them taking to humour were 90 (91.8%) and trying to focus more on things that they can control and accepting things which they cannot were 88 (89.8%). Negative coping strategies are not seen widely used by the students. When used, it is emotional withdrawal which occupies the highest level were 66 (67.3%) with ignoring the problem were 52 (53.1%) also being practised. In the post counselling session, it is noted that there was a decline in the number of students who used negative coping strategies.

DISCUSSION

The current study focussed on identifying the baseline level of stress and to identify whether counselling effectively decreases the stress in first MBBS students. In this study, it was proven that there was reduction in stress levels after implementation of counselling and mentoring programmes. The practice of stress relieving techniques was also considered useful by the students.

In the present study, we have observed higher prevalence of stress among first MBBS students. This is in accordance with some earlier studies. Gade S et al., conducted a cross-sectional study among the first MBBS students in Nagpur, India, using a 41-item questionnaire and observed that about 29% had stress level greater than 3 in a score of 5 [18]. In a study conducted in Kerala, India by Sivan S et al., found that the prevalence of stress amongst first year MBBS students was 93.75% (MSSQ) and 69.79% (PSS) [19]. Sreeramareddy CT et al., in a study conducted in Nepal, reported higher level of psychological morbidity in first year students as compared to second year (28.4% against 16.3%) [20]. The prevalence of stress was determined to be 57% by Abdulghani HM and 61.4% by Saipanish R [21,22]. Shah M et al., derived a mean perceived stress levels of 30.84 in a study conducted amongst 200 medical students in Lahore, Pakistan [23]. A 73% of medical students perceived stress at some points of their course, as per Supe AN, in a study conducted at Mumbai, India [24].

In the present study, we have not observed significant difference in stress scores in boys and girls similar to an earlier study done by Archana R et al., [7]. Gade S et al., and Shah M et al., had reported that stress scores of female students are higher than males [18,25].

The present study found that the major stressors for students are the inability to cope with academic demands, examinations, increased mental tension and too much work load. These findings were similar to the earlier studies done by Shaikh S et al., Houghton JD et al., and Roddenberry A and Renk K [25-27]. The fear of failure in exams was admittedly the most common stressor in many of the previous studies. The first year students were usually busy with their academic schedule that they lack leisure and recreation. It was reported by Isoahola S and Park S, and Iwasaki Y that leisure time was one of the best stress coping strategies [28,29].

Gade S et al., found that an emotional support system in place, like the mentoring programme in this study, was a major stress relieving factor [18]. Shapiro SL et al., reported that stress management programmes were helpful psychologically and/or physiologically to relieve stress and to improve academic performance of the students [30]. Stress management programmes provide favourable learning environment that help medical students cope with the stressors effectively [31].

LIMITATION

Generalisation of the study results is limited by the characteristics of the sample, which was done among students from a single private medical college. Despite assuring anonymity and confidentiality of their responses, under reporting of diverse group of stressors and coping responses might have been an issue.

CONCLUSION

The fact that first year MBBS students experience high levels of stress as observed by this study was an eye opener. Even a short term counselling programme has brought about a beneficial change in perceiving stress. Though, examinations are a stark reality, curricular revisions bringing in continuous comprehensive evaluation should be considered. A congenial atmosphere in the institution would reduce institutional stress factors. Assessment of stress and stress management programmes are necessary for improving academic performance and QOL of medical students.

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PARTICULARS OF CONTRIBUTORS:

1. Professor and Head, Department of Forensic Medicine, Travancore Medical College, Kollam, Kerala, India.
2. Professor and Head, Department of Anatomy, Travancore Medical College, Kollam, Kerala, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Angela Viswasom,

Professor and Head, Department of Anatomy, Travancore Medical College, Thatttamala-691589, Kollam, Kerala, India.

E-mail: drangelakb@gmail.com

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