

Acknowledging Stress in Undergraduate Medical Education and Methods of Overcoming it

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Abstract: Medical education is very demanding and stressful. Medical undergraduates face social, emotional and physical problems due to stress which affect their learning ability, academic performance and patient care. When students look at their education as a challenge, stress can bring them a sense of competence and increased capacity to learn but when education is seen as a threat, such stress can elicit feelings of helplessness. Each year of medical education is characterized having unique stress. Hence, present study was undertaken to examine coping strategies of first and second year medical undergraduates and to suggest different methods to attenuate them. The prospective data was collected from first and second year medical undergraduates enrolled at MGM Medical College, Kamothe Navi Mumbai, by using prevalidated questionnaire. The questionnaire probed to find out emotional maturity, problem solving ability, guidance needed for the career planning, problems related to health due to stress, availability of nutritious food and time for grooming as well as coping strategies in various situations. Data analysis was done by using Likert scale (1-4 points) and results were tabulated in the form of percentage. The cause of stress observed among medical undergraduates was academic, financial as well as emotional and their coping strategies were poor. Hence it is suggested to take corrective measures at various levels like institutional level, students' level as well as parents should be concealed to develop and inculcate adaptive coping skills in medical undergraduates.

Key words: Coping strategies at institutional level, medical undergraduates, parents' level and students' level, stress

INTRODUCTION

Medical education though respected in the society is highly stressful and very demanding because large burden of information leaves a minimal opportunity to relax and recreate. Only the cream of population in the society is eligible for medical education (Ko *et al.*, 1999).

Hence in an academic tenure, medical student's life is subjected to different types of stress factors like the pressure of academics with an obligation of success, uncertain future and difficulties. Medical undergraduates face social, emotional, physical and family problems which may affect their learning ability and academic performance (Jaykaran *et al.*, 2009). For students who have been life long achievers in primary and secondary school, getting a mediocre grade on an examination during academic medical tenure often is shocking (Rosenthal and Susan, 2005). Thus, for first time, many undergraduates find themselves in the bottom of their class (Tomaselli, 2008). Once inside the pressure cooker

of academic demands, some medical students find it difficult to endure the crucible of training. Through the course of medical school they experience substantial deterioration of their mental quality of life (Tomaselli, 2008).

The reported reason for stress were examinations, academics followed by relationship problems in the college, family and also homesickness (Jaykaran *et al.*, 2009).

It was reported that medical students were more prone to depression than their non medical peers. According to literature survey, the emotional and academic challenges involved in becoming physicians wear out students because their initial encounter with illness and death may unmask psychological vulnerability. Such encounter often resonates with unresolved episode of loss or trauma in the student's past or come as a shock to those who have had little experience with death. The initial encounter with dead body in the first year of medical school and subsequent exposure to the treatment

of illness, death and sufferings may make the students emotionally detached. On the contrary some students may become too emotional to care for others (Rosenthal and Susan, 2005).

However, medical school stress is likely to predict later mental health problems, but it was reported that students seldom seek help for their problems. In Swedish study, the prevalence of depressive symptoms among students was 12.9% and most of the students had made suicidal attempt. Thus, it is an important issue for medical educator to know the prevalence and cause of student's distress which not only affects his health, but also his academic achievements at different point of their study period (Hamza, 2008).

Studies in the United States suggested that the practice of medicine entails certain risks to the mental health of both qualified physicians and students. The link between the training and later problems of mental health have been suggested by Firth (1986).

Although some stress is necessary for personal growth to occur, the amount of stress if overwhelming; the students' ability to cope is affected (Whitman, 1985).

Thus, adaptive or maladaptive skills developed during medical school, may lay the ground work for their later's professional development (Mosley *et al.*, 1994). According to Selye, stress is a physiological nonspecific reaction to external or internal demands. Therefore, it is not the stressor that causes stress but individual's perception and emotional reactions to it (Redhwan *et al.*, 2009). Coping refer to the cognitive and behavioral efforts employed to manage, reduce or control stress (Mosley *et al.*, 1994). Coping strategies are defined as the person's constantly changing cognitive and behavioral efforts to manage specific external and internal demands that are appraised as taxing or exceeding the person's resources (Redhwan *et al.*, 2009). It was reported in the literature that students with an active coping style have lower level of psychological distress (Redhwan *et al.*, 2009).

Despite the potential importance of coping very few studies were reported on it. The role of coping strategies in attenuating the impact of stress during medical education was examined (Mosley *et al.*, 1994).

Although each year of medical education is characterized having unique stress, it was reported by many researcher that students of first year are more prone for stressful situations because it is the transition from school education to professional health-care education which is dealing with human body (Mosley *et al.*, 1994).

Hence the present study was undertaken to examine the coping strategies of first year and second year medical undergraduates of MGM Medical College, Kamothe, Navi Mumbai.

METHODOLOGY

This study (a part of on going project) was carried out at MGM's Medical College, Kamothe, Navi Mumbai, Maharashtra, India, in a period of 2008-2009. The prospective study was carried out following Institutional Review Board approval. Initially, informed consent document were sought from the students who were willing to participate in this study. Self administered questionnaire was distributed to all first and second year students who were enrolled at the MGM Medical College, Kamothe, Navi Mumbai. The questions in the questionnaire were derived from the literature (Garmel, 2004; Lartey, 2009) and a focus group discussion. The draft questionnaires were sent to five experts in the field of medical education as well as to the clinical psychologist for review. Comments and suggestions made were incorporated into the final design. These modified pre-validated questionnaires were used in this study. The students of first year (n = 83) and second year (n = 103) including casual batch students) were administered an exhaustive questionnaire (modified pre-validated) aimed at probing the various aspects of the medical life and their coping strategies for the stressful events. Basic information gathered included age, gender, place of residence (hostelites and non-hostelites) and nationality. In order to find out coping skills, questions related to emotional maturity, leadership quality, sociability and vulnerability (Yvonne and Ylanko, 1984) were asked.

RESULTS

Data analysis: Only questionnaires with complete Background and demographic information were coded and recorded in a computer. Questionnaires with missing background and demographic information were not recorded and were excluded from the study. The data analysis was done by using Likert scale where digit 4 is assigned to most positive response and 1 to extreme negative response. Descriptive analysis and correlation coefficient analysis were used.

Emotional maturity: 65.71% from Ist year hostelites and 14.81% from IInd year hostelites, while -25% from Ist year nonhostelites and 0% from IInd year nonhostelites found emotionally mature. On the other hand 34.28% from Ist year hostelites and 85.18% from IInd year hostelites 72.91% from Ist year nonhostelites and 83.56% from IInd year nonhostelites is having less emotional maturity.

Leadership quality: 8.57% from Ist year hostelites and 11.11% from IInd year hostelites focused on the problems in order to find out solutions, while 16.66% from Ist year non-hostelites and 12.32% from IInd year non-hostelites focused on the problems in order to find out solutions.

They took corrective action. Thus, taking corrective measures by finding a solutions or acting in such a way to find out solutions explore the leadership traits. Most of the students agreed that they learned from the mistakes.

Sociability: 17.14% of Ist year hostelites and 66.66% of IInd year hostelites spent time with friends and took advise from family members. 12.5% of Ist year non-hostelites and 42.46% of IInd year non-hostelites spent time with friends and take advise from family members.

82.85% of Ist year hostelites and 33.33% of IInd year hostelites spent time with friends and reluctant to take advise from family members. 85.41% of Ist year non-hostelites and 47.94% of IInd year non-hostelites were not social.

Personal care: 33% of Ist year students observed that they got little time for personal care and sleeping while 67% students complained about lack of time for personal care and insufficient time for sleeping. Their major concern was availability of food in the mess. Due to poor quality of food in mess, 67% of Ist year undergraduates turned to junk food as an alternative in order to satiate their appetite. On the contrary, only 25% II year undergraduates complained about lack of time for sleeping and time for personal care with 70% having no issue about the mess food, time for sleep and personal care

Career planning: 77.14% from Ist year hostelites and 85.19% from IInd year hostelites suggested that they needed guidance from their seniors or teachers for future career, while 85.41% from Ist year non-hostelites and 76.71% from IInd year non-hostelites agreed for need of guidance in future career.

Run away situation: 11.42% of from Ist year hostelites and 7.42% from IInd year hostelites took corrective action, while 31.25% from Ist year non-hostelites and 8.2% from IInd year non-hostelites were moderately courageous to take corrective steps in the difficult situations.

82.85% of from Ist year hostelites and 66.66% from IInd year hostelites showed runaway behavior while 60.41% from Ist year non-hostelites and 76.71% from IInd year non-hostelites showed runaway behavior in the difficult situations.

Drug abuse: Not a single student marked use of tobacco toxins and alcohol.

DISCUSSION

A minimal amount of stress is necessary to add spice to one's life because an element of stress is involved with

growth and is essential for sound personal functioning. On the other hand the increase in the level of stress is associated with decrease of psychological health which may impair student's behavior, diminish learning and ultimately affect patient care (Jaykaran *et al.*, 2009).

The level of stress and depression vary between stages of education. In many foreign schools, students are plagued by financial worries which is an important cause of stress. In our study, though majority of students were from well economical background, high fee structure of medical education is one of the stressor for them (Hamza, 2008). The negative effects of long and tiring medical education on the psychological status of students have been shown in several studies and our results were in consensus with them. The changes appear to be significant during first year. Therefore, with early identification and effective psychological support, possible future illness may be prevented (Whitman, 1985). Besides educational demand, social and friendship related factors are reasons for psychological disturbances in our students.. When students do not rank near the top positions in the class at the end of the first semester, they give up trying because their best efforts were not rewarded. Students feel academic pressure because majority of their classmates were from top listed colleges. The major stressor for first year medical students was the amount and complexity of material taught, which was also reported by Whitman (1985).

In our institution, some of the students were from outside Mumbai and were staying in a hostel. As compared to home, hostel life is the huge change in the environment and became difficult for students to adjust in this environment. Such environment may bring cultural shock to some extent as they come from different social and cultural background.

The importance of substance abuse is also evident in this study. The low drug abuse rate may be attributed to the values of traditional society that established sanction against drug abuse and kept them on a high moral pedestal or students' may be reluctant to express such habit in front of their teachers. Intake of alcohol is difficult to measure accurately by questionnaire. It was reported that engagement strategies were more helpful than disengagement strategies to modify stressful situation and might be associated with more adaptive outcome. (Mosley *et al.*, 1994) The guideline have stated that there are no standards for coping strategies that might vary depending on socio cultural factors. Thus, coping strategies have been shown to vary by region, community, social groups, households, gender, age, season and time. This is greatly influenced by individual's personal experiences (Redhwan *et al.*, 2009).

In a view of the potential long term benefits of managing stress in a more effective ways, students should

develop such skills early in their medical career (Redhwan *et al.*, 2009).

The students described the stress due to medical training because their personal life was affected. Anxiety is invoked during their active participation in ward round, to deal with death and sufferings (Redhwan *et al.*, 2009).

Apart from tension, anxiety associated with stress, the feeling of frustration were also reported. These feeling may be seen as an inevitable part of being a medical students. Thus the causes of stress among the students were financial, lack of sleep, communication gap with teachers, and difficulty in understanding of subjects (Redhwan *et al.*, 2009).

It was reported that students coping strategies and personal health deteriorate as they progress through medical school. Symptoms of depression can be little bit difficult to distinguish in medical students as academic stress is inherent in student's life. Students often dismiss their feeling of despondency as a normal emotional response to medical school, where they live from test to test and do not have time for themselves (Rosenthal and Susan, 2005).

Coping skill training may be a useful intervention to mitigate the negative effects of stress among medical students. It was reported that the type of adaptive or maladaptive coping skill developed during medical school may have consequences for long term professional adaptation or impairment (Mosley *et al.*, 1994). Hence it is essential to take corrective steps at the beginning of the medical undergraduations to develop and inculcate adaptive coping skills in the medical students during their formative years.

Limitation of the study: As the study had been undertaken in the private medical college, all results cannot be generalized for the medical undergraduates population.

Suggestions for corrective measures: According to literature survey, in order to improve the coping strategies corrective steps should be taken at the beginning of the medical under graduation. These include improving orientation, better counseling, more support groups

Good teaching practice cannot be overestimated as a key to prevent and minimize distress among students (Whitman, 1985).

There should be functional parent counseling cell because parents should be counseled in order to avoid their over expectations about their kids. In medical school, to score and remain at the top of the class is difficult as compared to scoring in secondary school.

At the level of institution: Creating a mentoring cell at the level of institution and dissemination of information

of such program to the students via deans' office, during orientation program and via faculty members. It will provide support to the students.

Students should be inspired to take a help of such facility as and when needed. Entertainment facility should be established in college like regular debating club, movie club, sports club, music and art gallery. It was reported by Lee and Graham (2001) that stress management and time management techniques along with first and second year curriculum may assist students in dealing with stress.

Different stress management techniques such as meditation, member of support group help in better adaptation of coping skills. It will help to improved knowledge of stress, and to enhance ability to resolve conflicts.

At the level of faculty members: Small group teaching is a useful method to reduce the stress as there is more interpersonal interaction. It was observed that students freely communicate with junior faculty members hence staff need to be aware of stressors and stress levels of the students. If medical students do have a level of stress, it is necessary to know which part of training is responsible.

There should be a good communication between students and teachers or faculty members. There should be a parent/guardian faculty member meet on regular basis in order to know the progress of student

At the level of students: They should be exposed to various stress busters at early stage and should be trained properly in order to avoid stress burnout.

Students should be encouraged to participate in sports and extracurricular activity and to enrich their hobby. Seniors should be counseled against ragging. They should be encouraged to flourish healthy interactions with colleagues.

Developing support group: Inculcate the habit to make a strong network of supportive friends and family members. For this, facility like online forum should be provided. In our study, it was reported that talking to the friends was the most common stress relieving factor, some students reported participation in social activities and interaction with family members (especially non hostelites) were the stress busters. In students it was reported that sharing problems with others was the best way to deal with stress (Redhwan *et al.*, 2009). This strong network is an enormous buffer against life's stressors. On the other hand, loneliness and isolation from society make the students more vulnerable to stress. Teach medical students to monitor their own health by improving eating habit, sleep hygiene, stress regulation and mood regulation etc., (Rosenthal and Susan, 2005).

Develop sense of control: Things become out of control if people are vulnerable to stress. Thus, to avoid this, it is important to develop confidence in oneself, develop ability to influence events as well as take stress as a challenge, perseverance of work are needed. These abilities pacify the storm of stress very effectively. Optimistic attitude, strong sense of humor and faith in higher power help to accept the various changes in life as a part and parcel of routine events.

Other coping strategies: Healthy life style such as eating balanced diet, regular exercise, avoiding tobacco consumption and alcohol drinking, practicing meditation like yoga, prayer and listening to soft music will help to relieve the stress.

According to literature survey various criteria are mentioned to determine effectiveness of stress coping strategies. These are:

- Resolution of the conflict or stressful situation.
- Reduction in psychological distress by various means like
- Normal social functioning.
- Returning to pre-stress activity as early as possible after stressful encounter.
- Well being of self and others affected by the situations.
- Maintaining positive self esteem and perceived effectiveness.

At the level of parents: There should be functional parent counselling cell because parents should be counseled in order to avoid their over expectations about their kids. In medical school, to score and remain at the top of the class is difficult as compared to scoring in secondary school.

CONCLUSION

It is concluded that in order to make a good physician, stress in medical under graduation should be acknowledged during the formative years of the medical education.

If methods to overcome it will be implemented at the beginning of the medical education, the future physician will develop the skills of managing stress in a more effective ways early in their medical career which will avoid the further psychological calamities.

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