

Research Article

## Stress in first year medical students

Somnath T. Salgar

Professor, Department of Biochemistry, Rural Medical College, Loni (Bk), Taluka Rahata, District Ahmednagar, Maharashtra 413736. India.

**\* Correspondence Info:**

Dr. Somnath T. Salgar,

Professor

Department of Biochemistry,

Rural Medical College Loni (Bk), Taluka Rahata District Ahmednagar, Maharashtra. 413736. India.

E-mail: [drsomnathsalgar@gmail.com](mailto:drsomnathsalgar@gmail.com)

### Abstract

**Background:** Stress in medical students is not uncommon and is process orientated. Although minimal amount of stress is desirable and is necessary to spark in a healthy competitive spirit, the undue stress has undesirable impact on students.

**Objective:** The present study was designed with an aim to evaluate different stress factors among the first MBBS students.

**Method:** The participants were asked to complete a pre-tested and pre-designed questionnaire that included a list of sources of stress.

**Results:** The most common stress factor reported by participants were high parental expectations (80.9%), vast syllabus (73%), worry about future (71.3%), long duration of course (67.3%), frequency of examinations (66.7%), performance in formative and summative examination (66%), low self esteem (62.3%), lack of sleep (54%) and lack of emotional and social support (38%).

**Conclusion:** The life of medical student is stressful. Our study highlights the need for interventions in to cope up stress in medical education. Student counselling and informal mentorship is need of hour.

**Keywords:** Examination, medical students, stress, stressors.

### 1. Introduction

Medical education is highly stressful as compared to other professional curricula. Bachelor of Medicine and Bachelor of Surgery (MBBS) being the toughest course, stress in medical students is not uncommon and is process orientated. The vast syllabus, peer competition for academic performance, continuous evaluation and long duration of training are precipitating factors for stress in medical students.

The term stress was coined by endocrinologist Hans Selye in 1930s.<sup>1</sup> Stress is the condition that results when person-environment transactions lead the individual to perceive a discrepancy, whether real or not, between the demands of a situation and the resources of the person's biological, psychological or social system.<sup>2</sup> Stress inducing factors in medical students can be academic, physical, emotional or social.

Although minimal amount of stress is desirable and is necessary to spark in a healthy competitive spirit, the undue stress has undesirable impact on students.<sup>3</sup> In addition to impaired scholastic functioning in academics stress also hampers the social life of student. It can give rise to anxiety, depression, interpersonal conflict, sleep problems, and alcohol and drug abuse.<sup>4</sup> Depression if untreated may lead to untoward effect like suicide.

As it is apparent that in total training tenure of medical student the first year is most stressful, the present study was designed with an aim to evaluate different stress factors among the first MBBS students.

### 2. Method

The present cross-sectional and questionnaire-based survey was conducted in first year undergraduate medical students enrolled for MBBS course at MES Medical College, Kerala. The participants were asked to complete a pre-tested and pre-designed questionnaire that included a list of sources of stress. The methodology and purpose of study was well explained to all the participants and informed consent was obtained. The protocol of the study was approved by Institutional Ethics Committee.

The questionnaire was divided into four parts for the better assessment of the stress. The first part was framed to probe the demographic and general information about participants; the second part dealt with the behavioural signs; the third part assessed the physical signs and the part four evaluated stress prone characteristics.

Each question contained 5 options, each option was allotted marks from 0 to 5 (e.g. 0 = never almost, 1 = never, 2 = sometimes fairly, 3 = often, 4 = very often).

### 3. Results

Out of 300 students invited to participate in the study, 278 (92.8%) completed and submitted the questionnaire. The age of the students was in range of 17-21 years. Out of 278 participants, 165 (59.3%) were males and 113 (40.7%) were females. All the students were Indians. Among these participants 204 (73.3%) had attended English medium school whereas only 74 (26.7%) had gone to Malayalam (local language of Kerala) medium schools.

A total of 14 (5.1%) had educational gap; the most common reason was preparation of pre-medical entrance test. Out of 278 students 199 (71.5%) were residing in the hostels of the institute, whereas 79 (28.5%) were day scholars. None of the participants were married.

Out of 165 male students, 42 (25.4%) reported high level of stress whereas in 34 (30.1%) of 113 female students the stress was reported to be high. In this study the female students reported high levels of stress as compared to their male counterparts.

The most common stress factor reported by participants were high parental expectations (80.9%), vast syllabus (73%), worry about future (71.3%), long duration of course (67.3%), frequency of examinations (66.7%), performance in formative and summative examination (66%), low self esteem (62.3%), lack of sleep (54%) and lack of emotional and social support (38%).

#### 4. Discussion

In recent years the concern about stress during tenure of undergraduate medical training has increased. Various published literatures have documented high levels of distress among undergraduate medical students.

Stress along with social, emotional, physical as well as family problems may hamper the learning ability and academic performance of a student. Excessive stress may cause mental and physical problems and may negatively affect the academic achievement of the students.

In our study stress was higher among female students. One of the possible reasons for this may be the restriction imposed on females by their family members and society. Female is still considered as inferior as compared to their male siblings in many families of India. Bazmi Inam *et al* from Saudi Arabia noted high prevalence of stress in female 1<sup>st</sup> year medical students (89.7%) as compared to males (60%).<sup>5</sup> Similar findings were also noted from studies of other researchers.<sup>6,7</sup> Our observation is contrast to that of Cohen *et al* where there was no significant difference in stress between male and female students.<sup>8</sup> Studies of researchers like Hammer *et al*<sup>9</sup> and Devine *et al*<sup>10</sup> have reported age, gender, ethnicity and marital status as factors influencing severity of stress.

In most of medical students the performance in college and university level examination is the major stressor. The formative and summative examination forms integral part of evaluation of students. Examinations are necessary to motivate the students to study and achieve the desired goal of medical education. The vast syllabus, voluminous textbooks, pattern and frequency of examinations leads to stress among medical students. Examinations may precipitate stress in the students who consider it as burden, while it is useful who consider as a tool in taking corrective steps in learning. Studies of other academicians have also reported examinations as common source of stress in medical students.<sup>8,11</sup> Psychosocial factors may also act as stressor. The quality of parental care and high expectation from parents are also contributory factors to stress. Many first year students are away from the protective umbrella of parents for very first time therefore there is feeling of homesickness in the hostels. Lack of self esteem in few students leads to depression. Low self esteem was also a major stressor in the study of Pearlin *et al*<sup>12</sup> and Linn *et al*<sup>13</sup>.

The medical students always try to struggle hard to achieve their goals and this may lead to time constraints for self, family, friends and entertainment. From our study it can be concluded that being a medical student is stressful. Our study highlights the need for interventions in to cope up stress in medical education. Student counselling and informal mentorship is need of hour. Stress management workshops, soft skills development techniques at the entry of medical career would be helpful. Relaxation techniques like meditation, yoga and involvement in physical activities like outdoor sports can be recommended as stress busters. Stress though a well studied entity in medical students is yet to be explored further with more research.

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