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The prevalence of depression, anxiety and stress among MBBS students

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Abstract

The depression and stresses of medical education in India have been suggested to be different from that of the Western world. Several studies have attempted to assess the psychological morbidity among medical students in India. We undertook this study to determine the presence of depression, anxiety and stress among medical undergraduates studying in a premier medical institution in Hyderabad (south India). 76 apparently healthy, willing male and female second year MBBS students, studying at Kakatiya medical college were recruited for the present study after obtaining free, written, voluntary consent. The DASS is a 42-item questionnaire which includes three self-report scales designed to measure the negative emotional states of depression, anxiety and stress. Data was analyzed by SPSS 20.0. Data was expressed in mean \pm SD. Student t test and paired t test was applied to observe significance of difference. P value <0.05 was taken as significant. In our study we have observed moderate level of stress in both male and female students during regular classes also. Depression, anxiety, and stress affect a considerable proportion of undergraduate medical students in India. Systemic efforts are needed to address their concerns and make mental health care easily accessible to them.

Keywords: Depression, anxiety, stress, medical students

1. Introduction

Graduate medical studies are considered one of the most stressful professional courses [1, 2]. High expectations from self and family members, coupled with the training for assuming responsibility for the well-being of the patient, make a medical student prone to experience stress which may become excessive [3]. In addition, medical students need to devote time for their academic pursuits and are often not able to spare reasonable time for hobbies and relaxing pursuits [4]. The accumulating stress is likely to have several deleterious effects on medical students including academic jeopardy and poor quality of life [5]. Thus, high rates of depression, anxiety, and stress can result in poor quality of life and high rates of psychological morbidity. Mental depression is a complex disorder that ranges from mild to severe depression sometimes [6]. Medical students are highly stressful and their excessive stress not only affects academic performance but also leads to psychiatric disorders [7, 8]. It was reported that more than half of the medical undergraduate students were found to be affected by depression, anxiety and stress [9]. High levels of stress affect academic performance and mental health of the students [10]. Earlier studies have reported that medical students have high "baseline" traits of depression, anxiety, and stress [11]. High levels of stress may be due to academic demands, inability to cope up with stress, increased psychological pressure, mental tension and too much of work load [12]. We undertook this study to determine the presence of depression, anxiety and stress among medical undergraduates studying in a premier medical institution in Telangana (south India).

2. Materials and Methods

2.1 Study participants:

A total of 76 apparently healthy, willing male and female second year MBBS students, studying at Kakatiya medical college, Telangana were recruited for the present study after obtaining free, written, voluntary consent.

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2.2 Depression Anxiety and Stress Scale (DASS)

The DASS is a 42-item questionnaire which includes three self-report scales designed to measure the negative emotional states of depression, anxiety and stress. Each of the three scales contains 14 items, divided into subscales of 2-5 items with similar content. The depression scale assesses dysphoria, hopelessness, and devaluation of life, self-deprecation, and lack of interest/involvement, anhedonia, and inertia. The Anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The Stress scale (items) is sensitive to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. Respondents are asked to use 4-point severity/frequency scales to rate the extent to which they have experienced each state over the past week^[13]. DASS baseline scores were collected during relaxed state when there is no exam two weeks before and two weeks after and compared in male and female students. The study was approved by Institutional Ethics Committee. A written, informed consent was obtained from all the participants. The study was carried out 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. Statistical analysis: Data was analyzed by SPSS 20.0. Data was expressed in mean \pm SD. Student 't' test and paired t test was applied to observe significance of difference.

3. Results

Results are presented in table number 1. Table no 1 present's demographic data and depression, anxiety and stress scores in males and females. Depression, anxiety and stress scores are slightly higher in males. However, it was not statistically significant.

Table 1: The demographic data, depression, anxiety and stress scores of male and female participants.

Parameter	Females (n= 41)	Males (n= 35)	t-value
Age (Years)	19.2 \pm 0.74	19.1 \pm 13	0.3259
Height (Cms)	166.56 \pm 6.41	174 \pm 7.34	3.6432
Weight (Kg)	55.15 \pm 6.97	67.56 \pm 14.57	3.2422
BMI (Kg/m ²)	20.36 \pm 2.5	23.253 \pm 4.3	2.0103
Depression	9.41 \pm 5	12.35 \pm 6.7	1.3121
Anxiety	8.47 \pm 5.7	9.56 \pm 6.3	0.5302
Stress	11.6 \pm 6.46	13.57 \pm 7.6	0.6317

4. Discussion

Medical school is recognized as a stressful environment that often has a negative effect on students' academic performance, physical health, and psychosocial well-being^[14]. It was reported that more than half of the medical undergraduate students were found to be affected by depression, anxiety and stress^[15]. Fifth semester students had highest depression, anxiety and stress scores as compared to others. Similar findings have been reported earlier^[16, 17]. This may be attributed to greater fear of not attaining their goal of being a doctor or may be due to excessive load of both paraclinical and clinical subjects as compared to only clinical subjects in the latter years. Earlier studies reported that female students are having higher depression scores than males^[18]. In the present study we have observed higher depression scores in males. However, it was not statistically significant. Anxiety is a psychobiological emotional reaction that can be distinguished most clearly from other emotions by its

experiential qualities. It can be manifested physiologically (sweaty palms, increased heart rate and respiration) or cognitively (worry, self-doubt). Anxiety levels are not significantly different in males and females^[19]. In the present study we have observed higher anxiety scores in males. However, it was not statistically significant. Stress is very common phenomena where medical students faced in day to day activities. Earlier studies have stated that about 70-80% of the diseases may be related to stress^[20]. It was reported that, stress experience was due to academics and seen among all year of medical students and recommended strategy development for eliminating stressors is necessary for promoting healthy life. Prevalence of stress was 94.52% and more common among females^[21]. In the present study, stress scores of male students were higher than females. However, it was not statistically significant. Student distress may influence professional development and adversely impact academic performance contributing to academic dishonesty and substance abuse, and may play a role in attrition from medical school^[5]. Other studies on medical school graduates also suggest that distress may negatively affect quality of patient care, patient safety and professionalism^[22, 23]. In conclusion, more than half of the medical undergraduate students were found to be affected by depression, anxiety and stress. There is a need for the counselling services to be made available to the students in the medical college to control this morbidity.

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