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Depression, Anxiety and Stress Levels Among Second Year MBBS Students.

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ABSTRACT

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). 55 apparently healthy, willing male and female second year MBBS students, studying at Malla Reddy Institute of Medical Sciences, Hyderabad, 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. We recommend adopting simple stress management programmes for medical students.

Keywords: Depression, Anxiety, Stress, Medical students.

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INTRODUCTION

Mental depression is a complex disorder that ranges from mild to severe depression sometimes [1]. Medical students are highly stressful and their excessive stress not only effects academic performance but also leads to psychiatric disorders [2, 3]. It was reported that more than half of the medical undergraduate students were found to be affected by depression, anxiety and stress [4]. High levels of stress effects academic performance and mental health of the students [5]. Earlier studies have reported that medical students have high “baseline” traits of depression, anxiety, and stress [6]. 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 [7]. 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).

MATERIALS AND METHODS

Participants

55 apparently healthy, willing male and female second year MBBS students, studying at Malla Reddy Institute of Medical Sciences, Hyderabad, were recruited for the present study after obtaining free, written, voluntary consent.

Depression Anxiety and Stress Scale (DASS) [8]

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, devaluation of life, self deprecation, 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.

Procedure

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.

Ethical considerations

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. P value <0.05 was taken as significant.

RESULTS

Results are presented in table no 1, 2, 3. Table no 1 presents 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. No significant difference was observed in depression, anxiety and stress scores of hostel and day scholar students of both males and females.

Parameter	Females (n=32)	Males (n=23)	t value
Age (Years)	19.2±0.94	19.13±1	0.3259
Height (Cms)	165.76 ±7.61	175±6.36	4.7542*
Weight (Kg)	56.15±7.87	68.56±13.68	4.2522*
BMI (Kg/m ²)	20.47±2.8	22.287±3.8	2.0103*
Depression	8.71±6	11.56±7.9	1.5131
Anxiety	8.59±6.9	9.56±6	0.5402
Stress	11.8±7.49	13.69±6.9	0.9319

Table 1: demographic data, depression, anxiety and stress scores of male and female participants. (Data presented are mean±SD) (* P value <0.05 is significant)

Parameter	Hostel (n=16)	Day scholars (n=16)	t value
Depression	8.6±6.2	8.7±5.9	0.0316
Anxiety	8.3±5	8.8±8.5	0.2609
Stress	12.1±6.3	11.5±8.7	0.2682

Table 2: depression, anxiety and stress scores of females hostel and day scholars(Data presented are mean±SD) (* P value <0.05 is significant)

Parameter	Hostel (n=16)	Day scholars (n=7)	t value
Depression	10.9±8.6	13±6.5	0.5629
Anxiety	8.6±6	11.5±6	1.0571
Stress	12.5±5.2	16.2±9.7	1.1958

Table 3: depression, anxiety and stress scores of males hostel and day scholars(Data presented are mean±SD) (* P value <0.05 is significant)

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 [9]. It was reported that more than half of the medical undergraduate students were found to be affected by depression, anxiety and stress [10]. Earlier studies reported that female students are having higher depression scores than males. [11]. 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 [12]. 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 [13]. Earlier studies have stated that about 70-80% of the diseases may be related to stress [13]. 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 [14]. In the present study, stress scores of male students were higher than females. However, it was not statistically significant.

Limitations

The major limitation in our study was low sample size.

CONCLUSION

In our study we have observed moderate level of stress in both male and female students during regular classes also. We recommend adopting simple stress management programmes for medical students.



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