

## Assessment of DASS-21 Scale Among Fresh Medical Students: A Forensic Prospective Study

Sattar MA<sup>1</sup>, Ram Reddy CR<sup>2</sup>

### Abstract

**Context:** Medical studies are demanding and require regular hard work to cope up with the competition and complexity. It may lead to depression and anxiety disorders. The stress-tolerance level among the new generation of medical students seemed to be low.

**Aims:** To assess the stress tolerant levels and to know the prevalence of depression and anxiety

**Settings and Design:** A cross sectional, questionnaire-based survey was carried out among the undergraduate medical 1st and 2nd years students of Malla Reddy Institute of medical Sciences, Hyderabad.

**Methods:** About 175 students participated voluntarily out of 300 students from first and second year MBBS during the period "June 2018 to Sep 2018". The depression levels were assessed using Zung depression scale. Students were asked to complete the questionnaire and then the depression levels calculated in reference to Zung depression scale. The stress inducing factors during their course of medical education were also assessed

**Statistical Analysis:** The data was analyzed using proportions

**Results:** The overall prevalence of Depression, Anxiety & Stress (DAS) among the students was 25.14%, 24.57% 41.71% respectively without much difference among boys and girls i.e. 43.42%, 50.42% respectively. The prevalence of DAS in first year are 18.82%, 27.05%, 44.70% respectively and among second year students are 31.11%, 22.22%, 38.88% respectively.

**Conclusion:** The prevalence of depression anxiety and stress seemed to be more prevalent among second years compared to that of first year students

**Keywords:** Medical Students; Depression; Anxiety & DASS- 21.

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### Introduction

Depression and anxiety levels in the community are considered as specific projections for mental status. Many earlier studies have documented stress and anxiety disorders amongst the medical students. According to WHO by 2020, it would be the second-most prevalent condition worldwide [1]. There is

considerable evidence that rates of depression and suicide are higher in medical students and that these rates continue to remain elevated when these students become physicians [2]. Medical students are a valuable human resource for our future and depression in them leads to less productivity, reduced quality of life, learning difficulties and may negatively affect patient care [3,4].

Adjustment and general anxiety disorder are the most common problems found among medical students. They turn out to be emotionally unstable and there could be sudden mood swings. Some of the students may even turn towards alcohol or drugs for a change which are easily available nowadays in modern society.

Previous data are also shown fairly high levels of stress and symptoms of depression among medical

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students. Even in today's atmosphere also the depression is the major morbidity among medical fraternity colleges. The factors which are effecting seriously on their academics as well as on their quality are as follows:-

Some of these factors which are impinging on their tender minds are,

- A. Academic stress
- B. Home sickness
- C. New relationships (Adjustment disorder)
- D. Hectic time schedules
- E. Future concerns
- F. New life styles

Other factors are parent's compulsion to their children with higher expectations and comparing them with others, thus interfering the child's usual self approach schedules may leading to psychological disturbances. Forcing the students for higher ranks by the corporate institutions are leading to suicidal tendencies. Extreme degree of ragging of juniors by senior students leading to suicidal deaths. According to the diagnostic and statistic manual, fourth edition (DSM-IV), individuals who exhibit five of the following symptoms will meet the criteria for a major depressive disorder:

1. Depressed mood
2. Diminished interest or pleasure
3. Significant weight loss
4. Insomnia
5. Psychomotor agitation
6. Fatigue or loss of energy
7. Feelings of worthlessness
8. Excessive guilt
9. Diminished ability to concentrate
10. Recurrent thoughts of deaths.

These symptoms may not be surfaced clinically and it looks like an iceberg phenomena with subclinical presentation Depression is associated with.

1. Adjustment disorder
2. Bipolar disorder
3. Major depression
4. Precipitation of underlying psychotic disorders like schizophrenia etc.

These disorders if not noticed and not taken care of, may lead to suicidal ideation and he/she may harm himself/herself or he/she may harm others involuntarily in the form of ragging, sexual crimes and outburst as homicides attempt. On April 3<sup>rd</sup> 2017, a 24

years old MBA student committed suicide by jumping out of a 19th floor of hotel in Mumbai as he was depressed about failure of exam (Deccan chronicle).

A PG medical student of reputed corporate hospital committed suicide by consuming poison as he was depressed of academic stress (Times of India). A dental PG student of a dental college of Hyderabad commits suicide. He was failed in final exam and got depressed. (Deccan chronicle). It is important for medical educators to know the magnitude of depression in students and factors causing them, which not only effects their health and academic achievements but also has serious consequences as Thoughts of self harm, suicidal tendencies and substance abuse, which are the major health issues in youngster's life. However a very few studies are done on this subject, thus we are carrying out this cross sectional study among medical undergraduate of Ist and IInd year students

## Methods

This study is a descriptive cross sectional study conducted at Mallareddy Institute of medical Sciences, Hyderabad during a period of June 2018 to Aug 2018. About 175 volunteer students each from two different batches from Bachelor of Medicine and Bachelor of Surgery (MBBS) first and second year were included in the study. We had informed them the purpose of the study and also given the general instructions accordingly. Prior to the study informed consent is taken. The questionnaire containing 21 questions is given to the students and allowed to respond in there in their own way with privacy including basic personal details and stress inducing factors.

*Personal Details:* Included age, sex, batch, Day boarder or Hosteller.

*DASS-21 scale:* 5 It is a self rated questionnaire which assess the level of depression symptoms. It has already been used in primary care and community settings and as a screening for depression. The depression levels were assess using DASS-21 scale. The questioner list of DASS-21 scale with four option 0, 1, 2, 3 for which only one has to be considered and marked, depending on which ever suits to his/her mental character of the concerned student. The question points towards the characterization of the concerned neurological situation of the student. Each question is directed with provisional diagnosis of the three above mentioned disorders. These different levels of the psychological disorders are being evaluated on 0-3 scale depending upon the intensity of the mental abnormality.

**Results**

Total 175 students had responded out of 300 students completely to the questioner in Malla Reddy Institute of Medical College. Majority of the students are from same age group (i.e. 23.76+1.65). Percentage of female students is more when compared to that of male students (58.33%, 44.57% respectively) (Table 1).

**Table 1:** Demographic parameters of the study subjects

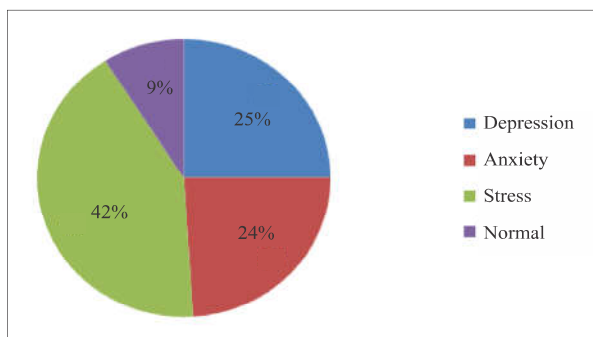
Parameters	(%)/ Mean+ STD
Total study response in our study is	58.33
Total Females respondents %	55.43%
Total Male Respondents %	44.57%
Age of the students (Mean + STD)	23.76+1.65

Among Total study group 120 students are residents of hostel (68.57%), majority are from first year students 91 (75.83%) compared to that of second year students i.e. 29 (24.17%) From total of 55 candidates Day scholars 42 (76.36%) are from first year and 13 (23.64) are from second year. (Table 2)

**Table 2:** Resident status of study subjects among 1st year and 2nd year students

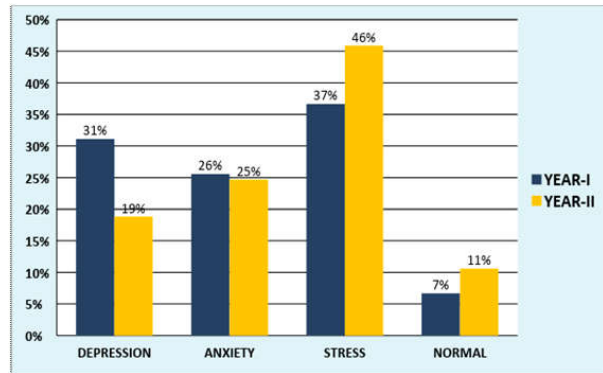
Resident	I Year	II Year	Total
Hostel	91 (75.83%)	29 (24.17%)	120 (68.57%)
Day scholars	42 (76.36%)	13 (23.64%)	55 (31.43%)

Among our total 100 respondents 25 members are seemed to be under Depression, 24 students seemed to be Anxiety, 42 students looked as they are under Stress and 9 students are Normal (Fig. 1).



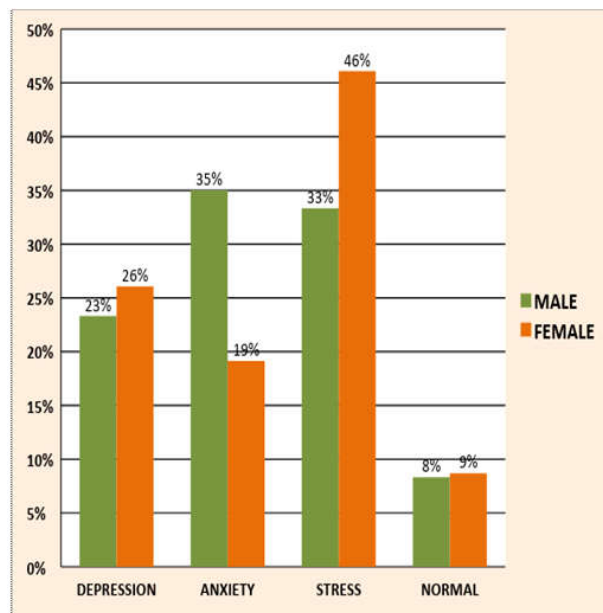
**Fig. 1:** Percentage of DASS among study respondents

According to our respondent data, Depression, Anxiety and Stress is seen more in first year students (31%, 26%, 37%, 7% respectively) compared to that of second year students (19%, 25%, 46%, 11% respectively). (Fig. 2).



**Fig. 2:** Comparison of DASS among medical college students

Depression and stress was found to be more among females compared to males. But anxiety rate was more among males compared to females. (Fig. 3).



**Fig. 3:** Sex wise comparison of DASS scale

**Discussion**

In our study the prevalence rate of depression among medical students is 25.71%. Which inconsistent with another Indian study (sector medical college Mumbai) which showed the prevalence rate of depression among medical students as 39.9% which correspondence with prevalence rates found in other developing countries [6]. A study from Pakistan also showed high prevalence rate as 43.9%. [7,8]. A recent study from Brazil found the prevalence rate of depression among medical students as high as 40.5% with 1.2% had very severe depressive symptoms [9]. A study from Chinese medical school found nearly

half of them found depressed and severely depressed were 2% [10]. The prevalence rate of depression from study of western world also showed in the range of 14-24% [11,12].

Medical profession demands great concentration, commitment and discipline from students. This will increase when the students start their clinical postings and classes simultaneously. In this light some of the students cannot cope with the didactic syllabus, which consequently alters their physical mental stress. The prevalence of depressive symptoms was high among newly entered students (1st year) as compared to second year students. This finding correlate with the results of previous studies [7,11,13]. This could be due to stress of new study environment with entirely newer subjects of medical stream. there will be a sudden change in their eating habits and sleeping pattern due to greater degree of workload which is a new experience to the medical students Home sickness is also a contributory factor in them as there are many hostellers. All of these factors causes the stress which may leads to depression. Female students were more likely to report symptoms suggestive of depression as compared to male students which are inconsistent with western reports [11]. A possible explanation for this finding is due to the fact the women articulate depressive symptoms, even very minor ones more easily than men this is a generalised fact about the women [12]. There was an interesting finding in this survey which has not been reported earlier. We found that students facing language problem in their medical course because English was not the medium of instruction up to 10+2 level and suddenly in medical school the medium of instruction changed to English and they find difficulty to understand the subjects which are completely new to them. That causes stress and anxiety which may leads to depression.

### Conclusion

Depression is a major problem in medical students and when it is severe it may leads to suicidal ideation. there should be a perfect mechanism to identify and help the students to come out from such a grievous situation and it should be considered seriously. An effective system should be start for its prediction and identifying in medical students. There should be an effective interventions to reduce the incidence of depression

### Recommendations

1. Early detection of DASS symptoms in the students and taking appropriate steps to treat the cases in time.

2. All the colleges should start counselling centres for the students along with their parents.

3. Counselling of the students pre and post admission of the courses should be done routinely.

*Source(s) of support:* Nil

*Presentation at a meeting:* Nil

*Conflicting Interest*

(If present, give more details): None

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