

# Exploration of Depression, Anxiety and Stress among Medical Students: An Institutional Case study

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Due to the ever expanding population in India, the education system has become highly competitive. As a result, the children begin to face the pressure of competition from the pre primary level itself in the form of year-end examinations which determine their promotion to the next higher grade (Rentala et.al;2019). Adolescence is said to be a period of stress and strain. Adolescents are a special group because of their developmental stage and the special problems (Mahapatrao et.al.2012). Effects of examination stress may be lower performance in academic examinations; students come under depression, substance abuse, eating disorders, psycho-physiological problems (Barmola &Shrivastava, 2010). Objectives: to assess the level of stress and challenges faced by students and to suggest the measures to reduce it. DASS 21 standard scale was used to measure the depression, anxiety and stress among the students during exam period.

**Keywords:** anxiety, case study, depression, medical, stress.

## Introduction

Adolescence is considered a stressful period due to physical, psychological, sexual changes and is also influenced by maturity. It is a crucial phase in life course of a human, and the presence of psychiatric disorders such as depression, anxiety, and stress at this stage of life is a matter of concern. The symptoms of these three disorders can lead to poor academic performance, lack of communication with friends and family members, substance abuse, feeling of abandonment, homicidal ideation, and suicidal tendency<sup>1</sup>.

The Depression, Anxiety and Stress Scale (DASS-21) questionnaire is a validated instrument that rates these 3 dimensions of mental health in adults (patients and non-patients) on a single, clear, and systematic scale. DASS-21 Questionnaire<sup>2</sup>.

Lovibond and Lovibond developed the DASS questionnaire to assess key symptoms of depression, anxiety, and stress and it also has been used to evaluate patient reaction to treatment. The questionnaire has been proven to have adequate psychometric properties and is equivalent to other accurate scales. The DASS-21 is the short form and findings from studies support its validity as an approved instrument for measuring adverse mental states and depression, anxiety, and stress in adults (patients and non-patients). The 21 items on the questionnaire comprise a set of 3 self-reported scales designed to assess DASS. The 7 elements on the scales are graded on a Likert scale from 0 to 3 (0: "Did not apply to me at all," 1: "Applied to me to some degree or some of the time," 2: "Applied to me to a considerable degree or a good part of the time," and 3: "Applied to me very much or most of the time"). Depression, anxiety, and stress scores are measured by summarizing the scores of the related items<sup>3</sup>.

Nursing students during their course of study experience many stressful events like adjustment to new college environment, academic burden, pressure to perform well academically, uncertain future, home sickness, residing in hostel etc. which may affect their academic and clinical performance, psychological well being and physical health. Previous studies conducted among nursing students have shown high rate of depression, anxiety and stress throughout the world<sup>4</sup>.

<sup>1</sup> (Kumar KS, 2017)

<sup>2</sup> (Antony MM, 1998)

<sup>3</sup> (Lovibond SH, 1995)

<sup>4</sup> (Baruah C, 2022)

## Literature Review

Our results revealed statistically significant differences in the levels of depression, anxiety, and stress in participants who had comorbidities connected with increased risk of severe illness from SARS-CoV-2 and participants who did not have the comorbidities. There was also a statistically significant relationship between supplement intake and educational level in participants. High levels of stress and anxiety were accompanied by high levels of depression among participants<sup>5</sup>.

DASS-21 relates to other sport-specific measures of mental health such as burnout, psychological strain, anxiety and depression further supports its utility in the sport context. Whilst future research may contextualize or purify the scale for use with athletes, we encourage use of the scale and second recent consensus statements calling for more work exploring athlete's mental health.<sup>6</sup>

The results of the DASS-21 were compared to the Mini International Neuropsychiatric Interview (MINI), which served as the gold standard. Levels of sensitivity and specificity of 78–89% and 71–76% were found for the DASS-21 assessed after detoxification, satisfactorily predicting depression as diagnosed with the MINI. Total DASS-21 scores as well as the DASS subscale for depression were significantly reduced at the second measurement, compared to the DASS at intake. We conclude that the DASS-21 may be a suitable instrument to screen for depressive disorders in SUD patients when administered (shortly) after detoxification.<sup>7</sup>

Depression is the most common psychiatric disorder, and students are more predisposed to depression than other populations. This meta-analysis was conducted to estimate the mean depression score in Iranian students based on DASS-21. The mean depression score is higher in female students than in male students, and the mean score of stress is slightly higher than those of anxiety and depression<sup>8</sup>.

Study with first year from Medical Courses batch. On comparison in both batches depression is found in odd batch with significant p-value, whereas anxiety and stress do not have significant p-value hence they can be compared in terms of severity levels. The study concludes that there is more depression, anxiety and stress in odd batch than in comparison with the even batch<sup>9</sup>.

Social Work Intervention can be effective if subjects are well prepared psychosocially to cope with their stress. This intervention shows positive change in behaviour, attitude and thinking of subjects.<sup>10</sup>

The prevalence of depression, anxiety, and stress were high with anxiety and stress significantly higher among females, whereas prevalence of depression and stress were significantly higher among 12th standard students. More studies are recommended to determine the factors leading to these mental disorders<sup>11</sup>.

Symptoms of anxiety and stress are more prevalent with moderate to extremely severe range than depression in the current sample. These findings suggest urgent need of some preventive measures and interventions to improve the mental health of students<sup>12</sup>.

No students have an extremely severe level of stress. However, the majority have a mild or moderate level of stress and it is associated with sex and residence (urban or rural). More than 40% of students have extremely severe anxiety. Results reveal that gender, residence (urban or rural), and family type of the students are linked with the anxiety level. The results also suggest that the type of accommodation of the students, their family type, and birth order are related to their depression level at a 5% level of significance. The findings also disclose that female students have more levels of depression, stress, and anxiety than their counterparts<sup>13</sup>.

<sup>5</sup> (Marijanović I, 2021)

<sup>6</sup> (Vaughan RS, 2020)

<sup>7</sup> (Beaufort I, 2017)

<sup>8</sup> (Mami, 2019)

<sup>9</sup> (Smrutika Karanjkar, 2022)

<sup>10</sup> (Joshi, 2022)

<sup>11</sup> (Kumar KS, 2017)

<sup>12</sup> (Asif S, 2020)

<sup>13</sup> (Hossain, 2022)

**Objectives:** To know the socioeconomic background of students, to assess the level of Depression, Anxiety and stress among the students during exam period.

**Methodology:** Descriptive research design was used to describe the various characteristics symptoms during exam period. It is an institutional case study thus 60 students from nursing department were included in the study. Non probability and purposive sampling method was used. DASS 21 standard scale was used to measure the depression, anxiety and stress among the students during exam period.

**Data Analysis:**

The scale consists of various statements related to depression, Anxiety and Stress.

There were 21 items in the scale 7 items are related to depression, anxiety and stress.

	Frequency	Percent	Valid Percent	Cumulative Percent
Normal	35	58.3	58.3	58.3
Mild	19	31.7	31.7	90.0
Moderate	6	10.0	10.0	100.0
Total	60	100.0	100.0	

The above table highlights the level of depression. Students in normal range were 35(58.3%) at mild stage 19(31.7%) and at moderate level 6(10%).

	Frequency	Percent	Valid Percent	Cumulative Percent
Normal	51	85.0	85.0	85.0
Mild	7	11.7	11.7	96.7
Moderate	2	3.3	3.3	100.0
Total	60	100.0	100.0	

The above table highlights the level of Anxiety. Students in normal range were 51 (85.0%) at mild stage 7 (11.7%) and at moderate level 2(3.3 %).

	Frequency	Percent	Valid Percent	Cumulative Percent
Normal	41	68.3	68.3	68.3
Mild	15	25.0	25.0	93.3
Moderate	4	6.7	6.7	100.0
Total	60	100.0	100.0	

The above table highlights the level of Stress. Students in normal range were 41 68.3%) at mild stage 15 (25 %) and at moderate level 4 (6.7 %).

**Table 4**  
**Gender \* Depression Cross tabulation**

Count		Depression			Total	p value
		Normal	Mild	Moderate		
Gender	female	20	7	2	29	0.268
	male	15	12	4	31	
Total		35	19	6	60	

Table 4 shows that the prevalence of depression was equal among male and female no significant difference was found (p=0.268).

**Table 5**  
**Gender \* Anxiety Cross tabulation**

Count		Anxiety			Total	p value
		Normal	Mild	Moderate		
Gender	female	27	1	1	29	0.158
	male	24	6	1	31	
Total		51	7	2	60	

Table 5 shows that the prevalence of Anxiety was almost same among male and female no significant difference was found (p=0.158).

**Table 6**  
**Gender \* Stress Cross tabulation**

Count		Stress			Total	p value
		Normal	Mild	Moderate		
Gender	female	22	7	0	29	0.121
	male	19	8	4	31	
Total		41	15	4	60	

Table 6 shows that the prevalence of stress was almost same among male and female no significant difference was found (p=0.121).

### Discussion

The present study indicated the level of prevalence of depression, anxiety and stress. 36.7% couldn't seem to experience any positive feeling at all. 40% respondents expressed that they were used more mental and physical energy. 50% found it difficult to relax when they were under stress. 41.7% respondents said that they were unable to become enthusiastic about anything sometime when they were under stress. 35% respondents shared that many times they were intolerant of anything that kept me from getting on with what they were doing. 36.7% students state that many times they felt down-hearted and blue. Some time students. 40% found themselves getting agitated. 36.7% Students felt that they tended to over-react to situations. 50% found it difficult to work up the initiative to do things sometime. 46.7% students shared that it was difficult for them to live stress free. Findings of previous studies performed all over the world indicate a significant depression, anxiety and stress level among students.[11,12,13]

Majority of students are in normal range of depression, anxiety and stress. There was no significant difference found related gender.

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