

## RESEARCH ARTICLE

### Study of anxiety, stress, and depression level among medical students during COVID-19 pandemic phase in Jamnagar city

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#### ABSTRACT

**Background:** Medical education is a known stressor for medical students. Anxiety, depression, and stress are common in medical students due to different stressors in medical education, as suggested by the previous studies. **Aim and Objective:** This study was conducted to evaluate mental status and prevalence of anxiety, stress, and depression among medical students during coronavirus disease (COVID)-19 phase. **Materials and Methods:** This study was conducted in 250 1<sup>st</sup>-year MBBS students of Shri M. P. Shah Government Medical College, Jamnagar, after getting approval from the Institutional Ethical Committee. Pre-structured questionnaire-based DASS21 scale was used to conduct this study through Google form after obtaining written consent from the students. **Results:** In our study, we found that prevalence of anxiety, stress, and depression in 1<sup>st</sup>-year medical students was 17.20%, 15.60%, and 10.80%, respectively. **Conclusion:** In our study, we found that anxiety, depression, and stress are present in medical students. In COVID-19 phase, students are not attending medical colleges and all the teaching process is online. Even at home, medical students are suffering from anxiety, depression, and stress. Early evaluation and intervention should be done to reduce anxiety, depression, and stress in medical students.

**KEY WORDS:** Anxiety; Depression; Stress; DASS 21, Medical Students; Coronavirus Disease-19 Pandemic

#### INTRODUCTION

Depression and anxiety are both common mental disorders with a prevalence of 10–44% in developing countries, and depression is the fourth leading cause of morbidity.<sup>[1]</sup> It has been reported that 25–75% of medical students are stressed during their medical education.<sup>[2]</sup> Due to the vast course, long study hours, examinations, peer competition, sleep deprivation, and including other factors make the medical students more stressed and which slowly makes them depressed. Due to

the widespread of the coronavirus in public, the government of India had declared lockdown and to maintain social distancing people that have to stay at home, so as to stop the spread of infection. Teaching continued online for the rest of the year for the students. Hence, sudden isolation and social distancing can significantly affect the mental health of the students as they are removed from their extracurricular activities which make them to feel less connected with their friends, hobbies. This situation also gives them uncertainty about their future, their own health, and the health of their friends and relatives.

Early detection and intervention may help in preventing and minimizing the effects of distress on the students. Hence, the aim of the study is to evaluate anxiety, stress, and depression among medical students during coronavirus disease (COVID)-19 pandemic phase.

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**MATERIALS AND METHODS**

This study was conducted in 250 1<sup>st</sup>-year MBBS students of Shri M. P. Shah Government Medical College, Jamnagar. This study is conducted during COVID-19 pandemic phase, where medical colleges are closed and students are at home. This study was conducted after approval from the Institutional

Ethical Committee. Pre-structured DASS-21 questionnaire-based study was conducted through Google form after obtaining written consent from the students. The students were explained regarding the questionnaire. In our study, we have excluded all the students who were diagnosed with anxiety, stress, and depression before coronavirus pandemic.

**Table 1:** Demographic characteristics of the study participants

Variables	Number of students	Percentage
Age (years)		
17–20	243	97.20
>20	7	2.80
Gender		
Male	110	44
Female	140	56

**Table 2:** Mean±SD of dass score for anxiety, stress, and depression among medical students

Variables	Medical students (Mean±SD)	Male (Mean±SD)	Female (Mean±SD)
Anxiety	3.59±4.44	3.7±4.40	3.51±4.49
Stress	5.90±5.52	6.15±5.74	5.71±5.35
Depression	4.12±5.24	4.12±5.2	4.10±5.22

**Table 3:** Anxiety, stress, and depression among medical students

Variables	Number of students	Percentage
Anxiety	43	17.2
Stress	27	10.8
Depression	39	15.6

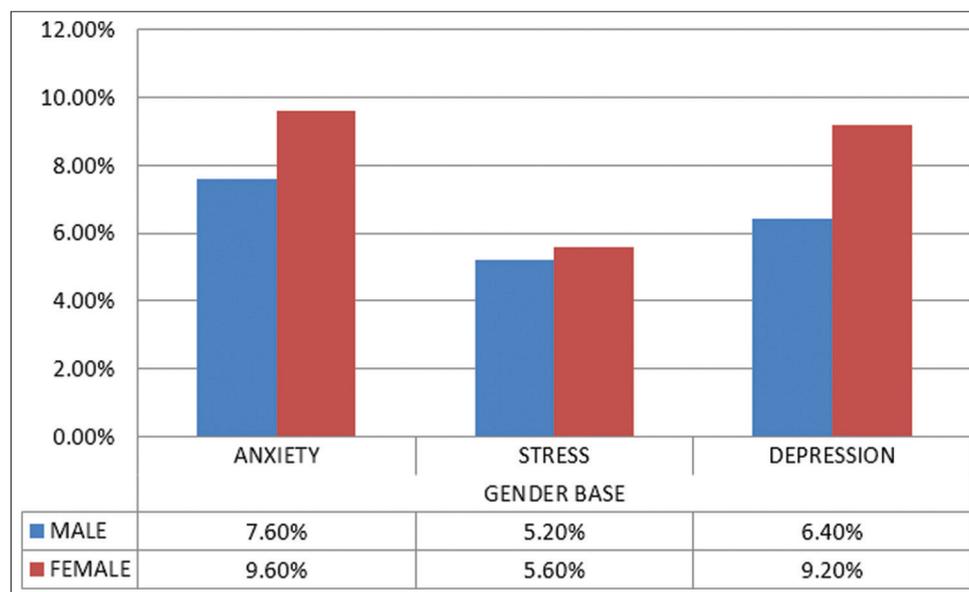
**RESULTS**

In our study, we found that prevalence of anxiety, stress, and depression was 17.20%, 15.60%, and 10.80%, respectively, in medical students. In our study, we also found that gender-based prevalence, that is, prevalence of anxiety, stress, and depression among male is 7.60%, 5.20%, and 6.40%, respectively, and in females 9.60%, 5.60%, and 9.20%, respectively [Tables 1–4 and Figure 1].

**DISCUSSION**

Taneja *et al.* also found the presence of anxiety, depression, and stress in medical students.<sup>[3]</sup> Mandal *et al.* explain that the reason for stress could be a language problem, fear of failure, and vast syllabus of 1<sup>st</sup>-year MBBS.<sup>[4]</sup> Singh *et al.* described that examination fear could also be a stressor for anxiety, stress, and depression in medical students.<sup>[5]</sup> Corona pandemic and its socio-economic impact can also be a stressor for all these findings. Some studies conducted during SARS and H1NI in China have indicated the obvious anxiety and stress of university students and suggested coping strategies.<sup>[6]</sup>

We have conducted this study in medical students only in MP Shah medical college during COVID-19 pandemic. To understand more about the prevalence of anxiety, depression, and stress in medical students, large sample size is required. Psychiatric consultation of the students is also necessary to



**Figure 1:** Gender-based comparison on anxiety, stress, and depression among medical students

**Table 4:** Distribution of grades of anxiety, depression, and stress among medical students

Variables	Gender (%)	
	Male	Female
<b>Anxiety</b>		
Mild	6 (31.57)	10 (41.66)
Moderate	9 (47.36)	8 (33.33)
Severe	4 (21.05)	4 (16.66)
Extremely severe	0	2 (8.33)
<b>Stress</b>		
Mild	9 (69.23)	8 (57.14)
Moderate	4 (30.76)	6 (42.85)
Severe	0	0
Extremely severe	0	0
<b>Depression</b>		
Mild	7 (43.75)	10 (43.47)
Moderate	7 (43.75)	12 (52.17)
Severe	2 (12.5)	1 (4.34)
Extremely severe	0	0

understand more about the stressors in medical students. In future studies, we want to include psychiatric consultation and evaluation to understand more about stressors in medical students with a large sample size.

## CONCLUSION

In our study, we found that anxiety, depression, and stress are present in medical students. In COVID-19 phase, students are not attending medical colleges, and all the teaching process

is online. Even at home, medical students are suffering from anxiety, depression, and stress. Early evaluation and intervention should be done to reduce anxiety, depression, and stress in medical students.

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