

Impact of covid 19 on the mental health of medical students in India

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Abstract

Introduction: COVID-19 disease pandemic emerged in 2020 for which, worldwide lockdown was imposed.

The continuous spread of the epidemic, strict isolation measures and online teaching in colleges, across the country had an unexpected negative influence on the mental health of medical college students.

Materials and Methods: The aim was to evaluate the impact of COVID-19 pandemic on mental health of MBBS students using a Google form. It is a cross-sectional, observational study, using:

1. GAD-7 scale for assessment of anxiety
2. CESD-10 scale for assessment of depression.

Results: A total of 350 MBBS students were enrolled over a period of four months for the present study. Students included into study, ranged from 18-27 years, of which 68% participants belong to 18-20 years.

It was found, 23% students were suffering from moderate to severe anxiety, which was significantly associated

with apprehension about their academic performance ($p=0.001$). 64.6% students suffered from depression, which was significantly associated with limited resources ($p=0.007$) and their performance in online assessment ($p=0.009$).

Conclusion: During the COVID 19 lockdown, MBBS students suffered with anxiety and depression predominantly due to apprehension about academic performance and limited resources for online classes.

Keywords: Depression, COVID 19, Anxiety, Lockdown, Mental health, Students

Introduction

COVID-19 disease was declared a global pandemic in March 2020 and lockdown was declared in most of the countries and is still being practiced in many countries. India had experienced avalanche of deaths during second wave of corona infection and Indian government tried to stop the spread of this contagious disease by imposing lockdown, social/physical distancing, stop intercountry

travel. There were severe disruptions of routines, separation from family and friends, shortages of daily necessities, salary deduction, social isolation, and educational institution closure which made a deep impact on mental health of population including feeling of anxiety and depression. Other contributing factors may be an overestimation of the likelihood of infection, the excessive and inappropriate adoption of precautionary measures and possible unavailability of treatment. ,

In academics, avoiding face-to-face teaching learning by closing schools, colleges affected approximately 320 million learners in India, of which about 34 million belonged to the tertiary level of education.⁵

The strict isolation measures along with some factors like loss of academic growth in colleges, and universities across the country had an unexpected negative influence on the mental health of students. Closure of the educational institution during COVID-19 outbreak led to digital revolution in the higher education system through online lectures, teleconferencing, digital open books, online examination, and interaction at virtual environments which further enhanced social isolation. Studies have observed that long periods of social isolations can increase the risk of a variety of health problems including psychological disorders such as anxiety, depression, PTSD, low self-esteem and in worst cases even death. A study conducted by Cao et al. (2020) analysed that the presence of higher level of anxiety issues among Chinese medical college students were strongly related with acquaintance to COVID-19 diagnosed patients.⁷

There have been reports on the psychological impact of the epidemic on the general public, patients, healthcare workers, children, and older adults leaving a lacuna for same in medical college students in India.^{8,9}

The present study was conducted to evaluate the impact of COVID-19 pandemic on mental status of medical college students.

Method

The study was conducted among 350 undergraduate medical students (2nd year, 3rd year) of Maulana Azad Medical College from Sept to Dec 2020, after getting approval from Ethics committee (F.1/ IEC /MAMC/ (79/ 07/ 2020)/ No 199). An online questionnaire interview survey guide was designed with the purpose of assessing the mental health status of college students both quantitatively and qualitatively.

A Google form, which included a consent form, was created and circulated on different online platforms such as WhatsApp groups and Gmail.

Study design

A cross-sectional, observational study

Study instruments

We used GAD-7 scale (Generalised Anxiety Disorder scale) for assessment of anxiety and CESD-10 scale (Center for Epidemiologic Studies Depression Scale Revised-10 scale) for assessment of depression.

GAD-7 scale is a validated 7-item self-report scale developed to assess the defining symptoms of GAD. Items are rated on a 4-point Likert-type scale with 0-3 scores (0 = not at all to 3 = nearly every day). Scores of 5, 10, and 15 are taken as the cut-off points for mild, moderate and severe anxiety.

Center for Epidemiologic Studies Depression Scale Revised (CESD-10) scale is a validated scale, consisting of 10 questions was used for assessment of depression. It uses likert scale from 0-3, totaling 0-30. Scores of > 10 is suggestive of depression.

An additional set of brief questionnaires for assessment of various demographic and socio-economic factors affecting the mental health was also filled by students.

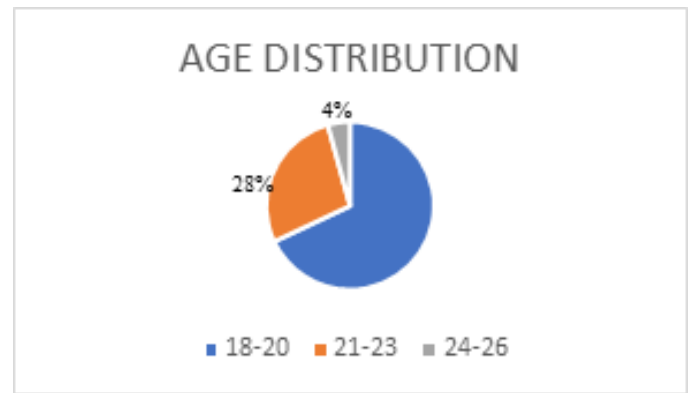
The data was analysed with the help of SPSS version 23.

The $p < 0.05$ was considered statistically significant.

Results

350 MBBS professional students participated in the study over a period of 4 months (Sept to Dec 2020) for the present study. Students included into study ranged from 18-27 years age group. Subgroup analysis suggested that mostly participants belong to age group 18-20 years (68%). 96% of students had never tested positive for COVID-19 during the duration of the study. During the study duration, 31.4% of participants had history of corona positive status among family members or relative or acquaintance but was not significantly associated with anxiety or depression. (Table-1)

Graph 1:



Graph 2:

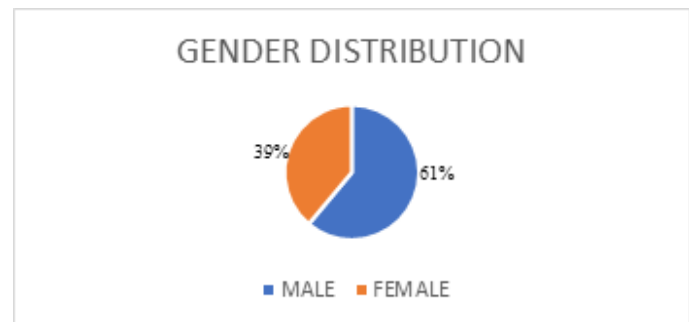
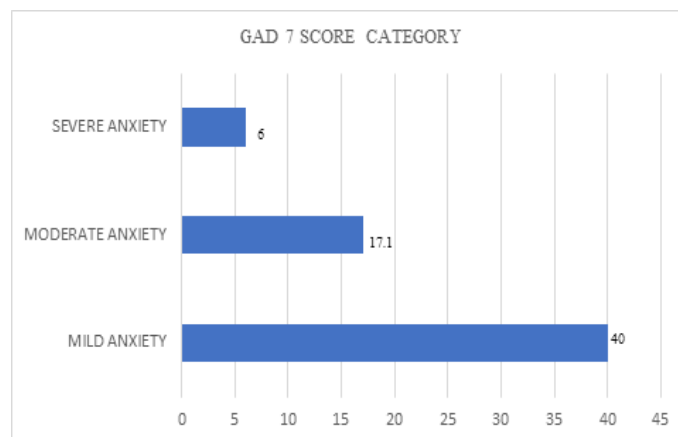


Table 1: Variable frequency distribution

Variable	Frequency	Percent
Are you suffering from a diagnosed mental illness?		
Yes	12	3.4
No	328	93.7
Prefer not to say	10	2.9
Your COVID Status		
Never tested positive	336	96
Currently tested positive	1	0.3
Tested positive in past	6	1.7
Prefer not to say	7	2
Did any of your family member or relative or acquaintance got COVID-19?		
Yes	110	31.4
No	240	68.6
During COVID-19 times did you stay with family?		
Yes	342	97.7
No	8	2.3

Did COVID-19 lockdown affect your family financial status?		
Yes	158	45.1
No	192	54.9
What problems you faced during the COVID-19 Pandemic?		
Financial problems	252	72
Health related problems	269	76.9
Food availability problems	311	88.9
Problems related to continuation of regular studies	40	11.4
Social cut down	80	22.9
You were apprehensive about your academic performance, delays if any due to lockdown, attendance issues or online assessments		
Yes	288	82.3
No	62	17.7
Time spent on studies during lockdown		
Less than normal times	259	74
Same as normal times	45	12.9
More than normal times	46	13.1
Did you have all the required resources like separate room, electronic gadget, uninterrupted internet connection etc. for attending online classes?		
Yes	224	64
No	126	36

All participants were screened for anxiety using GAD-7 scale. Nearly 23% of study population presented as case of moderate to severe anxiety. (Table-2). 61.1% participants enrolled in study were males, suggesting male gender was significantly related to anxiety (p value <0.05) (Table-3). Most students (82.3%) were apprehensive about their academic performance and delays due to lockdown, attendance issues or online assessments. Such students showed statistically significant association with anxiety (p-value 0.001) and depression (p-value 0.001). (Table- 3,5)



Graph 3:

Table 2: GAD-7 score category.

Factors		Minimal anxiety	Mild anxiety	Moderate anxiety	Severe anxiety	P value
Gender	Male	93	78	29	14	0.05
	Female	36	62	31	7	
Apprehension about academic performance and delays due to lockdown, attendance issues or online assessments	Yes	95	116	56	21	0.001
	No	34	24	4	0	

Table 2: Factors showing statistically significant association with GAD-7 Score Category.

*Using chi square test

All participants were analysed for depression by using CESD-10 (Table-4) out of which 64.6% of students were found to be depressed. Participants were evaluated for problems that were faced during COVID-19 pandemic like financial problems, health related problems, problems related to continuation of regular studies and social cut down.

Financial problems were faced by 72% participants and were statistically significantly associated to depression among students.

Health related problems were faced by 77% participants which were significantly associated to depression.

Approximately 64% students reported the access of all the required resources like separate rooms, electronic gadgets and uninterrupted internet connections for attending online classes. Such students showed positive relationship to depression ($p < 0.05$) (Table-5).

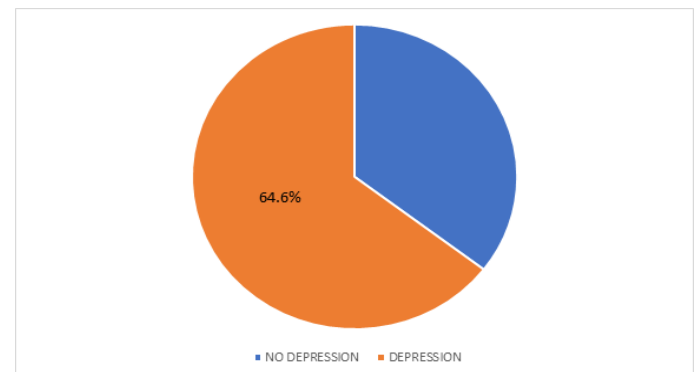


Table 3: CESD -10 Depression Score

Factors		No Depression	Depression	P value
Patients suffering from a diagnosed mental illness	Yes	0	12	0.001*
	No	124	204	
	Prefer not to say	0	10	
Family financial status	Yes	100	152	0.009*
	No	24	74	
Health related problems	Yes	104	165	0.024*
	No	20	61	

Possession of all the required resources like separate room, electronic gadget, uninterrupted internet connection etc. for attending online classes	Yes	91	133	0.007*
	No	33	93	
Apprehension about academic performance and delays due to lockdown, attendance issues or online assessments	Yes	93	195	0.009*
	No	31	31	

Table - 3: Factors showing significant association with cesd-10 depression score *Significant Discussion Medical college students are particularly prone to mental health issues. The results of this study focus attention on the impact of the pandemic on the mental health and wellbeing of student demographic. According to our research, the COVID-19 pandemic had a significant detrimental influence on academic and health outcomes (depression 64.6%, anxiety 23%).

Furthermore, earlier research showed prevalence of provisionally diagnosed depressive and major depressive disorder in medical students to be 21.5% and 7.6% respectively, whereas, we found 64.6% students to have depression post pandemic.

The majority of past research found that during the initial wave of the COVID-19 outbreak, university students were among the most susceptible demographics. Through online survey interviews conducted during the epidemic, we found that the majority of participants were facing issues with mental health as a result of the COVID-19 pandemic. These findings are consistent with recent studies conducted in Italy, which also discovered that during the pandemic, concerns for one's own health, family members' health and the effect of uncertainty of lockdown on academic performance were very common among the medical college students.

Alarming, 31.4% of participant students had history of corona positive status among family members / relative / acquaintance which, along with the online classes brought a major rise in depression and anxiety on the students. With the abrupt onset of online classes, MBBS students had to cover the curriculum in online set up, particularly affecting students who did not have the required resources, like a separate room, internet facility, computer/ laptop/ electronic gadget access.

Interestingly, males made up the majority of the study's participants (61.1%). The participant's gender and anxiety level are significantly correlated, as also seen in a similar study in Poland.¹⁸

According to Hadler et al, in order to provide the right support, concerns and psychological stress experienced by university students during the pandemic (and post-pandemic) must be precisely addressed (e.g., academic, social, mental health, financial).

Coordination of online assistance might be an effective strategy to lessen university students' risk of mental illnesses and loneliness given the still-in-use COVID-19 containment measures.

Conclusion

During COVID-19, the abrupt change in the way that education is delivered has made it harder for students to learn and has resulted in onerous workloads that resulted in anxiety and depression symptoms in MBBS students.

For many students, societal stigma acts as a deterrent to seek assistance and receive other forms of support.

The college authorities could have provided counselling services to the students to overcome these difficulties.

We anticipate that these findings will be somewhat generalizable, since students from different corners of the country are present in a medical college and given the statewide commonalities in university transitions to virtual classrooms and similar stay-at-home directives.

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