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Perceived stress and academic concerns among undergraduate medical students during COVID - 19 pandemic

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Abstract---Background: In India, the corona virus pandemic had created a sudden closure of educational institutes which led to the shift of conventional classes to virtual classes. The present study aimed to assess the perceived stress and academic concerns during the COVID 19 lockdown, among the medical students. This cross-sectional study was carried in a government medical college during covid 19 lockdown. It included 590 undergraduate students. A semi-structured online questionnaire on Google forms was constructed and the link was forwarded to all the medical students. Perceived stress scale-4 was used to study the stress among this population. Results: Of the 590 out of 750 students MBBS students, 75% had high level of stress, where-as 25% had low level of stress. Post- lockdown, 287(48.64%) felt that it is best to revert to the old curriculum and mode of teaching. Around 90% i.e., 512 (86.78%) said they were concerned about the loss of clinical and practical experience. Around 50% i.e., 286 (48.47%) felt that returning to the medical college would increase their risk of infection. 320 (54.24%) said they were concerned about protective measures. 230 (38.98%) said that their family members were concerned about their risk of exposure and infection and so didn't want them to join. Regarding their fear of getting

infected, 297 (50.34%) said that it was minimal, 440 (74.78%) said their level of precaution related to the virus was average and not minimal or excessive. The leading concern for 335 (56.78%) students was the loss of clinical and practical exposure. As a future health professional, 528 (89.49%) said that they wanted to contribute in some way in the care of COVID 19 patients. Alarming, 297 (50.34%) wished that they had chosen an alternate professional course or stream. Conclusion: The present study found that, COVID pandemic was associated with a majority of the medical students perceiving a moderate level of stress. There is an urgent need to screen and monitor the mental health related concerns of students and plan to provide appropriate interventions.

Keywords---COVID-19, undergraduate medical students, stress, academic concern.

Introduction

The outbreak of the COVID-19 pandemic has exerted severe pressure on global healthcare systems and stressed the already burdened healthcare and created challenges to the medical and healthcare professions. Also Corona virus disease 2019 (COVID-19) pandemic led to an unprecedented disruption of medical education and training worldwide. It led to a lockdown in Mar 2020 and closure of teaching establishments and hostels, including the medical institutions causing displacement from both clinical rotations and their medical school campus.^{1,2} Medical curriculum had to be restructured and students had to adjust to education that was purely virtual. Re-opening of colleges was uncertain for a few months due to resurgence of cases causing more distress among the students.^{3,4} This situation has affected the education, preparation and confidence of the medical students. Adjusting to this new “normal” system of education with lack of on-campus learning, social isolation, loss of practical & clinical experience and increasing barriers in professional identity formation resulted in an unique challenge.^{5,6} This study aimed to find out the perceived impact of COVID 19 lockdown on undergraduate medical students, by focusing on their perceived stress and concerns related to the pandemic and their medical education.

Materials and Methods

This cross-sectional study was carried in a Government medical college. It included the undergraduate medical students of M.B.B.S. The medical college and hostel had re-opened in November 2020 and this study was conducted in Feb 2021. A questionnaire was designed by the authors and included queries on perceived worries regarding abrupt cessation of their training programme, loss of clinical and practical experience, virtual classes, and concerns related to the COVID 19 situation and future of their course in this scenario. The Data was collected with the help of an online questionnaire on Google forms. The questionnaire link was shared through already existing Whatsapp groups. These Whatsapp group included the medical students of different years and the medical faculty who were taking virtual classes for them. Out of 750 students, 590

students responded to the questionnaire. The questionnaire had an in-built consent and the study was not mandatory for the students. The questionnaire would terminate if the respondent did not agree to give consent. Students with psychiatric illnesses could exclude themselves from answering the questionnaire. Disclosure of identity and contact details by the respondents was kept optional. Confidentiality of the data was maintained. Institutional ethical committee clearance had been taken.

Results

Socio-demographic details

Among the 590 MBBS students who responded, approximately 50.00 % (294) were older than 20 years and more than 50% (296) were age ≤ 20 years. And 305 (51.7%) were males and 285 (48.3%) were females. 39.7%, 23.9%, 12.0% and 24.4% of the students were studying in first year, second year, third year and final year respectively. Of the 590 MBBS students, 75% had high level of stress, whereas around 25% had low level of stress.

Lockdown related concerns

Questions	No. of Participants	Percent
Residence during the MBBS course		
Hostel	494	83.73
Paying guest	19	3.22
Home	77	13.05
Residence during the COVID-19 lockdown		
Continued in hostel	301	61.05
Shifted to Home	193	39.95
When the college authorities decided to ask the medical students to return home, you felt relieved that you would be safer back home.		
Yes	384	65.08
No	85	14.41
Can't say	121	20.51
During the lockdown, you preferred returning to the medical college and your former routine		
Yes	317	53.72
No	166	28.14
Can't say	107	18.14
Do you feel that resumption of physical classes was unnecessarily delayed		
Yes	220	37.29
No	268	45.42
Can't say	102	17.29
Have you already returned to the medical college?		
Yes	563	95.42
No	27	4.58
Can't say	0	0.00
Do you feel that the extended lockdown is justified.		

Yes	281	47.63
No	187	31.69
Can't say	122	20.68

Course related concerns

When asked about their post lockdown expectations of the medical curriculum, 287 (48.64%) said that it is best to revert to the old curriculum and mode of teaching, while 213 (36.11%) said that the curriculum needs to be modified to include more virtual theory classes but with physical lab and clinical attendance. The rest 90 (15.25%) were unsure.

Questions	No. of Participants	Percent
As a medical student, you are concerned about the loss of clinical and practical experience.		
Yes	512	86.78
No	26	4.41
Can't say	52	8.81
As a medical student, you are concerned about difficulty in concentrating during virtual classes.		
Yes	459	77.80
No	70	11.86
Can't say	61	10.34
As a medical student, you are concerned about how exams will be affected		
Yes	505	85.59
No	34	5.76
Can't say	51	8.64
Did you wish that you had chosen some other professional course or stream		
Yes	99	16.78
No	439	74.41
Can't say	52	8.81
As a medical student, which of the above issues are you most worried about		
Loss of clinical and practical experience	335	56.78
Higher risk of exposure and infection than others	2	0.34
Difficulty in concentrating during virtual classes	67	11.36
Social distancing and inability to interact with friends and peers	22	3.73
How exams will be affected	89	15.08
Risk of getting infected in a hospital setting	26	4.41
Lack of adequate N95 masks and PPE	11	1.86
Others	38	6.44

COVID 19 related concerns

As a medical student, are you concerned that returning to the medical college will increase your risk of infection		
Yes	286	48.47
No	200	33.90
Can't say	104	17.63
As a medical student, are you concerned about lack of sufficient N95 masks and personal protective equipment		
Yes	320	54.24
No	201	34.07
Can't say	69	11.69
Do Your family members worry about your risk of exposure as a health care professional and do not want you to rejoin.		
Yes	230	38.98
No	296	50.17
Can't say	64	10.85
As a future health professional, you would like to contribute in some way and aid in care of COVID-19 patients.		
Yes	528	89.49
No	15	2.54
Can't say	47	7.97
Do Your fear of getting infected with Covid-19 virus?		
Minimal	297	50.34
Average	274	46.44
Excessive	19	3.22
Your level of precaution for COVID-19?		
Minimal	52	8.81
Average	440	74.58
Excessive	98	16.61

Discussion

This present study highlights the unique concerns and worries among medical students during COVID-19 pandemic. Global studies have shown the impact of the pandemic on the mental health and training of the medical students. Which is in trend with the global data ^{4, 5, 6}. The major concerns related to lockdown in the present study were worries related to how classes and clinics would go on, displacement from college and anxiety to return back to college and resume training which were same when compared with other similar studies. Lyon *et al*⁴ and Soham B *et al*⁷ also reported of loss of employment, social isolation & loss of peer interaction to be other major concerns. Our study did not find such concerns which could be due to the close knit family structure in the Indian culture, adequate family support and virtual interaction among peers during the lockdown. Saraswati *et al*⁶ & Guo *et al*⁸ also reported of increased levels of stress & anxiety.

The major course related concerns of the medical students in this study were loss of clinical & practical experience, the effect of lockdown on exams and difficulty in

adapting to new virtual training modality. These findings were observed to be more in the senior years which could be attributed to the apprehensions related to uncertainty in the routine, lack of clinical exposure, lack of confidence and cancellation of clinical rotations. The major concerns related to the COVID-19 infection per se, were risk of acquiring and transmitting infection to family & lack of PPE. This study also revealed that family members were overtly concerned about students contracting infection on reporting back which could again be attributed to the close knit family structure and influence of family in decision making of the students. Guo et al also reported grief among students who lost their close ones during the pandemic.^{9,10,11,12}

Saraswati *et al*⁶ reported increased anxiety and stress among medical students. Vala *et al*⁵ have reported increased prevalence stress and anxiety. Lyons et al have reported deterioration in mental well-being of more than two thirds of medical students during the pandemic. Current study also found that around 297 (50.34%) students wished they had chosen other professional stream which was much higher than 0.4% reported by Soham et al.⁷

Conclusion

The present study found that, COVID pandemic was associated with a majority of the medical students perceiving a moderate level of stress. Medical curricula are unique in that it relies largely on clinical experience and loss of practical and clinical exposure was the leading concern among the students. Globally, the medical education system has to recognize the need of mental health support as well as revised teaching modules to ensure both the well-being and skilled preparedness of this important workforce. The concerns related to the course can be addressed by virtual classes and videos, frequent open book examinations, virtual cases & online simulation teaching and move towards a new learning modality.

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