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IMPACT OF COVID-19 ON MENTAL HEALTH AND CONCERNS REGARDING CURRICULUM IN FINAL YEAR MBBS STUDENTS

Psychiatry

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ABSTRACT

Background: The current SARS CoV-2 pandemic has affected the mental health of various sectors of the country while it has also jeopardised the education system. In this background the present study was done to explore the mental health of the final year medical undergraduate students and their concerns regarding the curriculum.

Materials and Methods: An online survey was conducted among the final year MBBS students in India and psychiatric morbidity was measured by the Depression, Anxiety, and Stress Scale-21. A total of 83 complete responses out of 130 were received and the data was assessed using SPSS software.

Results: Out of the 83 study participants, about 34.9% were depressed, about 39.5% and 32.9% were having anxiety and stress, respectively. Sleep disturbances were significantly associated with depressive symptoms (p value - 0.0001) and those with stress (p value - 0.01) while change in appetite was also significantly associated with stress (p value - 0.01).

Conclusion: The current pandemic has led to growing concerns in the educational sector especially medical education where MBBS students are facing psychological distress along with newer challenges in their academics like distant education as against traditional bedside teaching for acquiring clinical skills.

KEYWORDS

COVID-19, online survey, medical students, DASS 21

INTRODUCTION

The world has seen many pandemics in the last century, for which many of us are not direct witness. Currently we are going through Corona Virus pandemic (COVID -19), which originated in China in December 2019 and continues to spread all over the world. The current pandemic has unfolded a plethora of challenges to the medical fraternity and medical education.

COVID -19 outbreak was declared as a pandemic by WHO on 11th March 2020.[1] Its rate of spread has proved to be greater than any previous pandemics thereby compelling needs for urgent and effective public healthcare measures in many countries.[2] Similar to previous outbreaks of SARS in 2003 & H1N1 influenza in 2009 which had considerable effects on the community in terms of fear and panic, COVID -19 also has been reported to have caused significant psychological impact.[3,4] A very recent general public survey during the initial phase of the COVID-19 outbreak in China showed that about one-third of the participants reported moderate-to-severe anxiety, whilst more than half rated the psychological impact as moderate-to-severe.[5]

Tsamakis *et al* noted that current pandemic not only had psychological implications on general public, patients and children but also on the healthcare professionals who are catering to the healthcare needs for the society.[6] Thus mental health has become a matter of concern for all sectors of the society and needs adequate care and attention.

A recent study on doctors in West Bengal done by SS Chatterjee et al noted 34.9% were depressed while 39.5% and 32.9% were having anxiety and stress, respectively. This study being the first in Indian context also noted significant predictors for psychiatric morbidities like experience in health sector, duty hours, use of protective measures, and altruistic coping apart from age and multiple comorbidties.[7]

The pandemic has not only affected the working healthcare professionals but also the medical system disrupting routines in hospitals, medical schools and beyond. The lockdown has disrupted traditional classroom setup as well as bedside medical training and has led to change in medical training landscape, by the introduction of earlier unthought-of modes of learning like the online teaching classes, which are unable to substitute for the clinical exposure and in- person practical skills.

Since there are no studies so far assessing the mental status of medical students and their concerns regarding the course, an effort has been made in this study to evaluate the same in the final year MBBS students.

MATERIALS AND METHODS

The study was an online, cross sectional and observational survey conducted among the final year MBBS/ medical students of SS Medical college, Davangere, India. This study was conducted between June –July 2020 after ethical committee clearance. An online semi-structured questionnaire was developed. The link of the questionnaire was shared through E-mails and WhatsApp. On receiving the link the participant would get auto directed to the study information. On accepting the willingness for the survey and informed consent, they filled the 2 sections of the questionnaire.

The online form contained 2 sections, the first section contained demographic details like age, sex, BMI, etc while the 2nd part contained the DASS-21 form. The DASS-21 is based on three subscales of depression, stress, and anxiety, and each subscale consists of seven questions each. The rating of DASS sub items such as depression, anxiety, and stress can be rated as normal, mild, moderate, and extremely severe. Each item is scored in a self-rated Likert scale from 0 (didn't apply to me all) to 3 (much or mostly applied to me) in the past 1 week.[7] The scale cannot be used as a diagnostic tool but can be applied as an aid to diagnosis. The DASS scale has both shorter version and longer version (comprising of 21 and 42 items, respectively). In DASS-21, the final score of each item is multiplied by two to obtain the final score.[8] The data collected was tabulated on Microsoft Excel 2010 and the statistical analysis was done with the help of SPSS software version 23.

RESULTS

The study was conducted among 130 students studying in the final year MBBS. The questionnaire was shared to all the 130 students of which a total of 83 students responded which were analysed and chi square test was applied on the bivariate table for testing the correlation. The sample had a mean age of 23 (± 2) years of which most of the students were females (n = 53, 64%). BMI was noted to be normal in 66.27% (n = 55), but was noted to be underweight, overweight and obese in 2.41% (n = 2), 22.89% (n = 19) & 8.43% (n = 7) respectively as given in table 1.

Majority of the students reported normal appetite while 12.05% (n = 10) & 37.35% (n = 31) reported decreased and increased appetite respectively. Questions on sleep inferred that 61.45% (*n* = 51) had sleep between 6-8hrs, 4.82% (*n* = 4) had sleep < 5hrs and 33.75% (*n* = 28) had > 8hrs of sleep of which 13.25% had decreased sleep (delayed onset, early/ intermittent awakening). Questionnaire also revealed increase in mobile screen time usage in 85.54% (*n* = 71) of the students of which > 8hrs was noted in 24.10% (*n* = 20) as given in table 1.

Of the 83 students, 59.03% (*n* = 49) expressed concerns about the curriculum. Of this 34.69% (*n* = 18) were concerned about lack of clinical exposure and practical skills, 12.24% (*n* = 6) felt google classroom was not useful, 16.32% (*n* = 8) were concerned about course getting extended and exams being postponed, 20.40% (*n* = 10) were worried about colleges not being reopened, 10.20% (*n* = 5) were of the opinion that studies are inadequate at home since they were not allowed inside hostel and 4.08% (*n* = 2) were apprehensive about work load and stress that they need to face once the college reopens.

The psychological effects of the study are as follows:

DEPRESSION

Out of the 83 students, 40 (48.19%) reported normal scores and 43 (51.81%) were depressed with varying grades of which 14 (16.87%), 20 (24.10%), 2 (2.41%) and 7(8.43%) reported mild, moderate, severe and very severe depression scores respectively. [Figure 1] Mean depression subscale score were found to be 12.87±9.73 and a median of 10. [Table 2]

Anxiety

Among the 83 students, 50 (48.19%) did not have any anxiety while 33 (51.81%) were anxious with of which 8 (6.94%), 12 (14.46%), 5 (6.02%) and 8 (9.64%) reported mild, moderate, severe and extremely severe anxiety scores respectively. [Figure 2] Mean depression subscale score were found to be 6.96±7.28 and a median of 4. [Table 2]

Stress

Out of the 83 students, 52 (62.65%) reported normal scores and 31 (37.35%) were stressed with varying grades of which 8 (9.64%), 12 (14.46%), 6 (7.23%) and 5 (6.02%) reported mild, moderate, severe and very severe stress scores respectively. [Figure 3] Mean stress subscale score were found to be 10.55±8.97 with a median of 10. [Table 2]

FIGURES

Figure 1: Depression severity among final year MBBS students

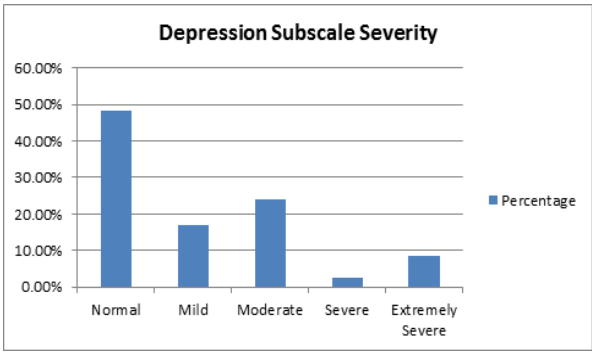
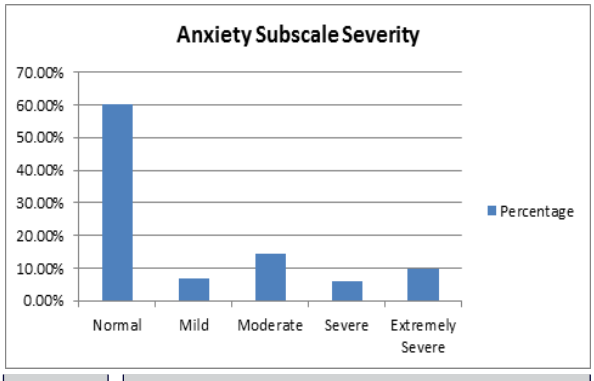


Figure 2: Anxiety severity among final year MBBS students



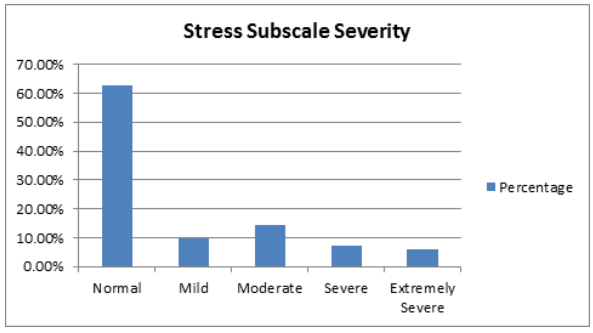


Figure 3: Stress severity among final year MBBS students

TABLES

Table 1: Socio-demographic details from the study

VARIABLES	*Sample size: (n=83), n (%)*	
Age (Mean ± SD) yrs	23 ± 2	
Sex	Female: 53 (64%)	Males: 30 (36%)
BMI	Underweight	2 (2.41%)
	Normal	55 (66.27%)
	Overweight	19 (22.89%)
	Obese	7 (8.43%)
H/o Comorbidity	Yes: 8 (9.63%)	No: 75 (90.37%)
	Hypothyroid - 2 Asthma - 2 DM - 1 PCOS - 3 Allergic rhinitis - 1	
H/o previous psychiatric illness ?	Yes: 9 (10.84)	No: 74 (89.16)
Family History of any Psychiatric Illness?	Yes: 4 (4.82%)	No: 79 (95.18%)
Sleep pattern	Decreased, Delayed Onset: 6 (7.23%) Decreased, Early Awakening: 4(4.82%) Decreased Intermittent awakening: 1(1.20%) Increased: 37(44.58%) Normal: 35 (42.17%)	4-5 hrs: 4 (4.82%) 6- 8 hrs: 51(61.45%) >8 hours: 28 (33.75%)
Is your appetite deranged?	No: 42 (50.60%) Yes, Decreased: 10 (12.05%) Yes, Increased: 31 (37.35%)	
Has your mobile screen usage changed ?	Yes, decreased: 6 (7.23%) No: 6 (7.23%) Yes, Increased: 71 (85.54%)	
Concerns about Curriculum	Total % expressed concerns about the curriculum : i. Lack of clinical exposure and practical skills ii. Felt Google classroom was not useful iii. About course getting extended and exams being postponed iv. About colleges not being reopened v. Studies are inadequate at home vi. apprehensive about work load	59.03% (*n* = 49) 34.69% (*n* = 18) 12.24% (*n* = 6) 16.32% (*n* = 8) 20.40% (*n* = 10) 10.20% (*n* = 5) 4.08% (*n* = 2)

Table 2: Mean score of Depression, Anxiety, and Stress scale sub items

Variable	Mean ± SD
Depression subscale total	12.87 ± 9.73
Anxiety subscale total	6.96 ± 7.28
Stress subscale total	10.55 ± 8.97
DASS score total	30.38 ± 25.98

Table 3: Correlation of Stress, Anxiety & Depression with demographic parameters

Parameters	Stress (p value)	Anxiety (p value)	Depression (p value)
Gender	0.13	0.973	0.48
Mobile use pattern	0.0991	0.527	0.277
Change in appetite	**0.0197***	0.75	0.75
Sleep disturbance	**0.019***	0.384	**0.00151***

***p value < 0.05 was taken as significant.**

DISCUSSION

In the present study sample of students, about 37.35% had stress, 39.76% had anxiety symptoms and 51.81% had depressive symptoms. Sleep disturbances were significantly associated with students with depressive symptoms (p value - 0.0001) and those with stress (p value - 0.01) while change in appetite was also significantly associated with stress (p value - 0.01) as given in Table 3. While most of the students did not have any comorbidities, 9.63% (n = 8) had comorbidities including hypothyroidism, PCOS, asthma, diabetes mellitus and allergic rhinitis and family history of psychiatric illness was present in 4.82% (*n* = 4). No significant correlation was found between mobile usage and gender with respect to anxiety, stress and depressive symptoms.

A recent study showed 39.5%, 33% and 35% prevalence of stress, anxiety symptoms and depressive symptoms among doctors with a sample size of 152 conducted in March-April 2020.[9] While the stress levels in both the studies were comparable, anxiety and depression is comparatively more in our study, which was possibly due to students having spent more number of days in lockdown (nearly 3 months post lockdown) since the study was done between June-July 2020. This also possibly accounts to increased and continuing uncertainty towards their future, inadequate study pattern at home than when college was open, no bedside teaching, all of which possibly leading to anticipatory anxiety and reactive depression.

A few studies have been done on MBBS students in pre-COVID era in India. A study done at Kolkata in 2012 on 415 undergraduate students (excluding final year students) noted 14.5% prevalence of mental distress by using the SRQ-20 scale[10] while another study done on final year MBBS (part I & II) in Kerala in 2016 showed 34.4% stress, 43.3% anxiety and 40.1% depressive symptoms.[11] This infers that there is definitive increase in stress and depressive scores in the current study which can be attributed to COVID-19 outbreak and its lockdown implications on both personal and professional life.

This study makes an attempt for the first time to understand the relevance of psychiatric parameters among the final year MBBS students and their academic concerns amidst this pandemic. It can be inferred that routine psychiatric screening among final year MBBS students is important which can be integrated as part of their annual health check. However a large scale study is the need of the hour, to understand the nationwide prevalence of psychiatric morbidity among medical students and their academic apprehensions and thus address the concerns of our future doctors and make up for the lost time in their curriculum due to the implications of the Covid-19 lockdown.

CONCLUSION

This study attempts to shed light on the mental health care needs of the MBBS final year students whose curriculum is in possible jeopardy due to closure of colleges following COVID 19 outbreak. The study emphasises on the need for newer policies/guidelines in the medical education sector which might substitute for the skills acquired through the traditional hands-on practical experience of the pre-COVID era, thereby facilitating continued learning and empowering the future doctors of the Indian health sector.

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Conflicts of interest: There are no conflicts of interest.

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