The impact of COVID-19 on the daily lives and study habits of the MBBS students

Tanvi A Joshi[1], Sharwari Bodkhey[1], Sharmishtha Deshpande[1]
[1]Smt. Kashibai Navale Medical College and General Hospital, Pune

Corresponding Author
Tanvi A Joshi
E-mail ID: tanvi_j@yahoo.com

Submission: 03.03.2022 Acceptance: 29.03.2022 Publication: 04.05.2022
https://www.doi.org/10.56136/BVMJ/2022_00028

Abstract

Introduction: COVID-19 pandemic has significantly impacted the academic and personal life of all college students. However, it has had a more profound impact on medical undergraduates. **Objectives:** 1) Survey of changes in the daily routine, views about their career and study habits of the MBBS students 2) To document changes in eating habits, other health-related habits, and self-perception of body image **Methods:** Permission of Institutional Ethics Committee (IEC) was obtained. An online observational cross-sectional study was conducted, using an online Google Docs-based questionnaire; circulated among MBBS students of all years, studying in 12 medical colleges both government and private medical institutions of India via WhatsApp. **Results:** We observed an increase in sleeping hours in 75.1% of students, an increase in sleep onset latency (62.6%), and difficulty maintaining sleep (38.3%). About 67.1% of students reported dedicating more hours to their hobbies, and 71.1% reported a decrease in time spent studying throughout the lockdown. We even observed contrasting responses towards the pandemic wherein 50.3% of the students wanted to volunteer and join the workforce while 37% were worried about the situation becoming worse. The frequency of meals and snacking in between meals had increased. Binge eating habits were noticed in around 13% on a daily basis. As a means to cope with this overeating, around 11% of students used laxatives and induced vomiting. Students also reported medical problems like fluctuations in weight, stomach cramps, syncope, and fatigue. **Conclusion:** Significant disturbances were observed in the daily routine, eating habits, and study habits of medical students, which had perhaps led to bigger perplexities of career-related uncertainty and improper coping techniques of varying degrees. These can have a nationwide impact on our health care system, stressing the need to strengthen its budding doctors to make them healthier and more resilient for the future.

Keywords: COVID-19, Mental health of MBBS students, Impact of COVID-19 lockdown on medical undergraduates

Introduction

Human health and well-being are discretely rooted in being surrounded by a functioning society. The COVID-19 outbreak has induced a global public and mental health crisis and a substantial psycho-social experiment[(1)]. Students form a significant part of this unprecedented change as the recent COVID-19 global pandemic has affected students' lives on many different levels. The speed at which the community lockdown and subsequent changes to the medical course occurred, resulted in many students struggling to adjust to the new routine. In addition to teaching-related changes, other impacts such as loss of peer interaction and social connectedness caused due to the consequences of the pandemic impact negatively on student well-being and cause further psychological distress, disrupt daily life and medical studies. It is important to actively assess and monitor this to mitigate negative impacts and provide appropriate support to students[(2)].

The healthcare systems and medical education authorities worldwide have responded variably to the students' participation in the COVID-19 healthcare crisis. Some hospitals had banned students from involvement in any clinical activities. In contrast, others have been more targeted, keeping students away from wards where COVID-19 patients are treated or out of emergency departments and ICUs[(3,4)]. Other countries have considered this moment of crisis as an opportunity to introduce remote medical training[(5)], and explore how medical students can apply their growing medical knowledge in real-life healthcare contexts and situations[(6-11)].

The Coronavirus disease 2019 (COVID-19) has already been recognized as a cause of direct and indirect psychological and social consequences that might impact Mental Health (MH) not only during the pandemic per se but also in the future. Quarantine consequences include acute stress disorders, anxiety, irritability, poor concentration and indecisiveness,

deteriorating work performance, post-traumatic stress disorders, high psychological distress, depressive symptoms, and insomnia[12]. Essentially, students, researchers, teachers, and health professionals reported mild stress levels. In contrast, mental health professionals and employees in different corporate jobs were in the normal range of stress. These findings could be attributed to the closure of universities and colleges that offer limited technical support and knowledge resulting in uncertainty about the future of students, teachers, and researchers. The current pandemic places demand on students and teachers alike to adapt to online teaching, albeit with limited resources, thus resulting in above normal stress levels[13]. The nationwide lockdown with restrictive movements has had a negative effect on the students' psyche, mainly observed in the form of lack of concentration in studies, unexplained crying spells, engaging in compulsive behavior such as repetitive hand washing, staying in bed for long periods, depressive mood, etc. Thus, all the research findings indicate that students and health professionals need special attention because of their higher psychological distress.

Due to the lockdown, a significant change was also expected in the students' eating habits, directly and indirectly affecting their health. Anorexia Nervosa (AN), Bulimia Nervosa (BN), and related eating disorders are psychiatric syndromes that convey significant risk for medical problems, particularly among youth[14]. A recent study from India has also reported that many medical students have eating disorders[11].

Anorexia nervosa can be classified into two subtypes: the restricting subtype and the binge-eating/purging subtype[15]. As with AN, patients with BN may place undue emphasis on their body shape and live in fear of gaining weight[15].

Binge-eating disorder is characterized by consuming large amounts of food in 2 hours, accompanied by a perceived loss of control. Additional symptoms include feeling uncomfortably full, eating rapidly, eating alone, eating when not hungry, and feeling disgusted afterward. Unlike BN, compensatory behavior (e.g., vomiting, laxative abuse) does not accompany these binge episodes[15].

Eating disorders affect people of all ages but are especially prominent among college students. The media conveys the message of beauty and happiness associated with a lean body and generates extreme concern with weight and body shape, which specific individuals try to adapt to be accepted and appreciated. This is a significant cause for the development of Eating Disorders (EDs), especially in women[10]. Health professionals working with youth need to be aware of the high prevalence of these subclinical disorders eating behaviors, ask appropriate screening questions, and provide resources and referral, if necessary, for youth reporting these behaviors[14]. Knowledge of risk and protective factors can guide intervention and prevention efforts, mainly as they apply across ethnicity[16]. Overweight and unhealthy weight control behaviors in adolescents are major public health concerns that warrant interventions addressing both problems[17,18].

We reviewed different articles on this subject and found studies lacking in Indian scenarios that assess the impact of large-scale lockdown on medical students and their coping reactions. This study aims to fill in that gap and assess changes in the mental status of medical students through the changes in their dietary, sleep, and studying habits. It also highlights the attitude of medical students and their coping with this lockdown due to COVID-19.

Objectives

Our primary objective was to study the changes observed in the daily routine, mainly studying habits of the MBBS students. The impact of online teaching during the nationwide COVID-19 pandemic lockdown was assessed, focusing on the changes observed in their diet, sleep schedules, and academic goals. We have also assessed the various ways used by the students to cope with these changes.

Methods

Permission from the Institutional Ethics Committee was obtained for conducting the study. An observational cross-sectional study was planned. We used a structured online Google Docs-based questionnaire, which included some open-ended questions asking how they were coping with the unique situation. We circulated this questionnaire among MBBS students across all four years studying in both government and private medical institutions of Maharashtra. We sent it to WhatsApp groups of 12 different colleges. One hundred seventy-three students participated in the study, 112 were female, and 61 were male. The study population was determined using convenience sampling, and the students' participation was voluntary. The short duration, Multiple Choice Questions (MCQ)-based questionnaire was specifically designed to collect objective data regarding the eating habits, sleeping patterns, and academic focus of the MBBS students. We also asked them open-ended questions like reasons for changes in eating habits, influence of social media on dietary habits, perceived need to lose weight.

The data for this project was collected in the period extending from 11th July 2020 to 15th August 2020.

Results

Table 1 describes the three points - gender, age and academic year in personal data collected from the students. Out of 173 students, 64.7% were females, and 35.3% were males. The mean age in females was 20.63 and in males was 20.89.

Table 1: Sociodemographic data

Sr. No.	Sociodemographic characteristics	Numbers and Percentages
1	Gender	
	Male	61 (35.3%)
	Female	112 (64.7%)
2	Mean Age	
	Male	20.89
	Female	20.63
3	Academic year	
	I	57 (32.9%)
	II	20 (11.6%)
	III Minor	31 (17.9%)
	III Major	65 (37.6%)

Table 2 shows the students' changes in time spent in studying during the lockdown. 123 (71%) students reported a decrease in total time spent studying, 30 (17%) students reported an increase, and 20 (12%) students reported no change; in comparison to the studying time before the lockdown.

Table 2: Studying Habits

Studying Habits	Numbers and Percentages
How much time do you spend studying during lockdown in comparison to the time sent before lockdown?	
Less	123 (71%)
More	30 (17%)
No change	20 (12%)

The meal frequency and snacking in between meals increased in 48% and 51% of students, respectively, as compared to 19% before lockdown (Table 3). In all, 13.3% of students were reported to engaging in binge eating behaviors; out of which 32.3% admitted to feeling guilt following a binge eating episode. To deal with this guilt and the fear of gaining weight, 6.7% of students resorted to using laxatives.

The study also aimed to assess issues in body perception through questions regarding Body Mass Index (BMI) and ideal body images. Three percent of students were convinced to be overweight despite having a normal BMI, and 7% felt

Table 3: Eating habit irregularities

Sr.	Eating habit irregularities	Numbers and Percentages
1	Has there been a change in the frequency of your meals since lockdown began?	
	Increased	83 (48%)
	Decreased	35 (20.2%)
	No change	55 (31.8%)
2	Has there been a change in the frequency of your snacking after the onset of the lockdown?	
	Increased	88 (50.9%)
	Decreased	49 (28.3%)
	No change	36 (20.8%)
3	How often do you binge eat during lockdown?	
	Almost daily	23 (13.3%)
	2-3 times a week	45 (26%)
	1-2 times a month	64 (37%)
	Never	41 (23.7%)

Significant changes in sleeping hours in 76.8% females and 72.1% males, an increase in sleep onset latency in 62.6% of students, and difficulty maintaining sleep in 38.3% of students were observed (Table 4).

Table 4: Sleeping patterns

Sr. No.	Sleeping patterns	Numbers and Percentages
1	How has lockdown affected your sleeping hours?	
	Increased	130 (75.1%)
	Decreased	19 (11%)
	No change	24 (13.9%)
2	Has the quality of your sleep changed?	
	Sleep onset latency	67 (62.6%)
	Difficulty in maintaining sleep	41 (38.3%)

Eighteen male and 42 female students disliked online teaching. The study reported a positive impact of online lectures on 19.4% females and 7.4% males, while a negative impact on 33.3% males and 38.9% females. About 50.3% of MBBS students wished to volunteer in the fight against COVID-19; whereas 2.9% wanted to quit their profession. In all, 5.2% of the students were already receiving psychiatric treatment for unspecified conditions prior to the lockdown.

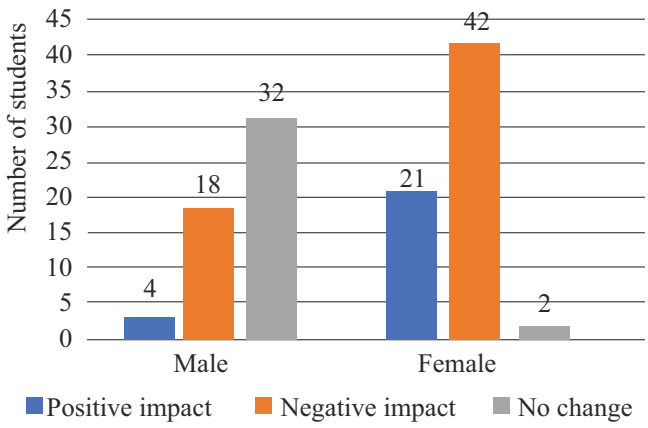

Figure 1: Bar chart showing the impact of online lectures on MBBS students study routine

Discussion

The interpretation of the results of this study has its limitations due to the convenient method of sampling and relatively small sample size. Despite these limitations, we came across meaningful results in our study population.

During COVID-19, online lectures became a crucial candlelight in the dark era of the lockdown worldwide[19]. Though not a substitute for face-to-face classroom lectures, online lectures can be a fruitful deal with improved technology for the coming generations[19]. Our study reported a lesser positive impact and a higher negative impact of online lectures. Similar to the findings of Rehman U et al; this could be attributed to the pressure on students and teachers alike to adapt to online teaching in the presence of limited resources, which led to above normal stress levels[13]. Besides, the higher negative impact on females could be attributed to the need for more social affiliation and emotional closeness in females.

Our study also reported a significant disturbance in the academic performance, sleeping and eating habits, study habits, and overall health of the medical students. A study involving the examination of 210 medical students of Chennai using the Eating Attitudes Test (EAT) and Bulimic Investigatory Test, Edinburgh for detection and description of binge eating disorders (BITE) self-report questionnaires reported 14.8% of the study population to have a syndrome of eating distress[11]. Although these seem to be minor problems on the surface, they can significantly affect the students' quality of life and motivation for learning. Two percent of students even wished to quit their profession.

Our data highlighted significant and adverse changes in the eating behaviors of MBBS students, especially more among females; thus affecting their physical and physiological health. Overeating and loss of control over what and how much to eat is found to be more common in females[20]. Our results support this observation with a significant number of females students having sub-syndromal eating disorders. But this finding could be attributed to the fact that our study included a greater number of female participants than males. The data also reported that the students resorted to rigorous exercises when they could not control their junk food intake. This finding is consistent with the fact that many people with anorexia over exercise or overdo any physical activity to burn calories[13].

The core psychological feature of anorexia nervosa is the extreme overvaluation of shape and weight[18]. Similarly, most of the students reported to having normal BMI but still perceived themselves to be overweight. Thus, the study brought to light the problems in self-perception of body image and the accompanying bodyweight issues faced by the medical students; despite them being aware of the importance of nutrition in maintaining health.

Insomnia is one of the consequences of the pandemic, that was determined even among our study participants[12].

The COVID-19 outbreak has induced a global public and mental health crisis, particularly affecting the study habits and overall mental health of MBBS students. Although the symptoms appeared to be sub-threshold on the surface, we noted that the students did not have a normative emotional reaction to stress but clinically significant distress.

Conclusion

The disturbances in the daily routine of medical students have led to disturbances in the bio functions and bigger perplexities of career-related uncertainty and improper coping techniques of varying degrees to the imposed lockdown. The effects have extended to our health care system, stressing the need to strengthen its pillars to ensure more resilient doctors in the future.

The study highlighted certain harmful deviations from the usual eating behaviors of the MBBS students, which could serve as risk factors for the gradual onset of eating disorders in the future. Thus, the study highlights the need to review the results as confined to the lockdown period or extend beyond its spatial and temporal limitations.

Ultimately, the findings of this study emphasize the need to assess actively, monitor the effects, and provide appropriate support to the MBBS students through this maze of a COVID-19 pandemic.

Source of support: Nil

Conflict of interest: Nil

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